

S

0 2007 1206823 4
California State Library

ARY.

Received APR 1894

Accessions No 93823 Class fc 630.5
P1

46



Digitized by the Internet Archive
in 2013

<http://archive.org/details/pacruralpres46unse>







CLVI. No. 1.

SAN FRANCISCO, SATURDAY, JULY 1, 1893.

93523

THE DEWEY PUBLISHING CO.
Office, 220 Market St.

Olives and Palms at San Fernando.

An engraving presents some exceedingly interesting features of the Mission horticulture of California. The view is all the more interesting, as it pertains to a Mission of which comparatively little has been printed. Those Missions which lie nearest to centers of present population or to popular resorts naturally engage most attention, but there are others just as picturesque and interesting. One of these is the Mission of San Fernando shown in the engraving.

Those who speed along the San Fernando valley on the railway, and see the large area of desert vegetation and sand wash on its eastern edge, have no idea of the rich valley in which the padres made their establishment, grew fine gardens, vineyards and orchards and built up their enterprise in their usual way. During more recent years, too, the San Fernando valley has been famed as the great granary of the south, the yield upon its many thousands of acres constituting quite an element in the grain output of the State.

The latest development of the San Fernando valley is evidently in the line of fruit-growing. For some years the orchard area has been increasing, and the returns have seemed to warrant extension of orchard-planting enterprises. For this reason there is now quite a disposition toward improvement of San Fernando lands, and an organization for that purpose is now being promoted at Los Angeles. It is called the Los Angeles Olive-Growers' Association. We are indebted to this association for the glimpse at the old Mission plantings as they may now be seen. Both the olives on the left and the California fan palm on the right show their age, but the palm adds natural beauty to its antiquity, for its growth has not been disturbed. The old olives have no doubt undergone the pollarding which the seekers after olive cuttings gave all the old Mission trees about ten years ago. It is to this that their stumpy appearance is due.

It will be poetic justice to see the San Fernando lands wrested from the grain-grower and returned to horticulture. The old orchards after Mission days, in fact, after American occupation, were of considerable moment. One of the first considerable products of dried fruit in California came from this Mission, the fruit being chiefly pears, handled with Indian labor, by Don Andres Pico, at that time owner of the Mission lands.

In the distance in the engraving the roof and the upper part of the corridor of the old Mission can be described. The architecture was less ambitious than in other Mission

buildings, but its size and the stability of the construction are good points.

IT LOOKS NOW as though the Riverside Fruit Exchange will be able to maintain an organization in future that will embrace about 80 or more per cent of the orange-growers of that region. The past year's unprofitable experience seems to have given a perfect demonstration of the need of thorough organization rather than to have pointed out the futility of attempts to control the market and to convince orangemen that their interests are identical and can be served best by marketing through similar channels and by similar methods. The Riverside Exchange was for some years a fine example of the benefits of intelligent co-operation. Dissension entered, and it failed to accom-

loads. The shipments of cherries to date this year amount to 1,465,870 pounds. Last year the total shipment was 973,005 pounds. California cherries seem to be finding a good market, notwithstanding the great increase and the hard times. Who was it said something about over-production?

A STATE ROAD CONVENTION has been called to meet in Sacramento, September 7th. The call is issued by the Sacramento County Humane Society, and is supplemented by a letter of Governor Markham, who says he will nominate twenty delegates from the State at large. The convention will be composed of county supervisors, three county delegates, each county surveyor and two delegates of each chamber of commerce, board of trade, municipal body, transportation company, grange, agricultural association, wheelmen's club, humane society and other organizations immediately interested in good road agitation. The call is quite long and recites seven classes of purposes of the proposed meeting. It sets out some surprising statistics of waste by reason of uneconomic methods of road construction and administration. It appeals to the press to give publicity to the call and to awaken interest in the approaching meeting. It is provided that each county cast only fifteen votes and organizations not confined to counties two votes each. It



THE OLD OLIVE ORCHARD AND CALIFORNIA FAN PALM AT THE MISSION OF SAN FERNANDO.

plish anything. Profiting by past experience, it seems likely that the exchange will be the agent of profit and prosperity to the whole community of Riverside. The way to co-operate is to co-operate.

THE WORLD'S FAIR MANAGEMENT seems to have made a serious mistake in at least one respect; it has granted to private individuals exclusive privileges for sale of certain commodities, and use and rental of other necessary things on the grounds that it should by all means have retained to itself. The result is exactly what might have been expected, viz., universal complaint of exorbitant charges by concessionaires. One instance of gouging comes home to California. The cold-storage-fruit charges are so high as to be prohibitive. The California fruit exhibitors have met and formally protested, but, as California knows, protesting by resolution against a monopoly has about as much effect as a pope's bull against a comet. The comet never diverges an inch from its erratic orbit. Meanwhile, it is said that the fruit exhibit of California is suffering very severely.

THE SHIPMENT OF CHERRIES OVERLAND from San Jose last week amounted to 444,775 pounds, in all eighteen car-

is to be hoped that there will be a large attendance. The purpose of the convention is most praiseworthy, and deserves attention from all interested in the subject.

ONE OF THE HEALTHIEST SIGNS of the times is the tendency among fruit-producers to work together in the matter of marketing their product. Co-operation has long been talked about to no definite end, but its recent success in Santa Clara county, at Yuba City and elsewhere has demonstrated what may be done when people go about it in the right way. The fruit-growers of Santa Rosa have just taken up this question, and at a meeting held on last Saturday they made a beginning toward practical organization. Another meeting will be held on Saturday of this week, and it is hoped to get the new co-operative society ready for practical operation during the coming season.

THE POULTRYMEN'S UNION of Petaluma, whose purposes were some weeks since described at length in the RURAL PRESS, has perfected its organization, and is getting ready for active business. The purpose of the union is co-operative. It is designed to buy feed cheaper and sell poultry and eggs to better advantage. The Petaluma Union will no doubt serve a useful purpose.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half inch (1 square).....	1.00	2.50	6.50	22.00
One inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

San Francisco, July 1, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—The Old Olive Orchard and California Fan Palm at the Mission of San Fernando, 1.
 EDITORIALS.—Olives and Palms at San Fernando; Miscellaneous, 1.
 The Week; A Reform Which Looks Backward; The Stringency and the Fruit Market, 2. From an Independent Standpoint, 3.
 MISCELLANEOUS.—Activity in the San Jose Fruit Canners, 3. Fruit Products and the Tariff; A New Cherry; Value of a Brand; Drying Peaches; To Destroy Linnet, 4.
 FRUIT MARKETING.—Success in Co-operation; Crystallized Fruit; Fruit Packing for Profit, 5.
 THE DAIRY.—Increasing the Milk Yield, 5.
 POULTRY YARD.—Poultry vs. Fruit; Raising Chickens on Farm, 5.
 That Sleepy Disease: Ode to the Hen; No Lice on the Chick; A Foolish Prejudice; The Droppings, 6.
 THE VINEYARD.—Success of Resistant Vines, 6.
 HORTICULTURE.—Spray for the Codlin Moth; Two Conventions of Fruit-Growers; Points from a Practical Pear-Drier, 6. Florida Orange Crop of 1892-93. Astonishing Fecundity of the Apple; Woolly Aphis in the Orchard; Big Yields from Single Cherry Trees; Pruning Orange Trees; No Conure Says Prof. Sanders; Bi-Sulphide of Carbon for Gophers; Chinese Labor in Orchards, 7. Analyses of Figs and Fig Solis, 8.
 THE HOME CIRCLE.—10.
 YOUNG FOLKS' COLUMN.—11.
 DOMESTIC ECONOMY.—11.
 AGRICULTURAL NOTES.—13.
 PATRONS OF HUSBANDRY.—From Worthy Master Davis; From Mr. Ohleyer; From Pescadero; Bennett Valley Grange, 14.
 MARKET REPORTS.—17-18.

BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

	PAGE.
Hay Presses—Truman, Hooker & Co.....	20
Windmills—R. F. Wilson, Stockton.....	20
Linniment—H. H. Moore & Sons, Stockton.....	20
Fruit Dryer—Paraffine Paint Co.....	18
Fruit Grader—G. G. Wickson & Co.....	19
Artificial Limbs—Menzon Spring.....	19

See Advertising Columns.

The Week.

Amid crash of broken banks and in the grasp of financial stringency, the days are tripping gaily along to the National Birthday. While one man wonders how he will get money enough to harvest his crop, another puts a mortgage on his farm to pay his way to the World's Fair. While it is solemnly declared that money cannot be had to start canneries, dress-coated committees are meeting and declaring that it is easy to get a million dollars to bring a fraction of the European merchandise from Chicago to San Francisco. And when we tire of the details of wildcat banking and impossible enterprises, we plunge the last fiber of our gray matter into the exploits of train-robbers and prison-breakers. Truly, this is a great age and we are a great people.

It does seem as though the times were out of joint. A wet winter and the soil hard and dry; heavy bloom and light fruit; great anticipations of a summer full of interest and activity because of the World's Fair and yet the fair might almost as well be in Madagascar so far as Californians as a whole are concerned. But we have one blessing which neither off-seasons nor business depression nor high railway rates can rob us. It is the Fourth of July. Let us be thankful for it.

The Stringency and the Fruit Market.

The canned-fruit product of California for 1893 will probably be light. The reasons are two: The financial stringency and the volume of carried-over stock. One trouble with the canning business is that it is necessary to make a large outlay of cash before returns come in. For instance, Mr. Skinner, of the Marysville cannery, declares that, even at the lightest seasons, \$117,000 in cash must be paid out by his concern before one cent comes back. In past seasons, canners have had little trouble in securing all needed assistance from banks. But the present loans are being very much limited, and it may be that some canneries will not be able to start up at all. But, notwithstanding the present depression of the industry, one thing should not be lost sight of. Canneries which have established the value and quality of their products will probably turn out nearly an average pack. It is interesting to note, as shown in another column, that the San Jose canneries are beating their record at the opening.

It is probable that we are just at this moment under the heaviest shadow in this matter and it is fortunate it comes

so early in the season. It might be more serious if it fell later, although we are aware that present friction must necessarily restrict the season's work. We anticipate that the present depression will soon be followed by a reaction which will restore a degree of confidence in staple food supplies, although general investments and luxuries may be much longer unthought of. For this reason we expect that the canners may feel warranted in doing more than now seems possible and thus care for a considerable amount of fruit before the season closes. It will not be the first time that canners have done more than they expected to do at the opening of the season, although we confess the present situation is graver than conditions which have sometimes discouraged them. We have not seen it claimed that the visible supply of canned goods in the United States could meet the demand longer than December. Consequently there will be eight or nine months of 1894 to supply from this year's pack. If there should be any such decrease in the product as is now talked of, there will be a famine in canned goods before the pack of 1894 can begin. It seems to us that this view of the future will lead Eastern dealers to proceed with some show of business, and this will be further promoted by the fact that they can probably get very favorable quotations from our packers. For all the present darkness we believe that any man who has canned fruits to sell in the winter and spring of 1894 will be glad of it. In fact it is even possible that the present situation may help some canners to secure cheap fruit.

But though such a degree of hopefulness seems warranted, producers have, of course, to face the present situation and prepare to make the best of it. Fortunately the recourse to drying is still open. The sun will shine for all, and, by using wisely all available energy, the grower can cheaply produce a splendid food supply which will be ultimately all the more valuable if the supply of canned fruit should run light. It looks now as though large producers who need advances to meet the cost of handling the fruit even for sun drying might have difficulty in obtaining it, but even in this we anticipate some relief from the present darkness. Even a small degree of confidence will let loose money enough for wages, though funds for increased facilities and improvements may not be had this season. The smaller producer who relies largely upon his own labor and that of his family will command the situation, and will get a fair reward for his effort.

We have not spoken of Eastern shipment of ripe fruits. So far as it can be carried, it is of course a great advantage. Fortunately sales thus far have as a rule been good and may continue. All the fruit which can be sold in this way, even with a small profit, should be thus disposed of, but only favored localities are accessible to this trade. Drying is the sheet anchor of the California fruit industry, and there is greater need than ever that the best methods should be the property of all. To this end we hope to make a contribution in a special edition on fruit-drying, which is now nearly ready.

A Reform Which Looks Backward.

CHICAGO, June 24.—A special from Washington says: Secretary of Agriculture Morton's policy is the reverse of that of Rusk. The latter's constant effort was to expand the work of the Department and give it the widest possible scope. Morton is trying to limit it to strictly governmental functions. He thinks meat inspection does not warrant the expense in view of the returns, and has cut off nearly 250 employees in the Bureau of Animal Industry since he took hold, saving the Government about \$200,000 per annum. He has caused to be prepared a statement showing the cost of the microscopic examination of pork at Chicago, Kansas City, Indianapolis, South Omaha, Pittsburg and Nebraska City. It shows the total value of pork exports to countries requiring the inspection for the 11 months ending May 31st was \$3,577,745, and the cost of inspection \$239,000, while Great Britain alone, which requires no inspection, bought of us \$34,000,000, or nearly ten times as much, without any expense to the United States. Morton has addressed the German Government on the subject to show our inspection does not affect our trade in that country, as even our inspected meats are not admitted till inspected by Germany.

We are not sure that the above paragraph from the Associated Press dispatches correctly represents Mr. Secretary Morton. We hope that it does not, and we therefore comment upon the misfortune it would portend if it were a true reflection of his policy and purposes.

Mr. Morton must know that for years farmers and farmers' organizations have been earnestly seeking from the Government some share in the expenditures for the upbuilding of the industrial interests of the country which should in some degree reflect the dignity of the agricultural industries and enable them to attain the proportions and prosperity which are their due. For years the farmers of the country saw vast sums of Government money expended for other public interests, while their representative at Washington enjoyed neither funds nor honor. Within a decade there has been notable advancement of agriculture in public esteem, in official dignity and in means of carrying forward measures for the elevation of farming intellectually and commercially, and for the elucidation of obscure matters which are important factors

in agricultural success. Now, having secured such consideration from the throng of professional and commercial men who make our laws, we are called upon to contemplate a man who wears the honors thus secured disposed to make a virtue of turning back into the treasury money appropriated for the advancement of agriculture. Can it be that the earnest appeals, the urgent resolutions, the carefully-prepared memorials, through which the agriculturists secured some respectable consideration from Congress, were all false claims? What else can we conclude when the chief representative of agriculture folds up his portfolio and, by unexpended funds, tells his associates in the Cabinet that Congress was foolish in making provision for the promotion of agriculture?

We understand, of course, that the farmer desires, of all things, care and economy in the expenditure of public money, but his complaint for a generation has been that all other interests had patrimony and he parsimony. He knows that millions have been lavished upon affairs which enriched other classes and impoverished him. He has congratulated himself of late that his interests were securing promotion and extension through Government enterprise, but now he finds himself in danger of falling beneath a reform movement which it has been reserved for his own representative to inaugurate. He has for years called for mercy in the halls of his enemies; now he needs mercy in the house of his friends.

We do not know whether those pork-inspectors could tell trichinae from rattlesnakes. Granted that they could not, and that they should all be run through a lightning slaughtering establishment. Secretary Morton would have served the agriculture of the country well in dismembering them. But that does not seem to be the point. The argument is that so much meat is sold to countries not requiring inspection that it is not worth while to carry on inspection for the small customers who require it. Can it be that Mr. Morton does not know that the entrance of our pork products into France and Germany has been urgently sought for years, and that only very recently and through inspection have the gates been opened? Is it any wonder that the early trade with countries which have been long closed should be small? Is it not a gratifying and encouraging fact that it has so soon reached such figures, and what does the saving of money which Congress has appropriated in the expectation of building up and extending that trade signify? Evidently it would be the costliest saving the country ever made if it should endanger this meat traffic with the great, hungry continent of Europe. In this trade now lies the greatest chance of reducing the drain of gold from American banks. The less hog we give them the more gold they will exact.

But Mr. Morton will write to Germany that the Congress of the United States is foolish to spend money to inspect pork for their ports. We do not know just how the German will look upon this new exposition of Yankee thrift, but we can imagine he will reply in diplomatic phrase that if it costs so much, we can keep the pork.

As we remarked at the outset, we sincerely hope the dispatches misrepresent Mr. Morton's methods and policies. The country is getting an idea that he is narrow and unable to grasp the great affairs entrusted to his care. This should be checked if it be a misapprehension. The Secretary of Agriculture has work which can well employ the broadest, deepest mind. There are reforms, improvements, extensions which will redound to the prosperity of the country through the elevation of agriculture and promotion of its highest interests. There are needs to be met which will require the greatest economy and the closest husbanding and adjustment of his resources. It is not a wise executive who turns back to the treasury money appropriated for the extension of important interests; it is wise, rather, to expend it economically and effectively, and to accomplish the results which are sought. We hope this is really Mr. Morton's motive and ambition, and in such a course we will strengthen his hands in every possible way; but to return to the treasury money appropriated for specific and promising agricultural extension and advancement, while other governmental departments are using their uttermost farthing in the promotion of other interests, seems a strange course for the farmers' representative to adopt. We sincerely trust that in this matter the dispatches misrepresent Secretary Morton.

FIG-GROWERS have often wondered how their fruit compared chemically with imported figs and how the fig soils of Smyrna compare with soils on which we are growing figs in this State. The University Experiment Station Bulletin on Page 8 gives the results of careful analyses and investigations recently completed at the State University. The portion in this week's RURAL refers chiefly to the examination of the figs; next week the comparative view of Asia Minor and California soils will be given. These matters will interest horticulturists who desire to look deeply into things.

From an Independent Standpoint.

All ordinary subjects of public interest are subordinated just now to the money situation. In ten days there has been something like a panic in the country with the usual accompaniments of bank suspensions and commercial failures. In San Francisco the Pacific and the Home Savings banks have gone under, and in Los Angeles and other southern towns there have been a score of similar failures. As we write (on Wednesday) it is assumed that the worst is passed, but it is impossible to borrow a dollar for any purpose from the city banks. The "money market" is tighter than at any time since the failure of the Bank of California, in August, 1875. With all the ordinary sources of relief closed, there is likely to be a series of business failures, both in the city and in the interior. The stringency is certain to seriously affect the industry of the State during the season just now at hand. Since all security is declined at the banks, nobody can do anything in an industrial way unless he has actual money in hand. Every grain bag in this market is "in bank;" that is, not to be had without money—not notes or ordinary securities, but actual money. In one instance, in the neighborhood of Hanford, harvesting operations have been stopped for the want of bags. Some fruit-canners, who usually borrow money for the season's work, cannot, as matters now stand, find accommodation; and it looks very much as if some of them would be unable to operate this season. Some of the older and stronger of these establishments expect to run as light as possible, but others, viz: the San Jose canneries, as described in another column, are preceeding with full force. But despite this exception, every line of business is more or less affected. Stagnation and want of confidence rule the time; and it looks as if we were in for a hard year.

In connection with the present situation, the views of President Cleveland have especial interest. In a recent interview he said that he intended to call a special session of Congress not later than September 15th, and even earlier if unexpected contingencies should make it necessary. He further said:

"While there has been no mystery nor secrecy in regard to my intention in this matter, I think it not amiss that our people should be informed authoritatively that the time is at hand when their representatives in Congress should be called upon to deal with the financial condition, which is a great menace to the country's welfare and prosperity.

"It is well for the people to take up the subject for themselves and arrive at their own conclusions as to the merits of a financial policy which obliges us to purchase idle silver bullion with gold taken from our reserve. One does not need the eye of a financier to see that this gold thus subtracted from the Government's stock is eagerly seized by other nations for the purpose of strengthening their credit at our expense.

"It does not need the art of statesmanship to detect the danger that awaits the continuance of this operation. Already the timidity of capital is painfully apparent and none of us can fail to see that fear and apprehension in monetary circles will ultimately bring suffering to every humble home in our land.

"I think that between now and the meeting of Congress much depends upon the action of those engaged in financial operations and business enterprises. Our vast natural resources and credit are abundantly sufficient to justify them in the utmost faith and confidence. If instead of being frightened they are conservative, and if instead of gloomily anticipating immediate disaster they will perform their patriotic duty, they will at the same time protect their own interests. The things just now needed are coolness and calmness in financial circles and study and reflection among our people."

Evidently Mr. Cleveland believes that the want of confidence back of the present money trouble is due to the silver question; and he distinctly announces his judgment that the silver-purchase law should be repealed. On the other hand, the silver advocates claim that the present stress grows out of the lack of a sufficient quantity of money in the country, and their remedy would be to open the mints to the free coinage of silver. Both these theories are based upon the idea that the prevailing trouble is purely an American matter. They fail, apparently, to connect our financial stringency with recent colossal failures in Australia and with similar stringency all the world over.

In our view of it, the trouble here and elsewhere grows out of the slow but steady contraction in gold. That metal is in reality (no matter what anybody may say to the contrary) the measure of all value; and as it grows scarcer and therefore dearer, the value of other things relatively declines. Thus, although the productive areas of the earth grow wider and more prolific, the values of things steadily decline. The men who hold the money of the world (the gold metal by which values are measured, or securities valued by the gold metal standard) get more year by year for their money, while the producers of commodities get less year by year. This process has been going on for a long time and it has now, in our judgment, reached a point where it must stop or lead to universal bankruptcy. What is needed, as we look at it, is a new and stable measure of value—in other words, an honest dollar. We are not arguing for free silver coinage in the United States; that would be only local treatment for an all-the-world disease, and would be a grievous blunder.

The thing needed, we believe, is the establishment by the consent and co-operation of all the nations of a new measure of value in place of the old gold standard. It is not, in our judgment, the amount of money but the value of it which needs to be regulated. Those who are so eager for "expanding the currency" seem not to know that as business is now conducted—by checks, bills of credit and exchange, notes, etc., etc.—the currency has a self-expansive power beyond any possible minting capacity.

There is, we believe, no desire on the part of anybody to strike from the pension rolls the name of any old soldier, or soldier's widow or soldier's orphan, provided the pension was rightfully earned, and provided, further, that it is really needed. But there seems to be a practically unanimous desire to cut off all names which were gotten on the rolls by misrepresentation and fraud and to stop all payments to persons whose disabilities are not such as prevent them from earning a good living. Of this last-named class—that is, persons who receive but do not need pensions—there are many conspicuous examples. Secretary Gresham draws a pension of \$30 per month; United States Senator Manderson, a rich man, \$15 a month; ex-Commissioners of Pensions W. W. Dudley and John C. Black, both severely wounded and physically disabled, draw pensions, the one of \$36 a month and the other of \$100, but each has been left mentally sound and active enough to make an ample living. Ex-Governor Beaver, of Pennsylvania, a rich man, draws a pension of \$45 a month; ex-Governor Fairchild, of Wisconsin, gets a pension of \$45 a month; Judge Calvin E. Pratt, of Brooklyn, draws a pension of \$35 a month; Rev. Dr. Green Clay Smith, pastor of a wealthy congregation at Washington City, still claims compensation of \$30 a month for a wound in the knee, which, however, does not appear to have affected his capacity for service as congressman of Kentucky or pastor of the church. Others on the list are Gen. Hugh Ewing, a leading and wealthy lawyer of Ohio, who draws \$30 a month for rheumatism contracted in the army; ex-Congressman Newberry, a Chicago millionaire, who accepts \$12 a month for general debility; Gen. Neal Dow, of Portland, Maine, who is wealthy and draws \$7.50 a month; ex-Governor Chase, of Indiana, of abundant means, who draws \$12 a month for general disability, and ex-Governor Dick Oglesby, of Illinois, who, though well off financially, accepts \$8 a month for services in the Mexican war. Gen. William F. Draper, elected to the Fifty-third Congress from Massachusetts, is a very wealthy manufacturer who draws a pension. In every State there are scores of similar cases. These men were all good soldiers, and if they were in want it should be the duty and the pleasure of the Government to provide for them, but they are all well-to-do or rich, and they ought not to receive pensions. The producers of the country ought not to be taxed to pay pensions to men in comfortable circumstances.

The anti-cigarette law enacted by the last State of Washington legislature has been declared unconstitutional and void by the United States District Court. The court says:

The said law of the State of Washington, prohibiting the sale of cigarettes, and referred to in the petition, is in contravention of Article 1 of Section 8 of the Constitution of the United States, and null and void in so far as it prohibits or attempts to prohibit the selling, giving or furnishing to any one by the importer of, etc.

This is probably sound law, but it is the moral rather than the legal aspect of the case which appeals to popular interest. Of the cigarette habit it is not possible to speak too positively, for it is unquestionably a prolific source of moral and physical degradation. The little paper roll of tobacco presents that vicious drug in its most fascinating, hurtful and available form. But this vice, like other personal vices, must be treated from the moral side; its victims must be informed, persuaded and strengthened. If it is to be conquered, it must be through the development of self-respect and of manly self-control. To undertake its abolition by act of legislature is a piece of folly only matched by the Pope's bull against the comet. There is only one way to reform men, and that is through the development of intelligence and character. Efforts based on any other principle will fail, for all experience proves that men cannot be made temperate nor chaste by statute.

It is a duty of society to protect children too young for knowledge and discretion against the cigarette vice by imposing penalties upon selling or giving cigarettes to them. It is right to protect the public by prohibiting the smoking of cigarettes in public places. But here is the limit of prohibition. To attempt more than this is to fly in the face of the impracticable and the impossible, and to do more harm than good.

Some years ago a Californian young woman, Miss Madge Morris, wrote a poem—a real poem, with poetry as well as

rhyme in it—entitled the "New Liberty Bell." It was as follows:

It was not to be builded—this bell that they planned—
Of common ore dug from the breast of the land,
But of metal first molded by skill of all arts,
Built of the treasures of fond human hearts.

* * * * *
Knights came in armor and flung in the shields
That had warded off blows on the Saracen fields;
Freeman brought chains from prisons afar—
Bonds that had fettered the captives of war;
And sabers were cast in the molten flood,
Stained with the crimson of heroes' blood.
Pledges of love—a bracelet, a ring,
A gem that had gleamed in the crown of a King;
The coins that had ransomed a maiden of death;
The words, hot with eloquence, caught from the breath
Of a sage, and a prayer from the lips of a slave
Were heard, and recorded, and cast in the wave
To be melted and molded together and tell
The tale of their wrongs in the tones of the bell.

This bit of verse gained wide circulation, and somebody with a fine instinct pasted a copy of it beside the old Liberty Bell at Philadelphia. Wm. O. McDowell there saw the verses, and it gave him an idea, no less an idea than to carry out the dream of the poet and compound a New Liberty Bell for the Columbian Exposition. Mr. McDowell at once began to collect relics for the bell, and continued the work till he had no less than 250,000 pieces of metal. Every great event in the history of the story of liberty, every great leader in the struggle through the ages for human liberty is represented in the metal that has been cast in the bell. No less than 20 different things dear to the memory of Washington, the flintlock from Thomas Jefferson's gun, metal from the room in which he wrote the Declaration of Independence, copper cooking utensils in which his porridge was cooked while a boy, are in the metal. From South America came a part of the chain of Simon Bolivar. From the home of William Tell a beautifully engraved copper cowbell. From Italy the medals in memory of old Garibaldi. From France a part of the metal from the original statue of Liberty Enlightening the World. From Siberia filings from chains that had been worn by prisoners in the mines of Kara. There are many mementoes from the memory of Lincoln. The daughter of General Sam Houston sent from Texas a medal in his memory. Altogether over 900 express packages came to the foundry, some of them containing 1000 contributions in a package. The bell thus compounded will be rung for the first time on the Fourth—next Tuesday—at Chicago.

Miss Morris, the author of the verses which led to the making of this bell, is now Mrs. Wagner of San Diego and the mother of a daughter of ten. This little girl has been selected to read the poem at Chicago on Tuesday, after which the mother will touch an electric button, which will set the New Liberty Bell to pealing, and with it bells in every State of the Union.

Activity in the San Jose Fruit Canneries.

The great fruit canneries of San Jose do not exhibit the dullness and danger by which other similar establishments are depressed. The *Mercury* of June 28th has the following:

Activity is the order of things among the canneries at the present time, the cherry season now being at its height.

Since June 1st the J. M. Dawson Cannery has been receiving large consignments of cherries, and is as rapidly placing them in cans. About 250 hands are employed, but it is expected at the opening of the apricot season to increase the number to 500 or 600. Shipments will not be made until later in the season, when the company will have an assorted stock of fruits.

Cherries alone occupy the attention of the J. Z. Anderson Packing Company. It reports a decided increase in the number of pounds handled this year over that of last year. A large force of men is employed constantly packing the fruit for shipment.

At the Golden Gate Cannery, on North Fourth street, the work of packing the large quantities of cherries is being prosecuted by 350 hands.

A rough estimate places the amount canned at fifteen tons per day. Not only is the cherry crop above the average in quantity but also in quality, many being as large as plums.

During the past winter a change of location has been made by the San Jose Fruit-Packing Company from North Fifth street to San Carlos street, adjacent to the narrow-gauge railroad. As the cannery now stands it is undoubtedly the largest and most fully equipped establishment of the kind in the world. New buildings have been erected and equipped with the most modern machinery, at a cost of about \$50,000. The structures are all well lighted and ventilated, and every precaution has been taken for the comfort and health of the vast number who are to work within them. A pretty grove has been set apart, to be used exclusively by the women and girls as a place to enjoy their luncheons. The main cannery is 300x400 feet and is modern in every detail. The receiving room is 15x100 feet, and is so arranged as to save all labor possible. In addition to these buildings is the tin-shop, 100x70 feet, the preserving and jelly department, 100x85 feet, and a solder room and storehouse 200x40 feet. The establishment covers an area of more than ten acres, mak-

ing it the largest in the world. A commendable feature of the new cannery is its vast storage capacity, there being room enough to store 500,000 cases of fruit at one time. When running at full capacity 200,000 cases can be turned out in one day. W. H. Wright is the able manager of the institution and presides at the elegantly furnished office which stands alone from the other buildings. All of the cans are outside-soldered and made by the firm. The cannery is now employing a force of 350 hands to care for the cherry crop, but as soon as apricots are brought in it is proposed to employ about 1000 hands.

Fruit Products and the Tariff.

Readers should not forget the call for a convention of fruit-growers to discuss measures and present facts which shall strengthen the claim made for protection through an impost upon imported fruits and fruit products. It is exceedingly important that the protection hitherto enjoyed shall not be removed. In the present complexion of public affairs there is counted danger to all protective tariffs, and Californians must exert an influence to maintain the encouragement under which the industry has advanced thus far. Some, at least, of our congressmen desire to present the claims of our growers at the next session of Congress, and to secure the facts upon which such claims rest the general assemblage of growers is invited. Let all who can take part in it.

A notice in another column gives definite information upon the holding of the meeting and to this the reader is referred. It will save time, and, at the same time, enrich the meeting if all who attend can prepare careful statements drawn from their own experience and observation to show the needs of the fruit interests in the line of protection, the local difficulties which prevail and which should secure relief from such competition as would follow the free entrance of foreign products to the markets of this country. The importance to the country of the prosperity and extension of the fruit industry is also a matter which should be clearly shown by sure figures. This matter in all its bearings should be earnestly handled by the growers, and we trust the meeting of July 13th will command wide attention.

Dairymen to Co-operate.

An address is being circulated, calling a convention of practical dairymen of the State to meet at Petaluma, September 2, 1893, for the purpose of organizing a California State Dairymen's Association. The object of the association will be to promote the advancement of California dairying interests. It is recognized that the industry here is not up to the Eastern standard in practice and results, and it is designed to take steps toward better and more modern methods and appliances, improvements in breeds, establishment more generally of neighborhood creameries, and other economic measures. It is recognized that more can be done by co-operation than by other means.

Uniform methods and packages will be a matter that will afford an ample subject for discussion by the dairymen. It is to be hoped that the association will be organized and be a success. Previous efforts have not been very successful, but that is no indication that the thing can't be done. The way to co-operate is to co-operate.

A New Cherry—The Deacon.

TO THE EDITOR:—We send you by express to-day a sample box of our new cherry, The Deacon. The cherry is something new and we consider it to be very fine. It is, as you will doubtless notice, very large and handsome in appearance, and the firmest cherry that we know of. It ripens about ten days after the Tartarian and is a very heavy and regular bearer. We send you the sample, knowing you are interested in all new and desirable fruits, and we believe we have the coming cherry.

W. R. STRONG COMPANY.

Sacramento, June 21, 1893.

The fruit received warrants the above description. It is an exceedingly handsome fruit and will probably show exceptional market qualities owing to its firmness, which is notable. It is as symmetrical in shape as the Royal Ann, with the color of the Black Tartarian. We would like to know something of the history of the variety.—ED. PRESS.

Drying Peaches.

TO THE EDITOR:—Could you kindly inform me through the columns of your paper, the best and most practicable method to skin and dry peaches? A SUBSCRIBER.

Walnut Creek.

We expect contributors to our special dried-fruit edition to cover these points. To be sure of it, we print these questions and invite all to answer them. Let us have a symposium on the peach.

To Destroy Linnets.

A correspondent writes the RURAL PRESS that in the western portion of Santa Clara valley the linnets made inroads on the bloom buds of French prunes, but would not touch the German prunes, nor did they disturb the leaf buds on either. Strychnine dissolved in vinegar, and poured into a dish where they come to drink thins these birds out readily.

The Value of a Brand.

Mr. C. E. Torrey, of Tustin, Orange county, takes unusual pains in curing and packing his lemons, and the result shows that his care is amply rewarded. The lemons are cured in wrappers, one layer to the tray, and he has gone to considerable trouble and expense in getting up attractive labels, stencils, wrappers, etc. The result is that in the New York market he has been offered \$3 and

upward per box, and a dealer in Seattle is anxious to contract with him to take 25 boxes every five days at \$4 per box. The Seattle man writes Mr. Torrey that his lemons are second to none, domestic or foreign. It is singular how quickly the best brands of fruits—lemons, oranges, or any other citrus or deciduous—become known. No packer need think that his efforts to produce first-class varieties will be wasted, and that they will be unnoticed and lost in the great mass of fruits poured into all the many markets of the world. The value of a brand is known by most intelligent fruit-raisers. Reputation is often half their stock in trade.

Gleanings.

A CREAMERY AT LOMPOC is talked of.

IF YOU WOULD BE WELL HEELED, let your garden be well toed.

HOT IN THE COUNTRY NOWADAYS. But that's the penalty of having all sun and no clouds. That's California.

AFTER THE GRANGE OR FARMERS' INSTITUTE is over, everybody can think of something mighty interesting he might have said, and didn't.

A PETITION ASKING THE GOVERNOR to reorganize the State Board of Horticulture is being extensively circulated in southern California.

IT IS WHISPERED that the number of the Cleveland family will shortly be increased from three to four. There's no luck in odd numbers.

THE PENNIMAN FRUIT COMPANY, of San Jose, has leased and will operate the cannery at Santa Maria this season. The pack promises to be a good one.

THE TOTAL NUMBER OF CARS OF FRUIT shipped from Vacaville to Eastern markets for the week ending Thursday, June 22nd, was 28; to San Francisco, 7.

AT ONE TIME in the great cowboy race, Rattlesnake Pete had a long lead on all others. All of which confirms our previous opinion that Rattlesnake is some shakes.

THE CALIFORNIA FRUIT ASSOCIATION shipped, on the 14th inst., a carload of fruit by fast freight over the Rock Island route, the car arriving in Chicago in 5 days, 18½ hours.

IT SHOULD BE SAID that the "Mr. Kr. Sr." poem in last week's Gleanings was written by a Honolulu minister. Curious what these ministers say and do sometimes. Look at Mr. Briggs.

IT IS GOOD to take a short rest after dinner before returning to work. But the farmer who wants to sit down then and rest a year or two will make slow time in a race with a mortgage.

FIGURING ON YOUR PROFITS in the fruit business is all well enough, if you do it after the fruit has been raised, packed, shipped, and marketed, and you have the money in your pocket.

THE CROP OF CHERRIES on the Chico rancho was sold to a San Jose firm, and up to last week 136 tons had been shipped. The price paid is \$80 per ton, which gives the return of \$10,880 for the crop so far.

THE CANNERY AT EAST NAPA is at work on cherries, after several seasons of idleness. Thirty or more people are employed. The right people seem to have hold of the enterprise, and it deserves success.

FLORIDA PAPERS ARE VERY INDIGNANT over recently published statements that the citrus groves of that State are dying out. They say it isn't so. But it does seem to be the truth that the acreage is not increasing appreciably.

IF CANNERS WOULD FLAVOR the apple with quince, they would greatly improve the quality of the fruit, according to the palates of most buyers, and increase the demand for that article of canned goods, says the *Fruit Growers' Journal*.

IT IS CLAIMED by some that a good quality of licorice root may be produced in Southern California. During the nine months ending with March last, the amount of licorice root imported reached 68,145 940 pounds, valued at \$1,260,789.

OF SIX CANNERIES in SONOMA COUNTY, Petaluma's is the only one running at present. The condition of the money market and the large stocks of canned goods are somewhat discouraging to cannerymen. But others will doubtless start up later in the season.

HERE IS AN OLD TOAST:

Here's health to you, as good as you are;
Here's health to me, as bad as I am;
But good as you are and bad as I am,
I'm as good as you are as bad as I am.

THE CALIFORNIA GIRL is of the right sort. She is not afraid to go into the orchard to pick fruit, or the packing-house to pack, or the cannery to can. They are the sugar of earth, the roses of Sharon, the lilies of the valley, the—in short, they are the World's Fair.

SOME CORN-GROWERS, says the Santa Ana Blade, left a stock ten feet high in front of the real estate office of Humphrey & Pitman this morning, which, considering the early time, is a marvel. If on the 10th day of June cornstalks are ten feet high, what will they be by the 1st of September?

PROF. MEEHAN, of Meehan's Monthly, says that of the 100,000 flowering plants known to the botanist, possibly not 10 per cent have any odor. "The large majority of plants are, in fact, scentless." Of 50 species of mignonette only one is sweet, and of 100 varieties of violets not a dozen are sweet ones.

THE COLUSA FRUIT-GROWERS' ASSOCIATION has been organized. N. Cutter was elected chairman and J. L. Seawell secretary. The object of the association is to establish an Eastern market for Colusa fruits. The members pledge themselves to ship through the association. Let the good work continue.

AN EXCHANGE EDITOR has brushed away the cobwebs of his bible, and has discovered that the present dressmaker's device of the balloon shoulders was denounced as long ago as the time of Ezekiel, that prophet having issued this solemn warning: "Thus saith the Lord God: Woe to the women who sew pillows on all armholes."

THE ORANGE GROWERS OF ORANGE have organized by the election of the following officers: Col. J. A. Scarritt, president; I. L. Collins, secretary; A. F. Snell, treasurer; Joel B. Parker and H. K. Cooper, executive committee. A committee has also been appointed to solicit signatures. The growers are to become shippers as well.

"THE SECRET OF MAKING GOOD HAY," says E. S. Hall in the *Venturian*, "is to cut it just when the milk is running and not after it has got dry enough to thresh for grain. When cut just before it ripens the grain sticks in the heads and the full sustenance remains in the straw. Such hay goes much farther than the ordinary kind of indifferently cured article."

THE MODESTO AUTHORITIES recently attempted to assess wheat in city warehouses for city taxes, and the farmers in that section promptly announced that they would hereafter patronize outside warehouses, or ship to Port Costa direct. The Modesto authorities have now concluded that such wheat may be exempt under the law. Necessity is sometimes a pretty good interpreter of law.

VACA VALLEY, says the Reporter, has been filled with men

and boys for the past week seeking work in our orchards. The Chinese seem to have the preference with our fruitmen, while the Jap comes in as second choice. White labor must wait and take what is left. Consequently we see daily on the streets dozens of white men and boys seeking work and but few of them finding it.

TALKING ABOUT BIG EGGS, the prize story comes from Madagascar. A twelfth of a dozen eggs of the *xyornis maximus*—that is Madagascar Latin for hen—sold in London recently for \$335. It was 34½ inches long and 28 inches round, holding as much as 148 common-sized hen's eggs. The *xyornis maximus* is a bird, the largest living or extinct. We have big eggs in California, but they are several sizes smaller than this.

THE STATE PAPERS are talking of a recent exploit of a San Francisco paper, which printed a piece of hogus news to trap a rival into appropriating it, and thus convict it of stealing. The feat was successfully accomplished, and paper No. 1 points the finger of scorn at paper No. 2 as a news thief. In other words, paper No. 1 deliberately told a lie and deceived its own readers in order to induce paper No. 2 to commit a theft. And this is journalism!

IT HAS BEEN SUGGESTED that the authorities at San Quentin send grain bags to authorized agents in all parts of the State, from whom farmers may purchase, and to whom they may return unused bags in good condition and obtain the price paid for the same. In other words, that the State give farmers the advantages in this direction that other dealers do. Should the suggestion be followed, the immense surplus of bags at San Quentin would speedily diminish.

AN ITEM IS GOING THE ROUNDS of the State press, says the *Expositor*, that "millions of worms are devastating the vineyards of Fresno county." This is altogether an error. Worms are not devastating the vineyards of Fresno to any extent. They have appeared at two or three points outside the regular vineyard district, but have done no material injury to the grape crop of the county. The worm that is doing the most of the damage in that vicinity is the worm of the still.

THIS IS THE DELICATE WAY in which the Latah (Idaho) Times reminds delinquents that even editors are shy a dollar or two sometimes: "This ¶ is to state that the weather in this ¶ has been without ¶ in severity since the morning *a* sang together, consequently \$s are few in our office, and we hasten — the opportunity to ask our subscribers (with their ¶ mission) to ¶ in cash, so that we will not have to stand with a ¶ in our ¶ to keep our creditors away from our personal property."

THE OREGON LAWS place some difficulties in the way of exporting Mongolian pheasants for the purpose of propagation in California or at other places. The law expressly forbids such exportation. It may be said, however, that this statute is as much honored in the breach as in the observance, and those communities which desire to import these fine birds will find a way of obtaining them. All that is necessary is to get a couple, and then—as the Irishman said about the Venetian gondolas—"let nashure tak her coorse."

THERE IS SOME PERPLEXITY about the term "Midway Plaisance" at the World's Fair. The Midway Plaisance is the section devoted to private exhibitors from all parts of the world, who charge admission or sell wares, or do other things that will separate the visitor from his money. It is the side-show to the main circus, so to speak. It is a conglomeration of all nations, each striving to attract the wayfarer and sell or show him something. It is one of the most interesting—and expensive—features of the fair.

THE ORANGE NEWS PUBLISHES A STATEMENT of one of the orange-growers in that section, which is as follows:

800 boxes of seedlings.....	\$470 18
Picking, packing and boxes.....	\$126 00
Freight and ice.....	355 50
Cartage.....	9 00
Commission.....	47 02
Balance due Earl Fruit Co.....	67 34
	\$537 62 \$537 62

In this case the packer gets nearly \$200 clear profit, while the grower pays \$67.34 for the privilege of selling his crop in the East. Who says fruit-growing doesn't pay? If it doesn't pay the grower it will the packer. So it isn't very strange after all that there is a general movement in California to make every grower his own packer.

THE AFFAIRS OF THE GREAT CATTLE FIRM of Miller & Lux are to be made the subject of litigation in the courts. Mrs. Miranda Lux, widow of the deceased partner, Charles Lux, is dissatisfied with the manner in which the business and affairs of the firm are being conducted by the surviving partner. According to the provisions of the will of Charles Lux the entire management of the business was to be vested in Miller. The latter, although now controlling more land and cattle than any other man in the world, is anxious to still further extend the possessions of the firm. Mrs. Lux, on the contrary, desires some of the assets turned into money, so that she can realize upon her share. She now announces her intention of suing for a partition of the entire assets of the firm, valued at \$20,000,000. Pending the litigation she desires a receiver appointed to assume charge and control of all the ranches and cattle which are to be made the subject of controversy. The suit promises to be the most important of its kind ever tried in California.

THE FECUNDITY of the twice-stabbed ladybird (*Chilocorus bifulvus*) seems to be well established by the breeding of this species on a carob tree in the University Economic Garden at Berkeley. The tree has been somewhat infested with a brown *aspidiotus* scale and has attracted the attention of these scale-eating ladybirds. A few weeks ago we noticed the beetles upon it, but not particularly numerous. At present the tree is almost alive with the larvæ and such havoc is being wrought upon the scale that the branches show chiefly the white under-scale from which the insect has been torn by the ladybird. May its tribe increase.

A LARGE NUMBER OF CITIZENS of Butte county met at Oroville last week, in response to a call for a road convention, and passed a resolution denouncing—the word is not too strong—the proposition to bond the county for road purposes. Several speakers expressed themselves in favor of good roads, but were opposed to any bonding scheme. It seems not to have occurred to some of the gentlemen who aired their views on the subject and found severe fault with newspapers for agitating the matter, that the only way to have good roads is to build them, and the only way to build them is to pay for them.

THE FORTUNA CANNERY, in Humboldt county, starts the season with several large advance orders. Its specialty is strawberries, for which it has quite a high reputation. By using first-class fruit and first-class methods, other establishments ought to do as well.

FRUIT MARKETING.

Success in Co-operation.

In conversation with the editor of the Oroville Register, Mr. B. F. Walton, of Yuba City, thus spoke recently of the benefits of co-operation by fruit-growers:

"The man who ships one box of ripe fruit to New York or Chicago gets as much in proportion for it as the man who ships ten boxes or a thousand boxes. Without co-operation the small grower, who can only send a few boxes at a time, would be unable to dispose of his fruit to advantage. We send out a rustler, who goes among the fruit-growers and takes a list of those who can ship from day to day, and the kind of fruit and the number of boxes. One man will send 10, another 50 and a third 100 boxes of fruit, and in this way the carload is made up. Should one grower fail to be on hand with his lot of fruit, he is charged for the space. The fruit sells in the East in proportion to its size, color and condition. If a man packs first-class fruit he receives a higher price than the one who sends poor or inferior fruit. I tell my nephew who has charge of my packing not to send a single peach that he would be unwilling to pay five cents for when placed on a stand in the Eastern markets. By thus joining together we can ship a carload a day, while without it only a few of the largest growers could ship to advantage. We consign our cars to the California Fruit Union, and that body directs to what points the cars shall be sent. They thus prevent a glut in the market as far as possible. I think we have reached the height of fruit production in this State, unless some plan of this kind is followed by fruit-growers. If we join together and ship in the manner I have mentioned, then an immense field is opened to us. We can grow the fruit all right—what we now need to do is to look after the means of placing in the customer's hands in the cheapest and best manner. We have been shipping the early peaches, apricots and cherries, with some plums. These early peaches, such as Hale's Early, Alexander and Buck's Prolific, find but a limited market here, as they are not the right kind for canning or drying, yet when shipped East we get a handsome price for them. Why, we realized almost as much per pound on our first shipments as the orange-growers in the southern part of the State realized per box for their citrus fruit. In Sutter about three-fourths of our fruits are peaches, while the other fourth is made up of cherries, plums, prunes, apricots, etc. The prune here does exceptionally well; it grows large and fine and contains a great proportion of saccharine matter. If our growers would pay attention to this fruit and thoroughly cultivate their orchards during the summer, so as to keep up the moisture, and in this natural manner irrigate the soil, so as to give abundant moisture to the prune, I am satisfied we can grow the finest prunes in the State. We must learn to dry this fruit and pack it in the most skillful manner to be successful. We grow as fine raisin grapes in this valley as can be produced in any other part of California. They are large, highly colored, richly flavored and contain a great amount of sugar. If our growers would pay careful attention to raisins, we can compete with Fresno or Riverside or any other locality, for the grape we produce is equal to or superior to theirs and the climate here is favorable for raisin-making. We have an element of wealth in our warm and genial summer that is equal to almost every other advantage we possess as a fruit region. In Sutter this season we will ship and dry more fruit than usual and can less. The Eastern markets are filled with a great deal of canned fruit from California's last year's pack, and this must be worked off ere the merchants there will place orders for more canned fruit. In our co-operative movement we have followed the most approved business methods and have not attempted to revolutionize trade as was done by the Los Angeles and Fresno growers. This is one of the reasons why, at Yuba City, co-operation has been successful in a number of instances."

Crystallized Fruit.

Mr. Bishop, of the fruit-crystallizing firm of Bishop & Co., has just returned to Los Angeles from Chicago, where he has been installing the firm's exhibit at the World's Fair. While away he investigated the market for these products.

There is, he says to the Los Angeles Times, an unlimited market for California crystallized fruit, if prices can be made right. French goods are very low in price at present, and it is somewhat difficult for California to compete, in spite of the duty, which is about 30 per cent. Labor enters largely into the cost of these goods, and the difference between California and French wages is very great.

The firm is at present working on cherries. Most of this fruit has to be brought from the North, but a very good lot was sent in from the Caluenga a few days ago. Raspberries, strawberries and apricots will follow next.

Not only is labor much higher here, but also many varieties of fruit, such as berries. Thus, French canned raspberries, for use in this business, can be bought in New York at 11 cents a pound, while a grower, who has 17 acres in raspberries just south of Los Angeles, asks 10 cents a pound for his product.

Like most other men of experience in the fruit business, Mr. Bishop insists strongly upon the necessity of careful picking and grading. One poor shipment will destroy confidence on the part of buyers, and make it difficult to obtain good prices for subsequent shipments.

Fruit Packing for Profit.

At a recent meeting of the Sutter County Horticultural Society, R. C. Kells gave a practical illustration of his method of fruit packing by having several boxes of apricots direct from the trees brought before the society and his two experienced packers, Misses Edith Kells and Bertha Black, sorted, wrapped and packed the same in the proper shape for shipping East. The system of baskets and crates

used, was four baskets to a crate, each basket being three-layer deep and weighing five pounds. In one crate the fruit was wrapped separately and placed in the baskets, while in another crate the fruit was laid in without being wrapped, but paper was placed between the layers. The apricots were just coloring and in the proper condition for shipping. The packing was watched with much interest. Mr. Kells stated that it cost for labor in packing six cents per crate, and the paper, baskets and crates cost six cents more, and the total expense per crate to get it sold in New York was 70 cents; this includes the freight, commissions, etc. He considered that it paid to pack well and to use good fruit above all things.

J. Reith, representing a Chicago commission firm, spoke of the importance of good packing, as the American people were said to buy with their eyes more or less and that neat packages of fruit sold far more readily than poorly packed ones. The present system of baskets and crates as used here was popular among the retailers.

Julien Marcuse, representing Allison & Gray, of San Francisco, also spoke on the question and urged the importance of good, neat packing and good fruit.

THE DAIRY.

Increasing the Milk Yield.

When at the sale of Mr. Humbert's Holstein cattle last week, where we saw good two-year-old bulls, in good condition, selling at \$52.50 down to \$22.50, yearlings from \$25 to \$35, and calves down to \$10, we thought there were not many present who were anxious to improve their herds with a view to an increased flow of milk or bulls would have sold for something nearer their real value than they did; else those present who had breeding interests at stake did not take into consideration the beneficial influence of a good bull in a herd of cows, or it might be that some did not want to use bulls of that breed. If such prefer to use scrub bulls, through prejudice to any one breed of cattle, they stand in their own light, for a good pure-bred bull of almost any breed, if he is good for the purpose wanted, is sure to leave his mark in the way of improvement on any ordinary herd of cattle; neither should a few extra dollars in price deter any one from buying the bull that is likely to do most good in his herd, whether his object be improvement in the milk or beef-producing qualities. The bull may not, literally speaking, be half the herd, but it should ever be borne in mind that he has an influence for betterment, on the contrary, on every calf of his get. This is what many do not seem to think of, and, judging by their actions, they think, Peter Bell like, that a bull's a bull and nothing more.

In regard to what can be done by selection and good breeding, some interesting facts are given in the bulletin of May, 1893, from the Agricultural Experiment Station connected with the Cornell University. It appears that up to the year 1874 the average yield of milk per cow had been a little over 3000 pounds a year. By the use of pure-bred bulls and a careful selection of the best heifer calves the descendants of these same cows that in 1874 produced only about \$3000 pounds of milk, gave in 1892 upward of 7000 pounds per cow, the largest yield being 11,165 pounds from a six-year-old cow, and the smallest rather under 3000 pounds from a two-year-old heifer.

The second largest yield was 10,754 pounds of milk, which produced a larger amount of fat than the milk of any other cow. The butter fat from this cow, according to the Babcock test, was 439 pounds, and that from the cow giving the largest quantity of milk was 418 pounds of butter-fat, which, according to the usual way of reckoning for butter, gives 549 pounds and 522 pounds of butter respectively for the two cows. The average yield of butter for the whole herd of 20 cows, reckoned on the same basis, was 357 pounds per cow, which is a large average yield, but as it is supposed to include the whole of the butter that the milk originally contained, without allowing for what might be lost in both skim milk and buttermilk, it may fairly be considered to be something like 20 pounds of butter per cow more than could be obtained by actual churning.

The feed used consisted of clover hay, ensilage, mangold wurtzel, bran, cornmeal and cotton seed meal. The cows had good pasture in summer and about four pounds of grain per herd in addition for the greater part of the time. They were fed about as much as they would eat up clean, and it was found that the cows consuming the most food produced both milk and fat at the lowest rate.

The average cost of milk was 62½ cents per 100 pounds, the highest for one cow being \$1.48 and the lowest 44 cents. The average cost of butter fat was 15.8 cents; highest 27 cents, lowest 11 cents for one cow. The difference in cost of milk and butter between the highest and lowest figures leaves a considerable margin for profit, or loss, and is proof of the necessity of a dairyman knowing each individual cow in his herd and what it will produce, in order to carry on his business in such a way as to obtain the greatest profits possible under the circumstances in which he is placed.

We hear a great deal said about the uselessness of keeping large cows and wasting food by supporting so many hundred pounds of unnecessary weight of carcass, people who talk in this way contending that small cows are more profitable than large ones in the dairy. As there are exceptions to all rules, under certain circumstances it may be so, but, in regard to a large proportion of the cattle of the country, which are kept on farms of mixed husbandry and on good average land, with such feed and care as good cattle always deserve to have, the heavier class or breeds of cattle will be found most profitable, all things considered.

On this subject the following table, from the same bulletin, will afford much that is instructive to those interested in dairy cattle, as showing the amount of food required by each cow to produce given weights of both milk and fat, also the amount consumed by each cow per 1000 pounds live weight per day. The time includes the feeding season

only, and is from November to the end of April, six months, only that any portion of time a cow was dry is not included in the table.

DRY MATTER REQUIRED FOR ONE HUNDRED POUNDS MILK AND ONE POUND FAT.

Cow.	Number of days.....	Lbs. dry matter consumed.....	Lbs. milk produced.....	Lbs. fat produced.....	Lbs. dry matter consumed for each lb. fat.....	Lbs. dry matter consumed for each lb. milk.....	Lbs. live weight, lbs.....	Lbs. dry matter consumed per 1000 lbs. live wt. per day.....
Beauty.....	152	3,754	4,778.00	79	225.56	17	858	28.8
Belva.....	182	5,512	6,349.76	87	196.30	28	1,326	22.8
Bertha.....	18	4,447	3,280.50	136	162.03	27	916	26.8
Carrie.....	182	4,591	3,092.25	148	108.93	42	972	26.9
Cora.....	90	2,319	2,578.50	92	133.95	17	1,123	22.9
Daisy.....	182	4,337	1,741.25	249	97.63	44	815	29.2
Freddie.....	182	5,723	7,085.50	81	260.14	22	1,474	21.3
Gazelle.....	106	2,563	2,427.50	105	123.31	21	1,071	22.6
Gem V.....	30	767	542.25	141	30.20	25	829	30.8
Glista.....	182	4,784	3,932.125	123	134.13	36	1,270	20.7
Glista 2d.....	152	3,825	2,736.00	140	82.13	47	1,011	26.1
Jennie.....	105	2,481	813.75	137	96.79	26	1,130	22.9
May.....	138	4,139	3,440.50	120	124.13	33	1,283	23.4
Mollie.....	182	4,782	4,743.75	91	153.72	31	1,007	28.1
Pearl.....	18	5,363	5,918.75	91	193.12	28	1,160	26.4
Pet.....	91	2,636	2,795.00	94	95.71	28	1,305	22.2
Puss.....	107	3,568	4,743.00	74	140.36	25	1,520	21.6
Ruby.....	152	4,679	4,485.50	102	161.03	28	1,183	25.5
Snadow.....	182	5,668	5,340.75	104	242.89	13	1,239	24.7
Sue.....	182	4,930	5,933.75	83	266.23	19	1,040	26.4
Average.....				104		27		24.7

The prices charged for feed are pretty much the same as they would be in this State, except that oats at 35 cents a bushel is a lower price than it can be had for here; cornmeal at \$20 a ton is also lower than it is here, but it can be substituted by fine ground barley at about the same price. Then again, we have no substitute for cotton-seed meal at \$25 a ton. Linseed cake comes nearest in feeding qualities, but the price is at present too high for profitable use, as compared with the price of other grain feeds.

In regard to breeds of cows named in the table, the first eleven were: nine grade Holsteins and two pure bred ones; the next seven Jerseys and Jersey grades, and the two last common grades, bearing evidence of having considerable Shorthorn blood.

The summing up of the whole matter is about as follows: That with a fairly good herd, well kept and cared for, milk can be produced at 65 cents a hundred weight and fat for 16 cents a pound for cost of food consumed.

That individuals of the same breed vary more widely in milk and butter production than do the breeds themselves.

That the larger animals consumed less pounds of dry matter per 1000 pounds live weight than did the smaller animals, and that in general the best yields of fat were obtained from cows that gave at least a fairly large flow of milk.

POULTRY YARD.

Poultry vs. Fruit.

There is more clear money in raising poultry in comparison to the amount of cash invested than in any other occupation that a man can follow. A first-class layer will cost 75 cents. She will lay during the year nine dozen eggs, worth 25 cents a dozen, or \$2.25. It will cost \$1.16 to feed and care for her during the same period. This gives a profit of \$1.09 for each hen, or more by 34 cents than the cost of the hen herself. It will require an excellent cow to more than pay for her food and attendance, and yet leave a clear margin of more than 40 per cent profit.

It is not true that only a limited number of hens can be kept on one farm. There are many poultry raisers who have from 250 to 1000 hens on a single farm, so that a man who devotes himself to this occupation can make money by giving the business careful attention.

To make this business pay one must use care, good judgment and brains. He must be willing to work and work hard, but he can succeed with a small capital. There are many men who cannot start an orchard because they have but a small capital, yet they can do well by going into the poultry business. San Francisco alone sends out of the State \$250,000 a year for eastern Eggs. The United States in spite of a tariff of five cents a dozen buys from other lands 10,000,000 eggs a year. In 1892 the eggs of this country amounted to \$200,000,000, while the poultry produce was \$100,000,000, making \$300,000,000.

One man with 50 hens makes \$70 clear in a year, another with 95 hens made during the same time \$125. One poultryman says 16 hens will give him as much clear profit per year as a cow, yet his hens cost him but \$12, while the cow is worth \$40. There is always a market for eggs and the price per year will average 25 cents a dozen.

In fruit growing there are short crops, loss in drying and handling fruit, bad seasons, loss of trees, scale, worms and other pests to fight, and occasionally the grower fails to get his money after he has sold his crop. Eggs are cash and there is no drying, no worry about extra help, no loss from commission merchants, no short crops and no poor years. There is room for a man to make money on a small capital and at the same time he can have a small orchard or a small vineyard growing, while his hens help make a living for himself and family.—Oroville Register.

Raising Chickens on Farms.

My plan, which I have successfully pursued for a number of years with my flocks, is to have a number of coops just large enough to comfortably roost about 25 full-grown fowls. These I place around on different fields, and as the ground becomes foul they are moved on fresh ground, thus securing a two fold advantage, viz., cleanliness and economizing manure. In these coops I place one or two hens with their broods, and, when their mothers show signs of

laying, they are returned to the laying flock, and the young left to themselves or an extra cock as leader. These are fed and watered, unless running water is at hand, until the wheat harvest is over, when the coops and fowls are moved to the wheat stubble to glean. Here is a period of from six to eight weeks that the growing stock requires little or no feeding, thus saving a handsome margin if the number reared is large. During plowing time a flock may be advantageously employed following the plow, picking up grubs and worms, which they will readily learn to do. In this way finer and healthier fowls can be reared with less than half the food necessary when confined to one run.

I have shipped breeding stock to nearly every State in the Union and have received many letters admiring the beauty of form and size of fowls. Under the above system fowls get natural exercise, hence a fine form and good size and freedom from disease.—H. H. Flick, in American Stock Journal.

That Sleepy Disease.

There is a difficulty often met with. Little chicks become stupid, go to sleep and appear to sleep themselves to death. Some style it the "sleepy disease," and in some communities it destroys the chicks rapidly, especially in warm weather and in a warm climate. A lady reader writes us about it, and we give a portion of her letter. She says:

"I lost nearly all of my chicks with sleepy disease. They would stand and sleep, with their bills resting on the ground. The chicks are from a cross of Buff Cochins male and common hens."

The sleepy disease is nothing more nor less than lice—the large lice on the skin of the heads and necks. Whenever a chick droops, and you do not know the cause, look closely for the great blood-sucker on the head, and rub two or three drops of sweet oil on the head of each chick twice a week.—Poultry Keeper.

Ode to the Hen.

Of robin and bluebird and linnet, spring poets write page after page; their praises are sounded each minute by prophet, soothsayer and sage; but not since the stars sang together, not since the creation of men, has any one drawn a goose feather in praise of the patient old hen.

All honor and praise to the singing that cheers up the wildwood in spring; the old recollections oft bringing joy, childhood and that sort of thing; but dearer to me than the twitter of robin or martin or wren, is that motherly cluck when a litter of chicks surround the old hen.

And her midwinter cackle, how cheery, above the new nest she has made; it notifies hearts all aware another fresh egg has been laid, and when the old bird waxes heavy and aged and lazy and fat, well cooked with light dumplings and gravy, there's great consolation in that.

No Lice on the Chicks.

Because you do not see any lice on the chicks, do not suppose that they are free from lice. There is one kind of the pests that requires diligent and careful search. It is the large head-lice, or blood-suckers, and they work on the skin of the head and neck of the chick. When a chick seems sleepy, look for the large lice. It is also the cause of so many young turkeys dying.

The large lice are never seen except on the body of the fowl or chick, and when the chicks come out of the shells, the lice leave the head of the mother and go to the chicks. The remedy is to rub a small quantity of lard or sweet-oil on the head of the hen, and about two drops on the head of each chick, twice a week. Too much oil, or grease of any kind, is detrimental; hence it should be used sparingly. Grease destroys the lice almost immediately.—Farm and Fireside.

A Foolish Prejudice.

It has been claimed that incubator-hatched chicks are inferior to those hatched and raised in the natural manner, and that they are not suitable for breeding purposes. Such supposition arises from ignorance. There cannot possibly be any difference. If a chick is hatched, it comes into the world fully endowed by nature to maintain its existence, no matter what the method of hatching may be. But after it is hatched, everything depends upon the care. We have seen incubator chicks superior to those hatched under hens, as also the reverse. They are, when matured, equal as breeders in every respect.—Poultry Keeper.

The Droppings.

Do not allow the droppings to remain in the poultry-house longer than twenty-four hours, as they will soon decompose during warm weather and give off disagreeable odors, as well as injure the health of the fowls. If the poultry-house is given a cleaning every day, the work will be easy, as a broom may be used for sweeping the floor, after which dry dirt may be sprinkled over the floor, and especially under the roosts. Scatter the droppings on the garden plat, as they are more valuable when fresh than at any other time.—Farm and Fireside.

THE VINEYARD.

Success of Resistant Vines.

Mr. Allen B. Lemmon, of Santa Rosa, recently made a visit to the vineyardists south of Sonoma for the purpose of ascertaining results from the planting of resistant vines. Among other things he says:

"Supervisor William Thompson says that his old vineyard began to die about five years ago and that its usefulness was ended last year. He has been planting resistants

but his plan of grafting has been different from that of most of his neighbors. He says the cleft or split graft is almost sure to leave a black spot which he thinks will cause the decay and death of the vine in time. Mr. Thompson grafts by the whip or splice method. He says an active, experienced man will graft 600 vines per day. He cuts the resistant stock on a level with the ground, the whip graft is put in and the earth heaped up to hold the parts together until they unite. In this way not more than five per cent of the grafts are lost.

"T. S. Glaister, of the same neighborhood, has planted Lenoir mostly as resistant. He says they make a stronger, better growth than the Riparia and he thinks them safe against the attacks of phylloxera. He considers the Tokay an excellent resistant vine. Eighteen years ago he grafted Zinfandel on Tokay roots and they have lived and continued healthy while vines all about them have died. Mr. Glaister told of a slide in his vineyard that put these Tokay stocks out of place so as to make room for another row of vines. He planted Zinfandels and every one of them have died while the Tokay roots on either side have remained in perfect health. The Tokays make many new roots in the fall of the year and are thus strong to resist the attacks of phylloxera.

"An experiment made by Mr. Glaister was to cut Malvoise about eight inches below the surface and graft Lenoir stocks. The second year he grafted Semillon on the Lenoir stocks and in one year he had a full crop. The Lenoir entirely absorbed the Malvoise roots and grew with great vigor. This experiment was tried five years ago and is still in prime condition.

"Mr. Hyde, whose vineyard adjourns that of Dresel & Co., planted resistants between the rows of old bearing vines and thus had his new vineyard established before the old one was gone.

"Mr. Dresel placed diseased roots in the ground all about the resistant stocks but no disease was communicated.

"It is heroic warfare these grape-growers have waged with vine diseases, low prices, etc., but they now have fine vineyards established and are hopeful of better returns in future. We noted that all their vines are now being trained higher than was formerly done and it might be well for vineyardists to ask why this is done."

HORTICULTURE.

Spray for the Codlin Moth.

TO THE EDITOR:—At this time it is rather difficult to form much of an idea in regard to this season's grape crop, though the prospect is very good. The fruit crop of the Santa Clara valley promises to be light, the report of fruit-buyers to the contrary notwithstanding. The nearly unanimous verdict of the more prominent fruit men is that there will be but little more than half a crop.

Apricots, probably more especially those of the Moorpark variety, have been dropping off the last three or four days, and in nearly every orchard I have found the ground under an apricot tree covered with fruit that has fallen off. So far no one appears to be able to account for this sudden destruction to this fruit, though some claim it is some new insect.

Codlin Moth.—Mr. B. E. Maynard, of the Sunny Wood orchard, kindly furnished me with the following in regard to the above insect: Last season, after using his fruit boxes for gathering pears, he took them home and stored them in his fruit-house, which is perfectly tight with screens over the windows. The boxes proved to be full of codlin moth worms, and after laying until May they began to form the moth. As they could not escape they were lying dead by the hundreds around the windows. There were enough dead moths to infest a whole orchard. It is expected that all will have hatched out and be dead before the boxes will be needed again, but in case they are not care will be taken to destroy them before removing the boxes. [This experience has been frequently reported by fruit-growers.—ED. PRESS.]

Spray for Bartlett Pears.—Mr. Maynard has been very successful in the use of Paris green for spraying his Bartlett pear trees, and I will give his method for the benefit of the RURAL PRESS readers. He attributes his success in being able to keep the arsenic from separating from the other ingredients which compose Paris green. In case the arsenic once becomes separated, it is very destructive to the foliage. He took one pound of Paris green and mixed in cold water till it formed a pliable paste, then emptied into the spraying tank containing 100 gallons of water and stirred occasionally with a dasher that works up and down. Care should be taken to begin spraying as soon as possible after mixing, so as to give the arsenic as little time as possible to escape or separate from the other ingredients. It would take about 1½ hours to spray out a 100 gallon tank. The tanks should be washed out every noon and night before using again. The writer examined a large number of pear trees that had been sprayed as above on May 10th and also on June 15th, and could not find any moths left, and the wash had not injured the young leaves in the least. ED. ROBERTSON.

Two Conventions of Fruit-Growers.

A convention of fruit-growers and others interested in fruit culture in California has been called, at the request of members of Congress from this State, to meet at Pioneer hall, Fourth street, near Market, San Francisco, at 10 A. M. Thursday, July 13, 1893. The purpose of this convention is to gather and present such facts respecting fruit culture in the State as shall inform the judgment of our representatives in Congress in respect to the necessity of a revision of tariff duties upon imported fruit. Fruit and raisin-growers and others are requested to attend this meeting and bring, in tabulated form, facts and figures showing the

present value of land in their respective localities, before and after planting, and cost of caring for the same for five successive years. All expenditures of whatever kind should be included in the estimate, which should also show the income derived, amount of different fruits produced per acre, prices realized, cost of labor, freight, etc. The information is desired for comparison with the cost of land, production, labor, freight, etc., paid by European growers. This subject is deemed of the utmost importance to the fruit industry in general, and those interested should take an active part in this matter and attend the convention.

The third State convention of olive-growers and manufacturers of pure olive oil will convene at 220 Sutter street, San Francisco, at 10 o'clock A. M., Friday, July 14, 1893, under the auspices of the State Board of Horticulture. All interested in the culture of the olive and the manufacture of olive oil are cordially invited to be present at said convention and to participate in its deliberations. The meeting will be largely attended and valuable papers will be presented, to be followed by general discussion.

Points from a Practical Pear-Drier.

D. W. Lewis of Sanger has a large pear orchard, and his experience encourages him to continue in the specialty of drying the fruit for the English and Chicago markets. He has planted such varieties as he had left in stock from his nursery and thus has tested most of the leading kinds.

For drying profitably, a pear should be white fleshed and very rich in sugar [possibly we would add fine-grained.—ED.] Bartlett, Easter Beurre, Beurre Bosc, Howell and Souvenir du Congrès are all highly approved. The choice of all is Winter Seckel (or Dana's Hovey), which is almost as heavy after it is dried as before and among the most delicious pears grown. When dried, it is like maple wax.

Sulphuring.—This should be done more thoroughly than with other fruit, as it is essential that the product present an attractive appearance and all trace of sulphur fumes disappear after a few days in the bin. Never spread any pears in the latter part of the day, as the cool, damp air of the evening will affect them badly at an early stage of drying. He has a sulphur-room large enough to hold one day's cutting and runs the cars in as fast as they are prepared and spreads the fruit out to dry the first thing next morning.

Although the pear is very slow of sale in small lots or to home trade, he finds no trouble in disposing of carload lots of uniformly high grade at satisfactory prices. There is a good demand from England, and they sell well in Chicago.

Bananas on the Red Lands.

E. T. Jordan, three miles northeast of Exeter, Tulare county, has two banana plants doing nicely. The first year they made a growth of three feet and added seven feet the next. They have never suffered from frost. Upon the same land a Pecan made a growth of 1½ feet from the nut the first year. Orange trees five years old were eight inches in circumference of body and eight feet in diameter of top. The supply of water upon this place was limited, and Mr. Jordan's plan of cultivation is to put the orchard in good order early in the spring and then run a small stream to each tree every week or two.

Object Lesson in Cultivation.—If Mr. Jordan will visit H. S. Anderson's place, five miles away, on similar soil, he will find two-year-old peach trees considerably larger than his of five years' growth, and producing more fruit this year. I think the difference is mainly in Mr. Anderson's system of cultivation, as described in the last RURAL PRESS; and that visit to his place will convince Mr. Jordan that his plan can be improved. The two orchards present a good object lesson upon the theories of cultivation lately presented in the RURAL PRESS.

Out-of-Door Cellars and Coolers.

Some have brick rooms with double walls, well shaded and with cemented floors. These are good and substantial, but beyond the means of many. Others build of adobe with brick foundation, at one-fourth the cost of brick walls. A coat of cement outside and plaster inside makes a neat adobe structure. Either of these answer in proportion to the care with which it is built and to provision for circulation of air and protection from direct rays of the sun.

The Poor Man's Cellar.—This we have seen made of two dry goods boxes, the outer one perforated to serve as a shade and permit circulation of air, and the inner one provided with a pan of water on top and surrounded by sacks that hang down as curtains, and are kept wet by drippings from the pan. When fitted with shelves and kept on the north side of the house, or under the shade of some friendly tree, this answers well to keep butter, with eggs, etc.

A Still Better Cheap Device.—The writer saw a large cupboard with sides of wire cloth and galvanized-iron top, enclosed by curtains of porous cloth that were kept wet by small drip-holes from the water in the pan. It was found by use that this pan should be four inches deep; that the cupboard should be narrow enough one way to go through a door; that the curtains should be of cloth not too closely woven, to permit a good circulation of air, and the cupboard kept standing where there was both breeze and shade. This can be made a very neat affair.

Remedy for Cutworm.

Mr. Meyers of Sanger says that he has found quick-lime scattered about the base of plants effective against the cutworm, that has done so much damage this year. He wants more information regarding the fine web that he finds on his vines where the grapes are failing to set. He thinks that both web and damage to the grapes are the work of some minute, unknown insect.

Valleys Awaiting Development.

Tributary to the town of Reedley, Fresno Co., and eight to fifteen miles distant, is a series of small valleys at a slight

elevation above the valley and protected by hills so that they are almost exempt from frost. Some of them have produced very early fruit and vegetables. They have a few springs which might be developed by shafts and tunnels, and almost all have suitable sites for storage reservoirs. At present they are undeveloped wheat and pasture lands and held at figures ranging from \$5 to \$50 per acre.

Mrs. E. Moore of Clark's valley, eight miles east from Reedley, says that she has had green tomatoes all winter and picked ripe fruit from her vines on Christmas. She has had green peas in March and string beans in April, and new potatoes in May. She never has paid special attention to gardening.

Hill's valley is two or three miles distant over a low range, and is still less subject to frost.

Squaw valley has some 4000 acres, is at a higher elevation on the new road to the Sequoia mill, and has become noted for the quality of its apples as well as its exemption from frost.

Drum valley has a smaller area, and is further on the road to the Sequoia mills. Places can be had cheap, water developed and apples successfully grown.

Stokes valley has a reputation for early fruits, ripening nearly four weeks ahead of Fresno. I will try and visit that section on the way south and write more in detail.

Remarkable Growth.

F. A. Benadon, seven miles east of Sanger, shows a grape cane of one year's growth that I found to be 35 feet long upon careful measurement. He will probably place it on exhibition at the Fresno Board of Trade. He has seedling orange trees seven years old planted on dry-bog land, with very ordinary care, that are 14½ inches in circumference at two feet from the ground. One shoot on his orange tree grew ten feet last year. Eight of his White Winter Pearmain apple trees planted in 1890 produced \$1 worth of fruit each in the season of 1892 at 30 months from planting.

FRANK S. CHAPIN.

Florida Orange Crop of 1892-93.

The annual meeting of the Florida Fruit Exchange took place Friday, June 8th. From the report of Secretary Turner the following statement of sales, shipments, distribution, etc., of oranges is taken:

Total shipments, 343,338 packages; total gross average, \$2.03 per box; total net average, \$1.31 per box.

The averages cover everything sold, good, bad and indifferent, and include heavy sales of frosted and inferior fruit sold in January, February and March.

SALES BY MONTHS.

	P'k'gs.	Gross. Per box.	Net. Per box.
September.....	2,261	\$3 25	\$2 15
October.....	2,411	3 42	2 49
November.....	21,213	2 45	1 63
December.....	56,157	2 31	1 57
January.....	72,994	1 96	1 24
February.....	57,971	1 88	1 19
March.....	57,732	1 76	1 08
April.....	27,315	2 24	1 49
May.....	5,290	2 57	1 74

DISTRIBUTION.

	P'k'gs.	Gross. Per box.	Net. Per box.
New York.....	130,069	\$1 96	\$1 33
Boston.....	97,800	2 13	1 35
Philadelphia.....	36,291	2 13	1 37
Baltimore.....	17,576	2 08	1 34
Norfolk.....	871	1 77	98
Charleston.....	1,457	1 54	92
Savannah.....	994	1 26	70
Pittsburg.....	17,375	2 01	1 15
Buffalo.....	5,548	1 94	1 13
Toronto.....	689	2 22	1 05
Cincinnati.....	13,503	1 99	1 17
Chicago.....	1,538	2 46	1 43
Cleveland.....	5,131	2 05	1 13
St. Paul.....	591	2 38	1 20
Kansas City.....	3,219	2 29	1 12
New Orleans.....	10,718	1 71	1 13
Jacksonville.....	6,452	1 82	1 51
Liverpool.....	159	2 62	1 42
Miscellaneous.....	327	2 62	1 82

The crop of 1892-93, to the surprise of everybody, turned out to be only 10 per cent less than that of the preceding year—1891-2, 3,750,000 boxes; 1892-3, 3,400,000 boxes. The officers estimate the coming crop at 4,500,000 boxes.

Florida growers had to contend with a large crop, frost-bitten fruit and the heavy competition of California in the last months of their fruit season. Yet those growers who marketed through the exchange realized \$1.31 per box. The moral is obvious.

Astonishing Fecundity of the Aphis.

It has been estimated by Prof. Huxley that were there no destructive forces to prevent their increase, the descendants of a single aphis would in one season contain more solid bulk than is contained in 500,000,000 stout men, says the *Irrigation Age*. Fortunately, there are large numbers of carnivorous insects which prey upon them, and they are very subject to vicissitudes of the weather, and winds and rains destroy them. Yet the almost mysterious manner in which they sometimes appear so suddenly and in such vast numbers when the weather is favorable can be understood from their peculiar and rapid manner of reproduction.

The apple is an especial sufferer from its ravages, from the fact that it attacks the roots as well as the branches. The presence of the woolly aphis, which is the form which attacks the apple, can be detected by the cottony covering under which they work. The bark at the point of their attack ceases to grow and swells into a large ridge, about the cluster of aphides, leaving them in a sheltered pit. They are gregarious and live in societies, and seen from a distance resemble small bunches of cotton adhering to the trunk or branches of the tree. The insect depuded of its cottony covering is egg-shaped and dull, reddish-brown in color. They produce warts or excrescences with their

powerful sucking beaks, and when existing in great numbers cause the leaves to turn yellow, wither and fall.

To the root form of this pest a liberal dressing of wood-ashes is to be recommended. This is especially good in moist localities. About one and a half to two shovelfuls of gas lime placed around each tree so that it does not come in contact with the bark is also excellent. Care should be taken not to apply gas lime in greater quantity than mentioned. For the branch form of the pest the parts affected should be touched with a small brush dipped in a rosin solution.

For the aphis on plum, prune, or other tree, the following spray is to be recommended:

Caustic soda (98 per cent)..... 1 pound.
Rosin..... 6 pounds.
Water..... 40 gallons.

On rose or other bushes a strong tobacco solution is effective. This should be washed off in about half an hour after the application.

Woolly Aphis in the Orchards.

[From a Bulletin of the Experiment Station at Pullman, Wash.; E. R. Lake, Horticulturist.]

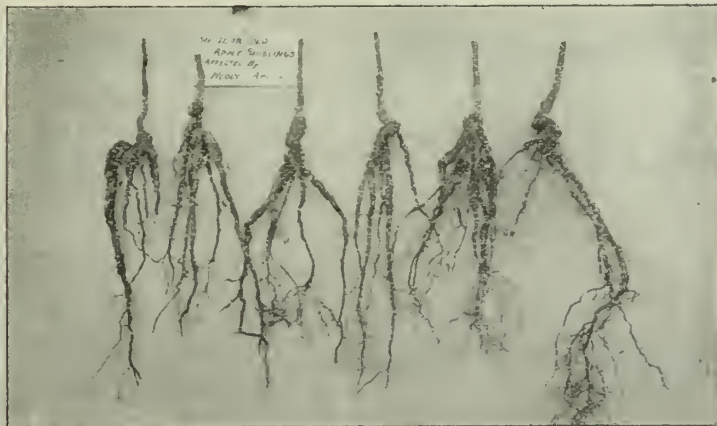
To the planter of apple trees in this northwest there is no more serious pest than the woolly aphis. It is an insidious foe, one that creeps into the orchard and saps the life from otherwise promising trees, as stealthily as a midnight marauder, doing its first and most lasting work under cover of earth—in darkness. In other words, this pest makes its



ABOUT ONE-TENTH NATURAL SIZE (UNAFFECTED).

appearance on the roots of the young trees while in the nursery in many instances, especially in old nursery ground.

Having occasion to examine a quantity of apple seedlings for grafting purposes, it was observed that the larger part of them had twisted, tortuous and knotted roots. Some were slightly abnormal; others more so; while some were simply monstrous. Upon closer examination there appeared multitudes of little knots or excrescences of the size



ABOUT ONE-EIGHTH NATURAL SIZE (AFFECTED.)

of a pinhead and larger, intermingled with the larger ones, which latter ones were frequently as large as filberts. This was recognized as the work of the woolly aphis, and the whole stock as a result discarded.

Last spring while planting yearling apple trees, purchased in the eastern States, the telltale "warts," as the workmen called them, were found on several trees. It is needless to say the trees were at once destroyed, as it is safe to take no chances with such a foe. Undoubtedly much of the trouble from this pest arises from its dissemination in this way—on the roots of young trees.

For the benefit of those who are not familiar with the root effects of this pest we present the following cuts, taken from photographs of one-year-old seedlings grown on the coast. They were considered at the time they were taken,

by those present, to be fair specimens of the normal and abnormal plants found in the examination above mentioned.

Big Yields from Single Cherry Trees.

There are a great many accounts of the profits of single trees of cherries. One near Newcastle has given an income of \$300 in a single year. Mrs. McGlincey, near San Jose, has a tree that has given an income of from \$50 to \$80 per year for many years. Several trees in Mrs. Geiger's orchard, near San Jose, give a crop of from 1100 to 1200 pounds per year, cherries worth 8 cents per pound. Single acres of cherries have given a crop of from \$1200 to \$2000 per year. The average yield of a good cherry orchard for a period of several years in Santa Clara and Alameda counties would be from \$300 to \$500 per acre.—Pacific Tree and Vine.

Pruning Orange Trees.

J. M. Edmiston, a well-known horticulturist of Riverside, strongly advocates cutting back orange trees in the process of pruning rather than merely to prune inside the tree and leave the fruit to grow mostly on the outside of the tree, at the ends of the limbs. He cites O. T. Johnson's orchard as a good example of his method of pruning, and alleges that some of the trees produced this season 14 boxes of fruit each, while other orchards on similar soil and apparently treated the same in other respects, except as to pruning, would not average one-half the yield of Mr. Johnson's orchard. Mr. Edmiston does not approve the "hoop-pole system" of pruning, as he styles it, making each limb long and free from interior branches, and throwing the fruit mostly to the outside of the tree.

No Coulure, Says Prof. Sanders.

Prof. W. A. Sanders, referring to recent reports that the coulure is afflicting the vines of Fresno county, says he doubts very seriously if it is that disease at all. He says: "All the dropping of fruit I've seen is due either to inopportune irrigation, alkali, or red spider. Alkali could have been easily and cheaply remedied by use of Coalinga gypsum. That gypsum deposit is a godsend to our valley. The specimens that have been exhibited to me are the best quality for agricultural use that I have ever seen. The remedy for red spider is water—lots of it—but even that can scarcely wage a winning warfare against them. Probably the most frequent cause of grapes dropping is irrigating while vines are blooming. Sulphur is not a remedy for any of these evils."

Bi-Sulphide of Carbon for Gophers.

M. O. Randall of Pasadena has a method which he pronounces very effective in ridding his orchard land of squirrels and gophers. He says: "I twist or tie on the end of a small stick some cotton or rags, making it about the size of my thumb and about as long. Dip this in bi-sulphide of carbon and introduce into the hole where the animal is to be found, taking care immediately to close all all issues to the outer air. This liquid is very volatile, and, being heavier than the air, will soon fill the entire tunnel and suffocate any living thing found therein. Great care should be taken, as the vapor is highly explosive if it comes in contact with fire. I have tried traps and poison with very poor success, as in many cases the pests will have nothing to do with either; but, if the animal is found at home, one application of the bi-sulphide is sufficient."

Chinese Labor in Orchards.

TO THE EDITOR:—I have traveled through the western portion of the Santa Clara valley, which is one of the choicest fruit sections of the State, and have paid particular attention to the labor employed. Society has condescended to permit young ladies and gentlemen of the inner circle to engage in fruit picking, packing, and, in fact, from a social point of view, it is quite the thing for them to do anything connected with preparing fruit for market.

For the last few years the Chinaman has been losing his footing in the orchards and vineyards of this portion of the valley. There are many owners of large orchards, and vineyardists, too, who will not have a Chinaman on their places. Chinamen are very independent when they have the upper hand. You must put up with what John is satisfied to do, for if you discharge one, he notifies the head company, and love, money or persuasion will not induce another Mongolian on to your place until you come to terms with the Six Companies.

Before coming here, I was lead to believe that it was next to impossible for the fruitmen to market their fruit and grapes without employing Chinese. But on going over the Santa Clara valley, I find that white labor is to be had, and it is in part, if not altogether, optional for the owners, in this valley at least, to choose white or Chinese. On these large fruit ranches any open shed was good enough for Chinamen, and later, when white labor is taking their place once more, they expect an American laborer to put up with something near the same accommodations. My experience is that Americans are white, and if you wish those in your employ to take an interest in your business, treat them "white;" for one has no use for a man that will not bear good treatment.

ED ROBERTSON.

(Continued on page 19.)

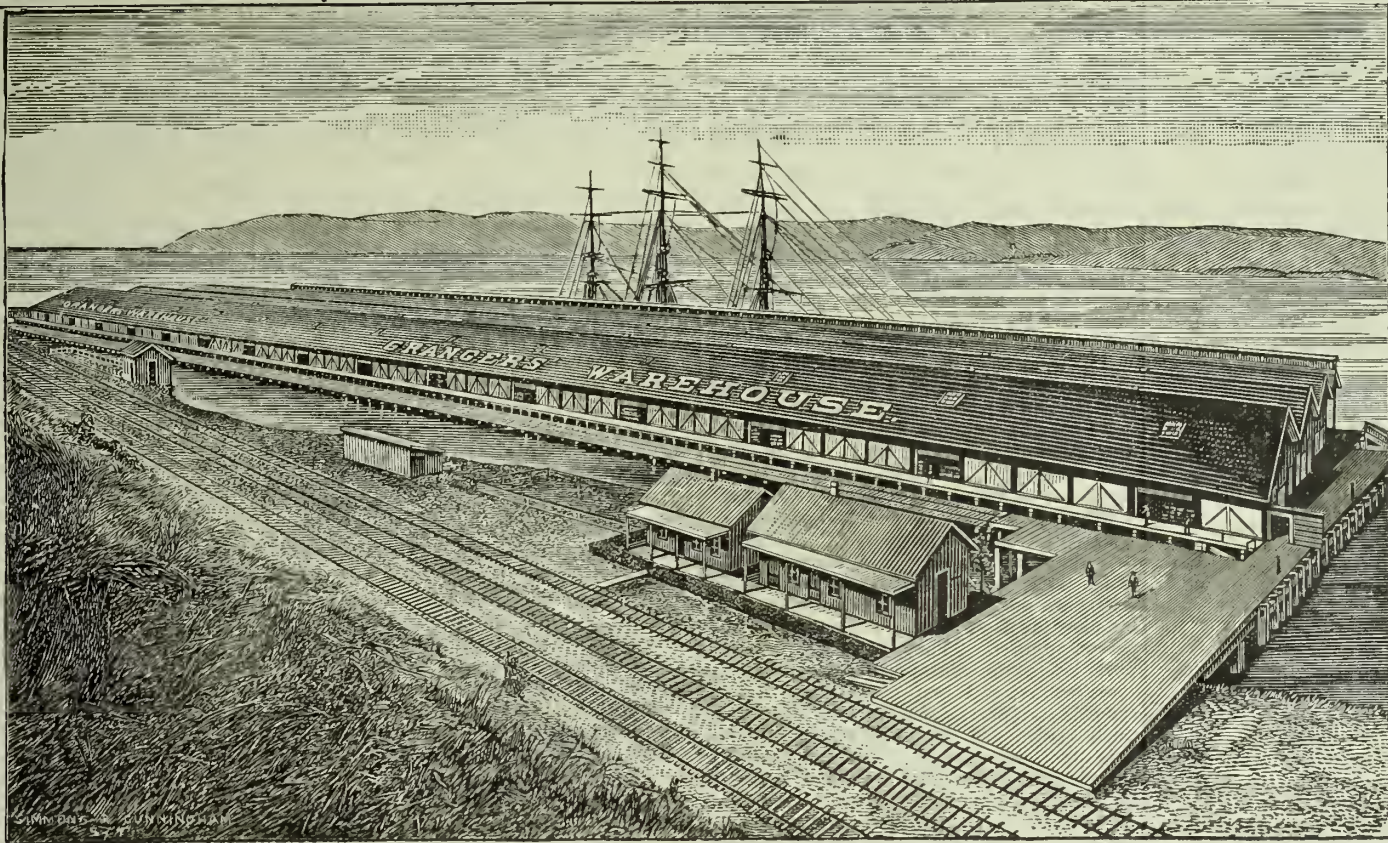
E. VAN EVERY, Manager.

T. R. BALLINGER, Grain Salesman.

Great Reduction in Storage

SEASON OF 1893

50 CENTS TO JANUARY
1st 1894.



75 CENTS FOR SEASON
TO JUNE 1st, 1894.

AT THE

GRANGERS' WAREHOUSE, PORT COSTA.

Capacity of Warehouses, 50,000 Tons; Wharf Accommodations for the Largest Vessels Afloat.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT, AND FOR SALE ON CONSIGNMENT.

For Particulars and Rates, address all communications to our San Francisco office and they will be promptly attended to.
PARTIES DESIRING STORAGE WILL PLEASE APPLY EARLY.

GRANGERS' BUSINESS ASSOCIATION,
108 DAVIS STREET, SAN FRANCISCO, CAL.

THE ECLIPSE WIND MILL



THE
ORIGINAL
SELF-REGULATING
WOOD WHEEL.

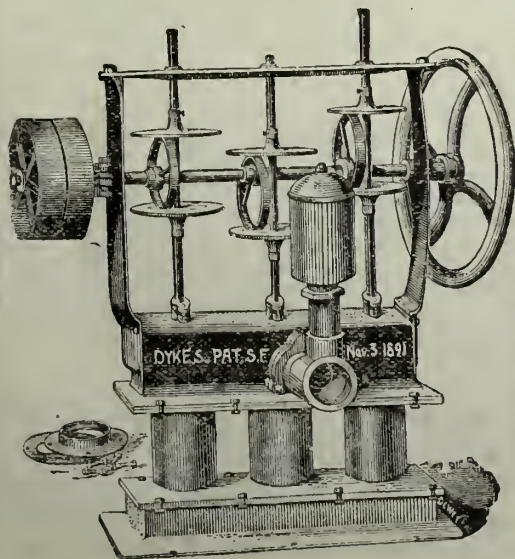
Will run in Lighter Wind
and do More Work
than any other.

FAIRBANKS'

GALVANIZED STEEL
Wind Mills and Towers.
Pumps, Tanks, &c.

Send for Catalogue and Prices.

FAIRBANKS, MORSE & CO., CHICAGO, ILL.



Dykes' Improved TRIPLEX PUMP

Medal and Diploma awarded at Mechanics'
Industrial Exposition, San Francisco, 1893.
The Best Well Pump, Windmill Pump, Irrigation or Drainage Pump.

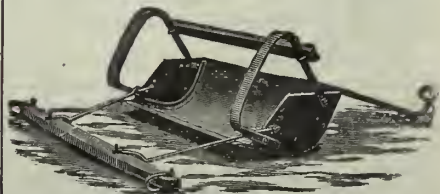
It is more simple than any other pump. Any one who can use a wrench and a hammer can take it apart and put it together with ease and correctness. It will very seldom need repair, and will not break, except for rough usage. But about three lines of instructions of how to set it up and use it are needed, as follows: Fasten it to your platform; attach your suction and discharge pipes; put in a bucket of water; start your power, and your pump will do its work. It will deliver more water with the same power than any other pump.

Careful inspection is what we want. Give us a chance to bid on the work you want. Any size pump made. We were awarded two First Premiums at the California State Fair, 1892, and one First Premium at the Stockton Fair. Send for circular.

TROWBRIDGE & DYKES,
Manufacturers,
West Berkeley, Cal.

THE Porteous Improved Scraper

Patented April 8, 1883. Patented April 17, 1888.



Manufactured by G. LISSENDEN.

The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making, etc.

This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

This Scraper is all steel—the only one manufactured in the State.
Price, all Steel, four-horse, \$40; Steel two-horse, \$31.
Address all orders to G. LISSENDEN, Stockton, California.

THE HOME CIRCLE.

The Cow in the Moon.

The man in the moon a dairyman is,
For a dark, spotted cow he owns;
But she is a jumper, fair and square,
And around a big orbit she roams.

And every night when the moon is full
And blazes up in the east,
You can see this cow, with lawless step,
Start out for a midnight feast.

The cow in the moon is a thoroughbred beast,
And a balanced ration she seeks;
And every day she goes the world round,
And into every one's garden peeks.

Yet this cow, in the moon is, oh, 'very old.
The oldest that lives no doubt;
And the children of every clime and age
Have gleefully pointed her out.

As, with tail in air and heels to match,
She jumps clear over the moon;
And ever and anon to the end of time
She will jump from that same sand dune.

For the man in the moon keeps to his old ways
And laughs at "new-fangled things,"
And refuses to "soil" this cow the year round
And prevent the mischief she brings.

For he says that this cow that jumps over the moon
Must every day exercise take,
And to be any good in the world to him
Must discard this last modern fad.

So the cow in the moon will keep jumping on
Till the moon falls into the sun;
Then the man in the moon will not have a cow
When she and her jumping are "done!"

—Hoard's Dairyman.

The Farmer's Wife.

Up with the birds in the early morning—
The dewdrop glows like a precious gem;
Beautiful tints in the sky are dawning,
But she's never a moment to look at them.

The men are wanting their breakfast early;
She must not linger, she must not wait,
For words that are sharp and looks that are surly
Are what the men give when meals are late.

Oh, glorious colors the clouds are turning,
If she would but look over hills and trees;
But here are the dishes and there is the churning—
Those things must always yield to these.
The world is filled with the wine of beauty,
If she would but pause and drink it in;
But pleasure, she says, must wait for duty—
Neglected work is committed sin.

The day grows hot and her hands grow weary;
Oh, for an hour to cool her head.
Out with the birds and winds so cheery;
But she must get dinner and make her bread.
The busy men in the hayfield working,
If they saw her sitting with idle hand,
Would think her lazy and call her shirking,
And she never could make them understand.

They do not know that the heart within her
Hungers for beauty and things sublime;
They only know they want their dinner,
Plenty of it and just "on time."
And after the sweeping and churning and baking,
And dinner dishes are all put by,
She sits and sews though her head be aching,
Till time for supper and, "chores" draws nigh.

Her boys at school must look like others,
She says, as she patches their frocks and hose,
For the world is quick to censure mothers
For the least neglect of their children's clothes.
Her husband comes from the field of labor;
He gives no praise to his weary wife;
She's done no more than has her neighbor,
'Tis the lot of many in country life.

But after the strife and weary tussle,
When life is done and she lies at rest,
The nation's brain and heart and muscle—
Her sons and daughters—shall call her blest.
And I think the sweetest joy of Heaven,
The rarest bliss of eternal life,
And the fairest crown of all will be given
Unto the wayworn farmer's wife.

—Ella Wheeler Wilcox in Farmer's Review.

Self Detractors.

[Written for the RURAL PRESS by ELSIE ANGE.]

ONCE heard a minister allude to a man who invariably spoke of himself as the worst sinner that ever lived. "And he did not believe it. Indeed, he thought quite the contrary," said the minister.

This is an instance which illustrates one of the most common failings of humanity—that of self detraction. In some people their insincerity is so apparent that we wonder why they employ so shallow a method of deception, while others equally in fault succeed in making us believe that they express their honest convictions in disparaging themselves. The most effectual remedy for such a glaring failure is a sharp one, and that is for the self detractor to meet those who evidently believe what he says and agree with him.

A lady appealed to a friend for sympathy for the way a superintendent of a mission school had spoken to her. This was her story: "I went to him and said: 'Mr. Carr, I am afraid I must give up my class.

The care and work is so wearing that my health is breaking down. I am so sorry, because I am very fond of the class, but I know that you can find some one better fitted for the position than I am.' Imagine my surprise when he answered bluntly:

"Very well, Mrs. Blank. If your health suffers I will find another teacher to take your place."

"Now, was not that unfeeling of Mr. Carr. I had no idea of giving up the class, and I thought he would give me words of appreciation and encouragement when I went to him."

Another person, who prided herself upon her brilliancy and popularity, was conversing in an humble strail of her attainments and place in the esteem of others, expecting that her listener would say some entirely contradictory things in return, when the latter remarked in a very sympathetic manner:

"You remind me of an acquaintance of mine. She is a little, unassuming old maid, scarcely known or noticed by any save a few old friends. She often says that she cannot see that she is of the least use in the world, and she can easily imagine that she will never be missed after she has gone. Now, dear, I say to you as I have to her: You have your own place and your own work in the world, and however disappointed you may be in yourself or your efforts, rest assured that God does not require of you any more than you can perform, and He gives you the credit that you fail to obtain from others."

The astonished listener could only receive this gentle advice in mute astonishment, but she learned a lesson she profited by.

"I have never since indulged in insincere detraction of myself," she said, in relating this experience. "I found that it was a sorry way to earn compliments."

Many handsome people disparage their beauty in the same manner. They declare that they are entirely void of attractions while they believe the reverse. But all critics are not generous. Some are ever on the alert for flaws in the face or form of the person admired. They can only see the deviation from what is strictly correct in some feature, and that one defect, imperceptible to others, is paramount with them. Such critics are dangerous to encounter. More than one charming belle has carried a sore heart for weeks because the shape of her nose, the size of her ear or the contour of her profile has been magnified into a deformity. She could smile at the criticism of less favored companions because she can attribute it to envy or jealousy, but when she under-rates her charms to some one she considers a judge of beauty, expecting a full share of praise, it is a stunning blow to be told: "Yes, my dear, you are perfectly right. Your nose spoils your face."

Again, there are people who depreciate their work. Who has not for an acquaintance the over-particular house-keeper who is always bemoaning her dirty house? She apologetically leads her visitor into rooms where the rigid orderliness sends a chill down the spinal column, with the remark that they are not fit to be seen. She opens the doors of closets, exhibiting articles of china, glass and silver which dazzle the eyes with their brilliancy, while she deprecates the intrusion of imaginary dust and cobwebs. The mistress of such a house is fond of leading her guests from attic to cellar, but nowhere will she allow that it is as neat or orderly as it should be. The visitor can only lamely disagree with her hostess, for the spotless housewife, is the most unsatisfactory person on earth to convince that she is in fault by being over-fussy and particular. Yet women of this class had a blow struck at them through the press some years ago. A distinguished woman had recently died, and in the biographical account of her, published widespread throughout our country, the following pithy story was told. Some one was speaking of an acquaintance noted for her spotless house-keeping, when this good woman retorted: "She is the dirtiest person I have ever met. She thinks dirt, she talks dirt, she hunts dirt and she fights dirt." So, viewed in this light, our detracting housewife is not wrong when she exhibits her dirty house to her friends. In like manner women noted for their success in cookery disparage the dishes they set before their guests. They say the bread is not as light as the last batch; the pastry is tough, the cake is a failure, and so on. If they really thought so, would they present such food to their guests? I heard a man tell of his experience at a friend's table. The hostess offered him some biscuits, with the remark that they were not good. "Are they not?" he inquired. "No, they are heavy," answered the lady. "Then I don't want any," said the guest, withdrawing his hand from the tempting-looking fare.

Now, the hostess especially prided herself upon her biscuits, and she begged her vis-

itor to try one, but he declined; then she appealed to the members of her family, who declared that the biscuits were excellent, but the guest remained obdurate. He explained that he took her word for the biscuits and would abide by it, and never from that time did she disparage any article of food that she set before him.

And it is by such bitter lessons as these that the detractor is cured of his insincerity, and who can say that the smarts they inflict are not wholesome?

Gems.

Adversity is necessary to the development of man's virtues.

He who does not advance is going backward.—Proverb.

Heaven will not be pure stagnation; not idleness, but active, tireless, earnest work.—Bishop Brooks.

We understand the infinite a hundred times better by the heart than by the intelligence.—B. Tisseur.

There must come a natural selection of religions, a survival of the fitting among faiths.—Phillips Brooks.

Blessed are the mirthful, for mirthfulness is God's medicine—one of the renovators of the world.—H. W. Beecher.

The wise prove and the foolish confess by their conduct that a life of employment is the only life worth living.—Paley.

Unless thou thinkest that what has happened is an evil, thou art not injured; and it is in thy power not to think so.—Aitchison Globe.

I think it must somewhere be written that the virtues of mothers shall be visited on their children, as well as the sins of the fathers.—Dickens.

The philosopher is he to whom the highest has descended, and to whom the lowest has mounted, who is the equal and kindly brother of all.—Carlyle.

People give the name of zeal to their propensity for mischief and violence, though it is not the cause but their interest that inflames them.—Montaigne.

I should be virtuous for my own sake though nobody were to know it, just as I would be clean for my own sake though nobody were to see me.—Shaftesbury.

I never knew a nation that was habitually governed by high motives, or one which was not deeply convinced of its superiority to the rest of the human race.—H. H. Boyesen.

Good words do more than hard speeches, as the sunbeams without any noise will make the traveler cast off his cloak, which all the blustering winds could not do, but only make him bind it closer to him.—Leighton.

One great secret of happiness is never to allow your energies to stagnate. The old proverb about too many irons in the fire is an abominable lie. Have them all in—shovel, tongs, poker and all. The more the better.—Adam Clarke.

Nothing of character is really permanent but virtue and personal wealth. These remain. Whatever of excellence is wrought into the soul itself belongs to both worlds. Real goodness does not attach itself merely to life; it points to another world.—Daniel Webster.

With acclamation and with trumpet tone,
With prayer and praise, and with triumphal state
Of men, whose firmness never overthrown,
Proved itself steadfast; which did add to fate
Speed, vision, certainty, and ever grown
More terrible, as more enduring shone
A fire of retribution and swift hate,
All visibly advancing—with these we keep
Unsullied in our breast, and pure and white
The spirit of gratitude that may not sleep—
A nation's safeguard against shame and blight,
Since sacred memories and the tears men weep
Alone can keep a nation at its height.

—Langdon Elwyn Mitchell.

For Cleaning Marble.

Common dry salt is said to be one of the best agents for cleaning marble. It requires no preparation, and may be rubbed directly upon the tarnished surface, removing any incrustations or deposits at once, leaving the marble shining and clean. This is well worthy of remembrance, as it is often found to be provokingly hard to clean the marble thoroughly without injuring the surface.

Sneezing.

The practice of saying, "God bless you!" whenever a person sneezes must be widespread indeed when we find a similar salutation *Mbuka!* (literally, equals live!) obtaining among the Fijians. It has been said by a London physician that one is nearer death at the actual moment of sneezing than at any other period of one's life. Herein, perhaps,

lies the reason for the kindly wish, and may account for the prevalent idea that it is dangerous to interrupt a person in the act of sneezing.—Notes and Queries.

The Day of Your Birth.

To name the day of the week of a given date, divide the number of the year by 4, rejecting the remainder, if any. To this dividend and quotient add the number of days in the year to the given date, inclusive, always reckoning 28 days in February. Divide the sums by 7, and the figure remaining will be the number of the day of the week, 0 signifying Saturday. For instance, take October 17, 1888:

4)1888

472

290

7)2650

378—4

The fourth day—Wednesday.

Dates between January 1st and February 28th, in leap years, both inclusive, must have 1 subtracted to balance the 1 added by the even division of the year, which is not yet offset by February 29th. All dates in 1800 and any other terminal year of the century, except one equally divisible by 400, must be similarly treated, as these are not leap years. Dates in 1752, after September 2d, must have 11 added on account of the change from old to new style.

A Good Nurse.

A good nurse is a woman thoroughly healthy and alert in her five senses. She must have good sight, in order that she may watch the slightest changes in the patient, catch a motion of the eye, the tips of the fingers, and see in a moment what is wanted. She must have quick hearing, to catch the slightest whisper of a weak invalid. She must have a sensitive as well as a soft touch, that she may note the most delicate changes in the skin and may test the temperature of hot applications that may be ordered. It is especially necessary that she have a correct and acute sense of smell, so she may detect the slightest impurity in the atmosphere of the sick room. Her taste must be correct, in order that she may test the food to see that it is properly cooked. A good nurse should also be a good cook, and at the best training school for nurses a course of lectures with manual training in cookery is a part of the teaching.—Ex.

Carrying Good News.

During the siege of Vicksburg an important artillery position had been assigned to a battery commanded by Major Schwartz, a German attached to General Grant's command. Late in the day, while Grant was in his tent receiving dispatches from the front, a German orderly made his appearance earnestly inquiring for "Zhineral Grant." After much parley his hearers, being convinced that his business with the general was important, admitted him to the latter's tent, where he announced, "Schwartz's battery is took!" "Well," said the general calmly, "did you spike the guns?" "What?" shrieked the little German, "spike dem guns? Dem new guns? Vy, it would schpile 'em!" "Well, what did you do?" asked Grant impatiently. "Vy, we took 'em pack again."—Life.

English As She Is Wrote.

A pretty little French woman went into one of the newspaper offices last Tuesday, and with a positive air passed an advertisement through the window. The clerk looked at it a moment, smiled and then said: "The English is a little bit awkward, miss. Would you like to make any changes?"

The pretty little woman tossed her head. "No, m'sieur. I zink I knows how to write ze good Inglis."

The clerk smiled again. "All right," and he watched the little woman as she sailed out of the door. The next morning the "ad." appeared:

"Pupils wanted—Mlle. Marcotte respectfully announces that she wishes to show her tongue to the young American ladies."—Boston Budget.

"Her Sheltering Oak."

It was on a train going through Indiana. Among the passengers were a newly married couple, who made themselves known to such an extent that the occupants of the car commenced passing sarcastic remarks about them. The bride and groom stood the remarks for some time, but finally the latter, who was a man of tremendous size, broke out in the following language at his tormentors: "Yes, we're married. Just married. We are going 160 miles further on this train, and I am going to 'spoon' all the way. If

you don't like it you can get out and walk. She's my violet and I'm her sheltering oak." During the remainder of the journey they were left in peace.—Philadelphia Public Ledger.

Ram's Horn Wrinkles.

The devil loves a moderate drinker. If you want to get happiness, try to give it. It is easy to be, but harder to appear to be. It is easier to mean right than it is to do right.

It is easier to be brave than it is to be patient.

The wren has a sweeter song than the peacock.

The smallest sin is big enough to hide the face of God.

The religion that has no joy in it does not come from God.

God is robbed whenever one man gives another light weight.

There is as much love in a warning as there is in a promise.

There are two ways of telling a goose—by its gabble and its walk.

Find a man who has no hobby and you will find one who is not happy.

Scrubbing a pig with soap will not take the love of mud out of its heart.

The nation has no better friend than the mother who teaches her child to pray.

The devil agrees with the man who says he can't see any sense in being religious.

It is easier to tell others what they ought to do than it is to tell yourself what you must do.

Honey as a Specific.

But few people are cognizant of the benefits to be derived from a moderate use of honey as food, says an exchange. Saccharine matter, as a rule, is apt to affect the system injuriously; but if taken in the form of honey it at once becomes a valuable food and medicine. Instead of having it given to us in combination with bulk food, as in the cane and beet, it is, in the case of honey, mingled with fruit juices derived from flowers highly charged with medicinal properties. Honey, taken as food, becomes a powerful medicine to the sugar-fed and half-diseased, and many people must begin on small quantities to acquire an appetite for it. Foul air, improper ventilation, coal gas and sudden change of temperature and exposure of throat and lungs to sudden chill are the sources of no end of throat and bronchial troubles. A free, regular and constant use of honey is probably the best medicine for throat troubles known, and its regular use is largely corrective.

The Hot-Water Remedy.

Are you a busy, worried woman, who comes home late at night with temples throbbing and every muscle aching from fatigue? If so, you often say to yourself: "I am dead tired, and haven't the ambition to dress or even comb my hair for the evening." Then you lounge about and go to bed about nine o'clock, with your head still aching and your limbs just as tired as when you came in.

The next time you feel that way just slip off the waist of your gown, brush your hair up on the top of your head, and bathe the back of your neck with hot water. When the pain is a little relieved, wash your face with the same reviver, and by the time that is done you will feel like brushing your hair and fixing up a bit, or we are very much mistaken. The hot-water cure is quite as efficacious taken externally as internally.—Philadelphia Times.

A Chicken's Intricate Foot.

"The mechanism of the leg and foot of a chicken or other bird that roosts is a marvel of design," said a well-known taxidermist recently. "It often seems strange that a bird will sit on a roost and sleep all night without falling off, but the explanation is simple. The tendon of the leg of a bird that roosts is so arranged that when the leg is bent at the knee the claws are bound to contract, and thus hold with a sort of death-grip the limb around which they are placed. Put a chicken's feet on your wrist and then make the bird sit down and you will have a practical illustration on your skin that you will remember for some time. By this singular arrangement, seen only in such birds as roost, they will rest comfortably and never think of holding on, for it is impossible for them to let go until they stand up."—Kansas City Times.

Be Careful What You Write.

"I never write a letter which I am not willing that any one should read," is the rule which a lady adopted early in life for her correspondence. It is an extension of the old proverb: "Conduct yourselves with your friends as if they may one day become your enemies."

YOUNG FOLKS' COLUMN.

A Little Witch.

I'd like to be a little witch and go up in the sky, Where I could leap from cloud to cloud as they go sailing by. This is my broom, on which I'd ride as witches do, you know; The dust-pan I should leave behind because I hate it so.

I wonder how Tip would behave, as through the air we'd float; Of course, a witch would have a cat—just notice his black coat.

It's growing blacker every day, and just as soft as silk. Stop crying, Tip; I hate to go down cellar for your milk.

My cap? Why, mother made it; it's just like witches wear.

Oh, dear, I wish there were some witches flying through the air.

Perhaps they'd come and help me; I'm keeping house to-day, But I just hate to do the work when mother is away.

I've got to sweep the kitchen, and wash the dishes, too,

And brush the walls and dust around; it's such a lot to do!

But, there! it's no use talking; I'll be a witch, not shrink,

And play I came down on my broom to do this very work.

—A. I. Willis, in Harper's Young Folks.

Johnny Bates' Cowardice.

HERE was a boy in the company of which I was the captain, who had to get the consent of his parents to enlist, for he was only sixteen years old. He was a strong, sturdy fellow, full of life and spirit, obedient, intelligent and faithful in the performance of his duty.

I noticed him often, chiefly because he was the youngest member of the company, but also because he evinced great aptitude in learning the duties of a soldier. He seemed to take a positive interest in everything connected with camp life, and I frequently told myself that Johnny Bates, as he was called, would soon win promotion and distinction.

One night this little idol was shattered into a thousand fragments. We had been ordered to the field, but had not yet an engagement with the enemy. A soldier's first battle is a trying episode in his life. I believe that seventy-five men out of every hundred would turn and run at the first volley from the enemy were it not for the moral support given by the presence of their companions.

But Johnny Bates gave way before his first battle came. Our regiment was encamped well toward the front of our line, and we knew that the enemy was not far off. In fact, we were gradually approaching each other, and a great battle could not be delayed much longer.

About 12 o'clock one night the long roll was sounded and our regiment was roused and soon formed into line of battle, where we were to await further orders. A sentinel on one of the outposts had fired his gun, and we thought the enemy was upon us.

That was my first experience of the kind, too, and I shall never forget the strange feelings that came over me. I never recall that hour without thinking of what Governor Vance of North Carolina said one day on a battlefield. During a lull in the firing, and while the Federals and Confederates were facing each other, ready to go at it again, a poor little rabbit, frightened out of its resting place by this horrible din on its native heath, rushed at top speed down between the two lines, seeking a quieter and safer spot.

Governor Vance—he is Senator Vance now—saw the little creature, and, while a peculiar smile broke over his face, he said: "Run, Molly Cottontail; I'd run, too, if I were not Governor of North Carolina."

Well, there we stood in the darkness and silence, not a man daring to speak, waiting for the expected order to march to the night attack. Here and there, down the line, I heard a man cough, but no other sound broke the stillness.

Suddenly, right behind me, I caught the sound of a boyish voice whimpering and crying. Amazed beyond expression, I turned and saw Johnny Bates. He was crying like a big baby. When I sternly ordered him to stop, he burst out worse than ever, apparently overcome by uncontrollable fear. He begged me most pitifully to allow him to leave the line, claiming that he could not possibly stay there; that he was ill, weak, trembling like a leaf and utterly unable to perform his duty as a soldier.

It never occurred to me to pity the boy;

on the contrary, I blazed out at him with all the vigor of a man fairly beside himself with indignation and anger. I told him that if he did not stop his blubbering instantly I would have him shot like a cowardly puppy. That threat or my manner, perhaps both, had the effect of quieting him. In half an hour or so, word came that the alarm was false, and we were ordered back to our quarters.

The next day I sent for Bates to come to my tent. When he entered, his face was full of shame and repentance. That softened me somewhat, and I determined to lead him on to a frank expression of his feelings. Let it be sufficient to say that fear of the expected battle had wholly unmanned him and turned him into a baby. He did not believe that he was a coward, but he had found it utterly impossible to subdue his fear as he stood there in the darkness waiting for the fire of the enemy's guns.

I really felt sorry for the boy, but for the sake of discipline I had to punish him, and I did so in the presence of the company. I don't mean that I thrashed him as a school-teacher does a refractory pupil, but I imposed a task that carried some degree of ignominy with it.

Johnny's companions turned the cold shoulder on him after that, for no man respects a coward. But the boy went on performing his duties as faithfully and zealously as if nothing had happened. Indeed, I think he showed even more zeal than he had shown before. I had come as a result of the peculiar circumstances of the case, to take a decided personal interest in the young fellow, much more than the captain of a company is in the habit of taking in an individual member of it.

A week passed, and we had not yet had the conflict that we had been expecting. Then, one evening, between supper-time and "taps," orders came for us to be ready to move against the enemy early the next morning.

Well, we "moved"—and got into one of the hottest battles that were ever fought. I do not intend to describe it; I want to tell you only about Johnny Bates and his part in the affair.

I need not say that the moment when our brigade commander gave the order for us to move forward and open fire was a very trying one to all of us that had never been in action before. I had a good deal to think about and attend to, but, strange to say, I could not get that boy out of my head.

I found myself watching him as we moved off, and it was with unmixed gratification that I saw his firm step and his brave bearing. But when we had become actually engaged and the roar and din of the conflict raged around us like a storm of thunder and lightning, I forgot Bates; I thought then of nothing but guns, bayonets, bloodshed and carnage. The mad whirl of battle comes pretty near to turning a man into a wild beast.

Before our part of the line the enemy had thrown up breastworks of earth, and from behind they poured volley after volley into our ranks. Suddenly the colonel of our regiment rode forward, and, rising in his stirrups, cried out in tones that every one of us heard:

"Charge, men, and take those works!"

His manner and his words thrilled us as if they had been charged with electricity, and we rushed forward with a yell that made the surrounding woods ring again. Just as we started, the color-bearer of our regiment was shot down and the flag went down with him.

A dozen men sprang forward to raise it again, but a slight, boyish figure was the first to reach the spot. Throwing his gun aside, he grasped the flagstaff, raised the colors once more to the breeze, and pressed heroically to the front of the line.

It was our little soldier, Johnny Bates, and his gallant act sent a thrill of indescribable enthusiasm along our line.

Johnny Bates was the first to scale the breastworks of the enemy, and when he

planted the colors there, it was to announce our victory.

That same Johnny Bates is now an officer in the regular army, and many a battlefield in the West has witnessed his gallantry.—Golden Hours.

DOMESTIC ECONOMY.

CUSTARDS.—Beat up two eggs, mix in half a pint of milk, sugar to taste and some vanilla, lemon or nutmeg flavoring; when well stirred, pour the mixture into a buttered basin, cover with buttered paper, and steam in a saucepan of boiling water, which should come about half way up the basin, for half an hour.

MOCK TURTLE SOUP.—Put two ounces of butter in a saucepan and set it on the fire. When melted, add a tablespoonful of flour, stir, and, when turning brown, add three pints of broth (either beef broth or broth made by boiling a calf's head). Boil five minutes, and then add about four ounces of calf's head cut in dice; mushrooms and truffles cut in dice. Boil five minutes. Cut two hard-boiled eggs and half a lemon in dice, and put into the tureen, and turn the soup over.

PEA SOUP.—Take four pounds of knuckle of veal, to which add a pound of bacon. Cut them in pieces and put them in the soup kettle with a sprig of mint and five quarts of water. Boil and skim well. When the meat is boiled to rags, strain and put to the liquor a quart of young green peas. Boil until entirely dissolved. Have ready two quarts of green peas that have been boiled in another pot, with a sprig of mint and two or three lumps of white sugar. Add these to your soup liquor.

CHICKEN EN COQUILLE.—To every pint of cold chopped chicken allow one tablespoonful of butter, one tablespoonful of flour, one tablespoonful of chopped parsley, one cup of milk or cream, two hard-boiled eggs, salt and pepper to taste; melt the butter without browning, add the flour, stir until smooth; add the cream, stir continually until it thickens; then add the chicken, the hard-boiled eggs, mashed fine, and the seasoning. Mix well, fill the shells, brush over the top with the beaten yolk of an egg, sprinkle with bread crumbs and brown in a quick oven.

FIG CAKE.—Chop fine one pound of figs. Beat the whites of five eggs to a stiff, dry froth. Beat one cup of butter and two cups of sugar to a cream, adding one cup of milk, three cups of flour and stir until smooth. Add one-half of the whites, then one-half of the figs, then the remainder of the whites and one teaspoonful of baking powder. Stir quickly and gently together. Bake in layers. For the filling mix one egg beaten light, without separating, with three tablespoonfuls of sugar. Add the remainder of the figs and spread between the layers. Frost the top.

Bites and Stings.

The stings of insects are not usually serious, yet there have been cases where severe cases of poisoning ensued even from mosquito bites. They are painful enough, however, and a knowledge of simple and readily available remedies is very desirable. In all cases, whether of mosquito bites or the stings of bees or hornets, an immediate application of cologne water, ammonia or camphor will give immediate relief, unless the sting remains in the skin. In such a case, the sting should be pulled out with delicate forceps, or it can be removed, though somewhat clumsily, by the pressure of the two thumb nails on opposite sides of it. The presence of a bee's or wasp's sting in the wound is not dangerous, as has been popularly supposed. It will, however, greatly aggravate the soreness, and it generates offensive matter, which is especially disagreeable. The sting remaining in the wound is easily discernible, as a black spot in the center of inflammation.—New York Tribune.

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder
ABSOLUTELY PURE

HAY PRESSES.

Eli Challenge Full Circle.
Champion Full Circle.
Junior Monarch.
Petaluma.
Miller Lightning.
Ingersoll's.

ECONOMY HOP PRESSES.

Write for prices and get full particulars.

WE ARE HEADQUARTERS

On Hay Presses and Haying Tools.

BALE YOUR HAY WITH T. H. & CO.
BALE TIES.

TRUMAN, HOOKER & CO.,
San Francisco and Fresno.

BUY FROM THE MAKERS AND SAVE AGENT'S PROFIT.



We guarantee every
PIANO,
ORGAN
—and—
SEWING
MACHINE
for five years.

and allow 30 days trial before
final acceptance. Send for

Catalogue "F"

showing the woods in the natural
colors. Elegantly lithographed,
and a work of art. Vest
Pocket Guide
to Chicago
and Fair
Grounds, for
2-cent stamp.

References, any Bank or Commercial Agency in the
United States.

MONTGOMERY WARD & CO.,
111 to 117 Michigan Avenue, Chicago.
ESTABLISHED 21 YEARS.



REGULATE THE STOMACH, LIVER AND BOWELS, AND PURIFY THE BLOOD.

A RELIABLE REMEDY FOR

Indigestion, Biliousness, Headache, Constipation, Dyspepsia, Chronic Liver Troubles, Bilelessness, Bad Complexion, Dysentery, Offensive Breath, and all disorders of the Stomach, Liver and Bowels.

Ripans Tablets contain nothing injurious to the most delicate constitution. Pleasant to take, safe, effective. Give immediate relief.

Sold by druggists. A trial bottle sent by mail on receipt of 10 cents. Address

THE RIPANS CHEMICAL CO.,
10 SPRUCE STREET, NEW YORK CITY.

ALAMEDA STEEL WIND MILL.



10, 12 and 14 ft.
Cheaper than any
First-Class Mill in
the market.

Every One Guaranteed.

No bearings, no
springs, no wheels
to get out of order.
The simplest mill in
the world.

10-foot..... Write
12-foot..... for
14-foot..... Prices

Agents Wanted
— ADDRESS —

TRUMAN, HOOKER & CO., San Francisco or Fresno.

A Small
THRESHING MACHINE
of great capacity for
Light Power.



EVERY
FARMER
can now

DO HIS OWN THRESHING,

with less help and power
than ever before. Send
for Free Illus. Catalogue.

We make a full line
of Horse Powers.

ENGRAVING—SUPERIOR WOOD AND
Metal Engraving. Electrotyping and Stereotyping
done at the office of this paper.

STEVEN'S FRUIT CASE!

A notable invention of the Columbian year, for transporting California's fresh fruit to market. Look into it! It is worthy of trial! Its advantages truly stated are: Fruit can be picked later and ripen; requires no wrappers; no decay from pressure, bruising or rubbing; the ventilation is absolute and positive; it grades and counts the fruit in the carrier; fruit all open to inspection; no rehandling or repacking at destination; no skilled labor for packing. Gives the grower all the advantage arising by arrival of his fruits in markets ripe, sound, luscious and attractive, instead of half ripe, bruised or decaying. It isolates each piece of fruit by double, elastic walls, with air spaces between, over and around it. It is not an untold quantity. Messrs. Brown & Wells, of California Market, San Francisco, say: "We have made shipments of green fruit in it to Honolulu, Panama, Boston, New York, Philadelphia, Australia and Arizona, and have received report to the effect that the fruit arrived in perfect condition. We believe it is surely destined to become in the near future the universal package for short or long distance shipments." Nothing to equal it for fine apricots, peaches, plums and pears. Will carry fresh figs successfully. Carriers now ready for delivery for apricots. Send in early orders to insure supply.

PRICE (for ordinary standard package) \$15.00 per hundred, including outside and inside cases. Call on us or send for circulars.

STEVENS FRUIT CASE CO., 307 Front Street, San Francisco,
Agents for the Pacific Coast.

ARE YOU A

Hay Baler? If so, do you use our Patent

Steel Wire **CROSS HEAD** Bale Ties?

IF NOT, WHY NOT?



— MADE ONLY BY —

THE WASHBURN & MOEN MFG. CO.

San Francisco Office and Warehouse

8 and 10 Pine Street.

"An Ounce of Practical Common Sense is Worth a Pound of Theory."

Atkinson's Practical Incubator and Brooder Combined

IS THE BOSS MACHINE FOR HATCHING AND REARING CHICKENS. It is Simple, Safe, Reliable, Practical and economical. Was awarded every Prize offered on Incubators and Brooders at the State Fair held September 5th to 17th, 1892, as follows: For the best display of incubators in operation, \$25; for the incubator hatchery



most efficient
during
Fair, \$10;
for the best
display of
Brooders in
operation,
\$10. Also,
Cash Prize
at Stockton
and Silver
Medal at San
Jose.

Does Not
Need
Watching
at Night.

Does Not
Spoil Eggs
from
Extremes
of Temperature.

Does Not
Require
an experienced
Electrician to
Operate
it.

No Accidents from
Lamp, as the principle of the application of heat overcomes all danger of explosion. The principle by which the water is heated is

entirely new. The large Double Brooder Attachment reduces the cost of rearing chicks to the minimum. Patented January 19, 1892. Send stamp for circulars and price list. Address

1029 J STREET..... M. L. WISE, Manager,.....SACRAMENTO, CAL.



GEM STEEL WIND MILL WITH GRAPHITE BOXES.

Never Requires Oiling or Climbing of Towers.

Guaranteed more durable without oil than other mills that are oiled. Practically, these mills require no attention. Truly a Gem, and worth its weight in gold. It combines beauty, strength, durability and simplicity. Governs itself perfectly, is easily erected and is sold on its merits; in fact, it is the best mill on earth. They are geared back three to one—the wheel making three revolutions to one stroke of pump—making them run in the lightest wind or breeze. The mill is made entirely of Steel and Cast Iron. Each one of our Gem Wind Mills is warranted. If not satisfactory, freight will be paid both ways and money refunded. We also carry Pumps of all kinds, Tanks, Pipe Fittings, Hoses, Etc.

WOODIN & LITTLE, 313 MARKET ST., San Francisco, Cal.



RUSHFORD FARM WAGONS

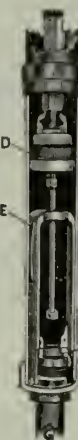
LIGHTEST DRAFT WAGONS
IN THE WORLD.

EVERY ONE GUARANTEED.

TRUMAN, HOOKER & CO.,

SAN FRANCISCO AND FRESNO.

Deep Well Pumps.



The Valves and working parts of the Fulton Pump can be removed, repaired and replaced without taking the pump out of the well.

Pumps fitted up for all depths of wells, ready to put in.

Send for Circular and Price List to

A. T. AMES,
GALT, CAL.

MANUFACTURER OF PUMPS AND
WINDMILLS.

For Sale at a Bargain.

1 "DANIEL BEST" TRACTION
ENGINE, Largest Size.

1 "DANIEL BEST" COMBINED
HARTESTER, 20-Foot Cut.

This machinery all in good order at King City, Cal.
Owner gone out of farming business there.

Address A. L. REED, King City, Cal.
Or EDWARD FRISBIE, Redding, Cal.

HAY PRESSES.

The Monarch, Junior Monarch, and other kinds of Presses, made by the Celebrated Hay Press Manufacturer, Jacob Price, for sale by
L. O. MOREHOUSE,
San Leandro, Cal.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos. A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St., San Francisco.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

Livermore Herald: We are informed by a gentleman in a position to know that there is a move on foot to form a general organization of all the wine men in the different counties. One of the main objects is to try and induce those engaged in the business to hold their wine until the dealers in the city are compelled to pay better prices. There is no disputing the fact that something has to be done, and that soon. The business was never in a worse condition than at present. The prospects are favorable for a tremendous crop this season, and, while that is generally looked upon as a blessing, the rule is reversed in this instance.

Butte.

Gridley Herald: An eye-opener in the shape of an English gooseberry was presented to our gaze a few days ago. The berries were grown on Henry Robbin's place, two miles south of Gridley, and were beauties, the largest being two inches in circumference. The cuttings were brought from Amador county, but the original stock is from Ireland. In the markets the English gooseberry is worth 2½ cents per pound more than the common berry, which pales into insignificance in comparison.

Chico Enterprise: Great complaints have been made about the vicious little sparrow which has nearly taken this section. The sparrow is a bird that is no account in the world, and is continually at war with all others of the bird family; especially so is it the enemy of all the sweet songsters we have in this section. It is full of mischief, and has not one redeeming trait to recommend it to life. So numerous have they become that it is proposed to wage a war of extermination, and the privilege will be asked of the Board of Town Trustees to put the war into effect. It is about three years since the first sparrows were seen here, and they have multiplied immensely since then.

Contra Costa.

Antioch Ledger: The new hay crop is coming in slowly. The fact is that the crop seems to be very light and limited. There were no disturbing showers during the haying season, and hay is of excellent quality, although the acreage is limited. Wiseacre who pretend to study these things predict that hay is a good investment, and that there is a fair chance to double money by buying hay at the present ruling prices.

Humboldt.

Arcata Union: The dairy cows on Arcata bottom are pretty much all dehorned, and as a consequence are much more docile than formerly. The practice of destroying the germ of the horn in the calf's head by caustic is being adopted by some, and will be found effectual if the application is made at the proper time.

Reports from upper Eel river confirm the recently published statement that, while there has been a showing of an unusually large crop of apples, in some localities they are dropping from the branches at an enormous rate. It is supposed to be a blight caused by the continued rain which prevailed during and after blossoming season.

Standard: The Fortuna cannery will start up Monday morning to pack strawberries. Many boys and girls of the Eel River valley are already engaged to pick and stem the fruit. D. K. B. Sellers has placed an order with the cannery for 12,000 cans of strawberries. Growers say the quality of the berries this year will equal, if not excel, that of last season, and, owing to the anticipated demand for Humboldt berries, they are now thoroughly prepared to supply the buyers.

Standard: History repeats itself, situation directly reversed. Time was, from two to four decades of years ago, when hogs were driven from Humboldt to Weaverville and other Trinity towns. A correspondent writes that yesterday a band of hogs came to Lamb Bros., Rohnerville, all the way from the Hettenschow valley, Trinity county. They were fine-looking porkers, and every one of them black as a coal; were grown in the Wilburn municipality, and near the home of James Howe, a Weaverville old-timer. The parties in charge said there are plenty of hogs in that section, notwithstanding a large number were killed and cured last winter. In spite of the long drive, the hogs were in very good condition on arrival.

Alton Our Paper: Some three weeks ago the prospects for a large crop of cherries in this valley were very good. But during the last three weeks the cold and heavy north winds have caused them to drop to an alarming degree. Particularly is this true around Alton. Mr. Peter Hauck informs us that his cherry trees were heavily laden with small fruits, but now he anticipates a shorter crop than last year, which was a small one. Others have complained of the same thing. The apple crop will be light, as will be that of the prune and peach. This is a matter to be deplored, as it will work hardship on the cannery in the matter of filling that large contract for canned fruits. It is reported that the yield of berries will be large, especially strawberries, raspberries and currants, and we understand the company's largest order is for the first mentioned of these three varieties.

Kern.

Californian: Out of 200 colts foaled at the Stockdale ranch this spring, all have lived and thriven but two. A pretty good record!

Californian: George J. Frey is reveling in sweetness. He got the job of removing the bees and the honey from the Episcopal church, and secured two large swarms of bees and over 100 pounds of first-class comb honey. The Episcopal church has been a favorite home for the industrious little insects, and every year a swarm or two have taken possession, and, when the hot weather came, the honey became fluid and ran down the walls of that structure, to the delectation of flies and annoyance of the trustees.

Kings.

At Hanford, in Kings county, there are 960 acres in raisin grapes in one tract, making the largest grape field in the world. It is owned by Timothy Page, and is two years old. Near by is a tract of

560 acres all set to prunes, three years old. This big place is owned by J. C. Kimball of Los Angeles.

Los Angeles.

The Pomona nurserymen shipped away 149,598 trees during May, of which number 131,000 were olives and 17,000 oranges.

Mendocino.

Republican-Press: Wool Day at Ukiah was last Tuesday, when from sheep ranges covering a thousand hills in Mendocino and adjoining counties scores of growers drove into town, bringing with them 961½ bales of wool weighing 356,665 pounds. This represented, even at the low market valuation, upward of half a million dollars. Mathematically and comparatively considered, this low valuation is only about two-thirds the prevailing rate last year, which of course is a sore disappointment to the growers.

Monterey.

Salinas Index: L. H. Garrigus, the grain-buyer, returned Sunday from a grain-inspection trip as far south as Paso Robles. He states that the crops are very fine at King City and San Lucas neighborhoods. They are not so good at Paso Robles, and in San Antonio valley there was too much rain during the season for an extra crop. The general average in Monterey county, he thinks, is the best it has been for a number of years.

Index: News of the first grain fire of the season reached here Tuesday. The first report put the burned-over tract at 800 or 900 acres, but parties down from San Lucas later say that the loss was less than 200 acres. The fire was on ground leased by Jim Smith, a former resident of Salinas, on the upper end of the San Lucas ranch, adjoining the San Bernardo. Mr. Smith had been to town for a load of lumber and had also got a package of matches which he laid on a post in the sun while he was unloading. The wind blew the package off, and the fall ignited them. The field is said to have been insured.

Napa.

Register: A. D. Butler has made his last shipment of cherries, which gave a round-up of 1400 boxes for the season. This is a lighter yield for him than two years ago and heavier than last season. This week will see the end of the season for most growers in this vicinity. Four full carloads of cherries have been forwarded from this point thus far this season. A good many cars partially loaded have gone to Suisun, there to be filled out with Vaca valley fruit. Large quantities of cherries have been sent through Wells, Fargo & Co. to different parts of the country, and some growers have sold to canneries and dealers in San Francisco.

Orange.

Anaheim Gazette: Beet-hauling will begin in about three weeks, and there will be busy times in the beet fields for upward of two months. The beets are maturing nicely and promise to fulfill every prediction made of them at the beginning of the season. Many fields will go over 20 tons to the acre, and this sunshiny weather gives every promise that they will be of high saccharine quality. There will be in the neighborhood of 60,000 tons of beets to ship to the refinery at Chino, and the output may go over that materially.

Orchardists report that some of the orange trees are very backward about blooming this year, and fears are entertained that next season's crop will be small. No cause is assigned for this state of things, but it is thought that the heavy crop borne by the trees last season may account for it. Orange trees, it seems have their "off" and "on" years in bearing, the same as most deciduous trees.

Placer.

Argus: The fine young orchard and vineyard of L. L. King, just south of Roseville, is one of the finest we have seen in Placer county. It has a fine variety of fruits, and comprises 120 acres. It is as clean as a new pin, and what is more to be rejoiced at, is bearing as much as it could be allowed to produce after thinning out.

San Bernardino.

Chino Champion: Mr. Gird has sent to the Chicago exposition an exhibit of sugar beets and photographs of typical sugar beets, beet fields, sugar factory and harvesting machinery, to be placed in the display of Florimond Desprez, the French seed-grower. Chino sugar beets will certainly have no superior at the great show, although the distance will make it difficult to deliver them there in the condition it would be desired. Mr. Gird plans to make a shipment of fresh beets from the fields every week or ten days to refresh the display as fast as it becomes wilted.

San Diego.

The Chino beet-sugar factory is to begin operations about July 15th. Reports are to the effect that there will be an immense crop of beets this season. The factory people expect the output of sugar to be about 16,000,000 pounds. This means 800 carloads, or 55 train-loads of 15 cars each.

San Jacinto Register: Blackberries and strawberries are again quite plentiful. Still the demand is greater than the supply. There is money to be made here in the raising of small fruits. Persons who own tracts of two to ten acres could realize a very handsome income with a little determined labor and attention to the work. A market could easily be found at home where people go without raspberries, currants and gooseberries, and have to be satisfied with a small crop of the berries that are grown here. This is a country particularly adapted to small fruits. The non-supply of potatoes is another grievance. Here where they grow to perfection we are obliged to send north for them and pay 3 cents and always 1½ per pound. This is a glaring inconsistency. If some of the numerous kickers in the valley would get to work, they would soon find nothing to kick about.

San Joaquin.

Lodi Sentinel: There are not many large watermelon fields planted this year, but a number have patches of from 10 to 75 acres. Those about Lodi are: J. Powers, 75 acres; Coleman & Gillespie, 75; W. H. Tecklinberg, 70; Gillespie & Acker, 65; L. O. Gillespie, 60; A. Harmon, 50; G. Hogan, 40; A. Bellows, 40; I. Hutchins, 40; H. Binger, 30; E. Angier, 20; J. Hubbard, 20; and F. Muller, 20.

Near Acampo, W. S. Broadus has 150 acres; N. Smart, 50; H. Ogden, 40; A. Bellows, 40; and L. Titus, 30. In addition to the above, there are two or three hundred acres of vines in the vicinity of Woodbridge, New Hope, Taison and Brack's Landing. It is expected that the melons will be of a superior quality this year. The supply is not great, hence if the demand is up to standard good prices will be the result.

San Luis Obispo.

San Miguel Courier: Haddin McFadden, with several vaqueros took a band of 1400 cattle out of the Carisa yesterday. On Sunday, while in the Nacimiento country driving them to San Miguel, he lost two fine steers. A traveling showman with a bear and monkey caused the cattle to stampede, and when they were rounded up after much hard work, two of the animals were missing.

Siskiyou.

Yreka Journal: Chas. Holgauser, who lives near Etna, has started a new enterprise for Scott valley. He planted out last year six or eight acres of hop vines, and they are looking fine this year. We are informed that the vines are in excellent condition, and growing rapidly, and now present every indication of a large yield. They are making preparations for building a large drier for curing the hops, and, if the enterprise proves as successful as now anticipated, a large acreage will soon be planted, and thus open up a new and profitable industry for that fertile valley.

Solano.

Dixon Tribune: R. E. L. Stephens dug 40 sacks of Early Rose potatoes from a half-acre of his Silveville farm this week, which at the present price of potatoes netted him a handsome profit. Yet we are told that farmers in this section cannot diversify crops, as the land cannot be depended upon to raise anything but wheat and barley. Even a few acres in potatoes, these hard times, would go a long way toward paying living expenses, and Mr. Stevens, with his characteristic enterprise, has demonstrated the fact that they can be successfully raised with ordinary care and attention.

Vacaville Reporter: Nate Holt showed us this week some fine blackberries and raspberries produced from the hushes growing in his garden. The berries were the largest and finest we have ever seen. The raspberries are apparently a cross between the common raspberry and the wild blackberry.

Sonoma.

Republican: Recently Surveyor Ricksecker visited the land Senator Jones is reclaiming in the southern part of the county. From him we learn that the yield of hay on 400 acres of the land is very heavy, and that there are 800 acres of splendid grain. The returns from the reclaimed tract are so satisfactory this year that the acreage in cultivation will be doubled before the coming of another season.

Farmer: During the dry, warm winds our pear crop was considerably lessened, and, as other fruits are less abundant than usual, we cannot afford to lose the grapes, even if the market will not be as near as it was last year. Some other firm could do well by organizing a Geyersville Must-Condensing Company, for in some parts of the valley one can see nothing but vines, and the grapes must be sold, even at low figures. There is some talk of running a drier in the old must building. From what source the talk comes is a problem; perhaps it is only a supposition.

Cloverdale Reveille: Wool sale day for this section of Sonoma county came off in Cloverdale last Wednesday and Thursday, June 21 and 22. Eight hundred bales was the amount offered for sale, but owing to the stagnation in the wool market and a lack of the usual complement of buyers, only about 300 bales were disposed of, and these at rates not at all satisfactory to wool-growers. The wool sold averaged about 13 cents a pound and was bought by the following parties: Koshland & Dickey, San Francisco, 100 bales; Pinschower & Brusb, 200 bales; and Capt. John Field, 64 bales. Prices ranged from 11 to 14 cents, making it average about 13 cents a pound.

Stanislaus.

The Stanislaus county agricultural fair this year will commence on Tuesday, September 26th, and close on Friday, September 29th. Job printers are now at work on the revised premium list.

Tehama.

Red Bluff News: Early this year the impression was abroad that the hay crop was going to be very short this season, and those who came into market early with their loads of "new-mown hay" realized a good price on the sale of the same. But as the season advanced many who intended to cut their fields for grain believed the better policy would be to cut them for hay, as the crop was short, the price of wheat low, and the expense of harvesting greater than that of haying. The result is that the Red Bluff market is flooded with new hay, which is now selling for something like \$7 per ton, with the prospects of not advancing very soon.

A. T. Hatch, the great fruit-grower, has worked up a scheme to plant 1200 acres in Tehama county. To carry out the plan the A. T. Hatch Orchard Co., with a capital of \$250,000, has been organized to plant a piece of bottom below Red Bluff. Among the advantages outlined for the project are: (1) An orchard at less cost than the investor can build it himself on a smaller tract; (2) an orchard managed by thoroughly competent and experienced men; (3) the best possible cultivation and care at less cost than by any other method; (4) the best prices in the market for the product, because the quality will attract and command buyers; (5) economy in all branches of the labor, because the work on a large scale can be more cheaply done through single management and by labor-saving and other appliances not adapted to small orchards.

Tulare.

Delta: There are 15,000 acres in the sinks in the Huron country that will yield from 16 to 20 sacks to the acre. About 15 harvesters are now at work in the grain fields. The yield promises to be something extraordinary. All this land was flooded during the winter.

Times: About 40 men are picking apricots at the Briggs orchard. A carload, holding perhaps 1000

boxes, will be ready by to-morrow for shipment to Chicago.

Times: On the Encina fruit ranch the hay which is growing between the young trees is being harvested. Some of the grain was sown since the last rain and it is yielding a fine crop.

Times: Potato-growers east of town have a better crop this year than last and they expect better prices also. Some of them have concluded to hold their potatoes till next fall if they can't get their price.

Times: A. W. Roach, who farms on Tule river, four miles west of Woodville, has some extra good grain this year. He has 100 acres in wheat and barley. The wheat averages about five and a half feet in height and he is expecting from 15 to 20 sacks of barley to the acre. He plows with two 12-inch sulky plows. That is why he has good grain.

Times: John Roth, of Woodville, plowed up ten acres of vineyard last winter. He concluded to try some other crop, as raising-growing was not his forte. So he planted the piece of ground in mangel-wurtzels, drilling in the seed. The result has astonished both him and his neighbors. He estimates the yield will be nearly 40 to 50 tons to the acre and the seed was planted too thick at that. Several specimen plants have been found that weigh ten pounds each. He has more hog feed than he knows what to do with.

Ventura.

Nordhoff Ojai: The last story-teller has the hes of it, of course. The Ojai recently mentioned oats grown here that measured seven and one-half feet in height. The Santa Paula Chronicle immediately hunted up some Santa Paula oats that measured eight and one-half feet in height. And now the Hueneme Herald is talking about oats down there that measure nine and one-half feet.

Venturian: "Roughly estimated, I should say that there are 24,000 acres in beans in this county this year," said A. Levy of Hueneme, yesterday. "Of this acreage I should say that one-half was in Limas and the other half in small whites and other varieties. On the whole, the crop is looking fine, but in places the cutworm has hurt the Limas. As high as five per cent has probably been damaged. These are only in spots, however."

Yolo.

Democrat: Mrs. R. Hyman has orange trees in her yard that are full of bloom. They are year-old buds on three-year-old roots. There is not a leaf on any of the trees. "The oldest inhabitant" never heard of anything like it before.

Capay Cor. Democrat: Harvest is progressing satisfactorily, and the outlook is more encouraging than it was a month ago. The resources of our soil are remarkable, and there is no doubt that there will be more wheat, and of better quality, than the most sanguine hoped for before the harvest began.

Democrat: James Martin has 3000 head of sheep on the way from Tehama county. They were started last Friday, and, barring accidents, ought to reach here about next Monday. He also has bought, in that county, 8000 three and four-year-old wetbers for August delivery. The sheep expected to arrive next week will be put on pasture for some time.

Mail: J. Rasmussen, foreman of the Byron Jackson place, reports an exceptionally heavy crop of fruit. A large force has been busy for some time thinning prunes, and, with all their exertions, the trees are so heavily loaded that they are continually breaking down under the weight of the growing fruit. The Jackson place is one of the few in this vicinity that can boast of a good crop of apricots. Mr. Rasmussen says that each year the trees are thoroughly irrigated just after the crop has been picked. He does not know that to be the reason why his apricot trees should be filled with fruit while his neighbors' are bare, but is inclined to attribute it to the irrigation. The grape crop keeps up with the procession, and will be the heaviest ever gathered.

OREGON.

Salem Statesman: The country around Salem has raised an immense lot of strawberries. The people of the Capital City are using great quantities, the big cannery is running on strawberries, and gobs of them are going to the Sound and other directions.

Salem Statesman: The prices for wool have fallen, and very little is now selling. It is now 10 to 12½ cents for the best. A Salem dealer was a few days ago offered 5000 pounds of good wool on board the cars at Amity at 12 cents. He did not take it, and it went to Portland parties. The managers of the woolen mill are not buying much wool now, growers being slow to sell at the low prices and they not being anxious, being confident that the prices will not advance. They are picking up stray lots occasionally. A man from The Dalles says the buyers there are apparently doing nothing, killing time and waiting for something to turn up.

WASHINGTON.

The little German songbirds which were imported into Oregon not long ago have multiplied rapidly, and hundreds of them may be found in and about North Yakima, where they are being ruthlessly slaughtered by small boys to the great indignation of the lovers of the bird.

A farmer in Wahkiakum county, Wash., objected to his neighbors building a public road across his farm. When he put up a fence they tore it down, and when he got in their way they took hold of him, rolled him in the mud, blacked both of his eyes and then had him arrested for obstructing a highway.

It is stated that young peach trees in the Wenatchee valley, Wash., which had their lower limbs covered with snow last winter, will bear heavy crops this fall, while the older trees will produce but little fruit. Apples, pears, prunes and plums will be abundant in that section, and there will be a full yield of grapes.

Washington is, next to New York, the heaviest producer of hops in the country, and the average number of pounds raised to the acre is 1616, only being exceeded by California, with 1643. The average for the United States is 780. There is a large increase in the acreage this year, owing to the Yakima and Walla Walla valleys, in eastern and central Washington, engaging extensively in the industry, which has hitherto been largely confined to western Washington.

PATRONS OF HUSBANDRY.

From Worthy Master Davis.

Brother Brigham, Worthy Master of the National Grange, is campaigning successfully in Texas, for the order he loves so well.

Hon. C. H. Knott, Master of West Virginia State Grange, is rousing the farmers of that State by his eloquence, wit and argument.

Sebastopol, Bennett Valley, Glen Ellen, Two Rock and Santa Rosa Granges have each appointed committees to assist Petaluma Grange in arranging for the entertainment of the coming session of the State Grange.

Magnolia Grange is preparing for a grand time on the 11th of August.

Pescadero Grange celebrates the third and fourth degrees Saturday, July 1st, and the master expects to be there.

July 8th Petaluma Grange gives the patron's "grip" and "test" to a new class.

You may as well prepare to dry and preserve your own fruit this year, unless the money market gets easier.

Reports from grange headquarters at the World's Fair are "that everything is in readiness and that all patrons should make an extra effort to attend." When we think of those hot days and sultry nights we are inclined to remark, "Will see you later."

The expected rush to the World's Fair from the Pacific Coast has not set in; nor will it so long as railroad fares are kept at the present high rate. If the management of the transcontinental roads would but see the situation as it is, and know of the financial distress, and would then reduce the fare for the round trip to \$50, there would be a big crowd from the Pacific Coast who would go to the Lake City. Would not the transportation companies make more money than they are now making? For when the people are in motion they go, and they spend, where they expected not to do so. Give us low fares and let us all go to the Fair.

The many failures among bankers and of banking institutions has caused a tightness of the money market that is quite distressful. It is exceedingly unfortunate for the California producer that this stringency should happen at all, but more especially that it should occur just now, when the harvest of hay, grain and fruit is at hand. Ninety per cent of all the producers in this State have to borrow larger or smaller sums for the harvest time. Labor has to be paid in ready cash, and bags, boxes and freight are always cash debts. Nothing but "spot cash" will do the work of a California harvest. Just at this time "cash" is out of business. The "old chap" is on his high horse. It is not proper nor well to try to give reasons for this condition of the money market. Every man has his own ideas, and he cannot be persuaded of his error, if in error. So the best thing to do is to have a reasonable amount of confidence in true and tried men and in business methods. Be as economic as possible. Husband every resource; save every nickel till the crash goes past. Assist creditors as far as pressing needs will allow. Encourage confidence by showing you have confidence, and after awhile there will be relief and more prosperity.

The power and force of organization is too well understood to need any word of help at this time. There is, however, a most happy illustration of its strength and usefulness to be seen in the feeling and fellowship which has brought the Alliance of Texas to join hands with the Grange of that State. By a recent arrangement, all members of the non-political branch of the Alliance have joined the Grange and have surrendered their State charter. This arrangement could not have been possible between the two farmers' organizations in the years ago. It is only possible where the leaven of education has wrought its wonderful influence and has shown the agriculturists that "in union there is strength." If the farmers of America would protect themselves and their rights, they must unite on a common basis; they must expect and agree to fight a common foe; they must know that the race is not always to the fleet, but that if they would win in the race of life they must be organized; be intelligent; be progressive; be vigilant; be honest; be just and fear not.

There ought to be a lively fall crusade among the farmers of this State this year in behalf of the grange. Who will undertake to lead that crusade? Where is the person who will organize a corps of workers and teach them the tactics, so that they can persuade the farmer and his family to join in the battle for the grange? Our forces

ought to be recruited; our enlistments must come from the farm. We want at least 10,000 boys and girls and half as many men and women to enlist under our banner. The pay is sure, the work pleasant and associations elevating, and the term of enlistment to suit the recruit. Won't some of the talented officers of the State Grange start out soon on a recruiting tour, establishing headquarters here, there and everywhere where there is a farm-home and a bright-eyed boy and a sweet-faced girl? Get the young people enlisted and then the victory is won. They will carry the banner to any height, and declare the purposes of the order to any throng. Get recruits for the grange among the young!

From Mr. Ohleyer.

TO THE EDITOR:—Since my last letter I have had a variety of experiences none of which I opine the public cares anything about. True, I have visited our own and other meetings of Patrons of Husbandry, been amused and enlightened thereby, but a recital of the doings would be merely a repetition of what had been so well done before.

The last meeting of Wheatland Grange was a grand success and was attended by a number from Yuba City, including the writer. Then we had a literary meeting in Yuba City which was also a success. The question of a parcel delivery by the postal department of the Government was broached and its discussion was set for next regular meeting, Saturday July 1st.

It was resolved to discontinue the special meetings during the busy harvest months but to continue the regular meetings on first Saturdays. More recruits are knocking at the doors who will receive due attention.

A recent business trip to northern Sutter and southern Butte brought me to the threshold of many old friends and members of our order. Chief among these were Judge and Mrs. Wilkinson of Live Oak, Mr. and Mrs. T. S. Clyma and their estimable family, Jas. and J. H. Myers, W. T. Lam and wife, Adam Hubbs, N. Young, John and Thos. Bruce, Joseph Kingsbury and others, mostly residents of north Butte.

Do you know, Mr. Editor, that I never visit that locality that I do not envy those fortunate dwellers the sylvan scenery that surrounds them. With them it is ready made by nature, excelling in beauty and romantic loveliness anything to be found in the great Sacramento valley, while we out upon the plains are compelled to create by art and hand such attractions as we have to offer. The great author and traveler, Nordhoff, once passed through this upheaval we call the Butte mountains, and made it the subject of a lengthy sketch to the New York Tribune, but even he failed to do the subject full justice, much less can I.

Here we have a mountain 2000 feet high, its top broken into three peaks, as rugged and pointed as Mt. Shasta. These peaks are known as North, South and West Butte, and seem to be supported by rocky ridges like huge spurs until lost in the valley. Between these spurs lie the most romantic little valleys, heading well up to the base of the mountain and constitute the abode of from one to three or more families. On the north side the mountain and base is covered with timber and underbrush, the timber being chiefly white and live oak. These little valleys are well adapted to all the cereals and the fruits of the country, and from their sheltered position have by many been pronounced superior for the growth of olives and kindred fruits, and the citrus family. The dense growth of tree and shrub would seem to indicate the possibilities of the locality and it very much resembles the country about San Diego, where such wonders are produced in fruit culture.

On a pressing invitation I remained over night with the Clyma's, the friends spoken of above, and was soon informed that March Grange was to have a meeting that evening at Pennington hall two miles away; and that Miss Jennie Clyma was the secretary and was going, and that I might take a ride with her to attend the meeting if I desired; of course I desired, so in good season I entered the buggy alongside of my fair escort, and was soon traveling at a rate that revealed the fact that the rearing of good roadsters and excellent drivers is not among the lost arts of North Butte.

The roads were excellent in every respect and our road to the grange covered several miles in distance not absolutely required, but in the twilight, fanned by the cool south breeze, at a gait that gave assurance that we'd get there, amid the laughing rills of my fair companion, the ride was very enjoyable. As the lady had the "books" she thought the grange would hardly open until she came, so we were there on time and the business

proceeded in charge of the writer as president officer. Owing to the busy season the attendance was not large but it was full of enthusiasm and grange spirit. The chief business was a preparation for a social event that was soon to come off and which I doubt not was a success. A previously appointed committee had the business in hand after which the meeting adjourned.

This grange holds two meetings a month, one in the afternoon and one in the evening. The latter, it is claimed, makes it possible for laborers to attend that cannot neglect their labor in the afternoons. The thought is worth considering by other granges similarly situated. I returned home the following day, having seen much of interest along the way.

Crops on high or naturally well-drained soil were fair, as along the Feather river from Yuba City northward for 20 miles, and a mile or two in width. On land not so situated the prospect is poor, by many considered almost a blank. These extensive fields have been plowed in fallow, hence the deluged appearance of the land has been abated and the treatment of the country indicates a matter of course. The pen that shall describe the situation a year hence will have a more agreeable duty to perform as I have never seen so much land laid over to rest, nor better work done. At the risk of transgressing on your apparently limitless good nature, I want to thank all those who treated me so kindly during my brief stay. My gratitude is particularly extended to the Clyma family, one and all, not forgetting Miss Jennie, who did so much to remind me of my youthful days, more than 40 years in the dim past.

GEORGE OHLEYER.

Yuba City, June 25, 1893.

From Pescadero.

TO THE EDITOR:—Since my last letter, written a month ago, Pescadero Grange has held three meetings, or properly speaking, four, though two occurred on the same day. On May 20th we found our number unusually low, but, nevertheless, the meeting was a great success. One of our members gave us an address, bidding us remember that the subordinate granges made the State grange, the State grange the National; that as the subordinate granges were, so would be the higher granges; therefore, it behooves us to let our light shine and make our influence felt. That to make the grange a necessity, is to make it a success. To this end we should discuss from the granger's standpoint, the farmer's rights, the developments of the surrounding country and the various advantages derived from different processes of farming. Then, knowing what will be the greatest good to the greatest number, we can concur in the cause with true and loyal enthusiasm.

Our worthy master then gave an address on the silver question, which was listened to with close attention. Justice cannot be done to it in this letter. Suffice it to say, the conclusion was that on the farmer and laborer fell the burden when silver was not on a par with gold.

Other important questions of the day were brought up, and the meeting ended with all believing that enthusiasm in a few was better than numbers without it.

Subsequent meetings have been given up largely to musical and literary exercises. On Flora's Day we followed closely the program suggested by the Committee of Woman's Work. The celebration was followed in the evening by a social dance.

Pescadero, June 25, 1893. M. A. M.

Bennett Valley Grange.

TO THE EDITOR:—Saturday, the 17th, Bennett Valley Grange met in regular session and a more interesting meeting has not been enjoyed in many months, although the attendance was not large. Most all present were charter members, the younger members being unable to attend, on account of hay making and picking of early fruits.

The old-time schoolmaster used to board "around." Sonoma Co. Pomona Grange has adopted that plan, i. e., meeting at the hall of a different grange each time. It meets at Bennett Valley Grange hall on the third Wednesday in July. Every effort is being exercised by the home grange to make it as interesting a meeting as the county grange has on record.

Other Notes.—Haying is about completed; balers are at work everywhere.

The weather is all that could be asked. The grape crop will be good if nothing happens.

Good hay demands a good price in the local markets.

Most all the wineries have sold their entire vintage of 1892.

June 19, 1893.

W. L. W.

GRANGERS' BUSINESS ASSOCIATION,
(A Corporation).Principal Place of Business, 108 Davis St.,
San Francisco, Cal.

NOTICE.

There are delinquent upon the following described stock, on account of assessment levied on the 8th day of May, A. D. 1893, the several amounts set opposite the names of the respective shareholders, as follows:

Nams.	No. of Certificate.	Shares.	Amount.
D. Q. Adams.....	220	8	\$20 00
Nathan Barnes.....	231	16	40 00
G. W. Brake.....	44	2	2 50
Nelson Carr.....	61	20	50 00
Jas. A. Clark.....	50	20	50 00
Annetta Clark.....	60	4	10 00
Clement V. Datten.....	146	2	2 50
T. G. Frost.....	77	2	5 00
W. H. Frye.....	76	20	50 00
J. A. Hollday.....	89	4	10 00
Joseph Huntly.....	170	4	10 00
Mrs. Joseph Huntly.....	171	4	10 00
H. M. Hollisbeck.....	238	5	20 00
Mrs. H. M. Hollisbeck.....	239	8	20 00
C. H. Hollday.....	251	6	15 00
H. M. Jewell.....	111	35	95 00
John Johnson.....	96	4	6 00
Mrs. Sarah Johnson.....	456	10	25 00
Mrs. T. E. Ketchum.....	139	12	15 00
T. E. Ketchum.....	140	28	35 00
Geo. A. Lamont.....	464	63	150 00
Mrs. L. E. McMahon.....	124	20	50 00
C. W. Plass.....	212	20	50 00
P. Peterson.....	303	28	70 00
P. Peterson.....	361	14	35 00
Thomas B. Pitkin.....	469	28	70 00
E. M. Smith.....	312	8	20 00
L. Stong.....	163	20	25 00
Mrs. Julia E. Sylvester.....	206	20	50 00
J. B. Sheat.....	352	4	10 00
Thomas Salmon.....	414	8	20 00
G. W. Tillotson.....	428	20	25 00
A. A. Van Sandt.....	199	4	10 00
J. P. Vincent.....	200	4	5 00
Uriah Wood.....	243	10	12 50
J. Wisecarver.....	161	54	135 00
	184	8	20 00

And in accordance with law, and an order of the Board of Directors, made on the 8th day of May, 1893, so many shares of each parcel of such stock as may be necessary will be sold at the office of the Corporation, 108 Davis Street, San Francisco, California, on WEDNESDAY, the 12th day of July, 1893, at three (3) o'clock p. m. of such day, to pay delinquent assessments thereon, together with costs of advertising and expense of sale.

CHARLES WOOD,
Secretary Grangers' Business Association,
Office, 108 Davis St., San Francisco, Cal.

Mrs. M. H. Ober,

PHELAN BLOCK,
816 Market St., S. F.
11 O'Farrell St., S. F.
Branch, 1236 San Pablo Ave.,
Oakland.



All qualities Ypsilanti Union
Snits for ladies and children.
Headquarters for the Coast.

TIGHTS.

Knee and ankle, open and closed
seat, \$1.25 up. All qualities.
Fine Black Hosiery for ladies
and children.

A full line of Bathing Snits.
Cleopatra and Delsarte Girdles.
R. F. Sensible Waists for
Ladies and Children. All prices.
Bathing Suits of all qualities
and prices.

Only authorized Agent for
EQUIPOISE Waist and JEN-
NESS MILLER Goods.
Sample pieces and Catalogue
sent free.

Horse Owners! Try
GOMBAULT'S
Caustic
Balsam

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes
the place of all liniments for mild or severe action.
Removes all Bunches or Blemishes from Horses
and Cattle. SUPERSEDES ALL CAUTERY
OR FIRING. Impossible to produce scab or blemish.
Every bottle sold is warranted to give satisfaction
Price \$1.50 per bottle. Sold by druggists, or
sent by express, charges paid, with full directions
for its use. Send for descriptive circulars.
THE LAWRENCE-WILLIAMS CO., Cleveland, O.

COYOTES

Nothing Succeeds Like Success.

A limited number taught to trap Coyotes and Silver-
gray Foxes. Send \$25 and a guarantee that you
will keep it a secret at least ten years. Only one taught
in same locality. Satisfaction guaranteed or money
refunded.
C. E. BECKWITH,
Kelseyville.....California.

Seeds, Plants, Etc.

AN INVITATION

IS EXTENDED TO ALL INTERESTED TO VISIT THE SAUSAL FRUIT FARM DURING THE FRUITING SEASON, WHERE ALL VARIETIES ARE TESTED THAT ARE GROWN AT

NAPA VALLEY NURSERIES.

AN INSPECTION OF THE NURSERIES ALSO SOLICITED. CLEAN STOCK, UNIRRIGATED, PROPAGATED FROM BEARING TREES.

LEONARD COATES, NAPA, CAL.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrobalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

OLIVE TREES.

ALL KINDS OF
Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,
Pomona, Cal.

OAK LEAF NURSERIES
—AND—
APIARIES.

Trees, Plants, Flowers, Seeds,
Bees, Honey, Etc.

The best varieties of Strawberry Plants furnished at lowest prices, such as the Australian Everbearing, Honey, Triomphe De Gand, Samers, Jessie, Iowa Beauty, Gandv, Eureka, etc., besides all the native wild varieties of California.

THE SNOW PLANT — THE MOST BEAUTIFUL FLOWERING PLANT IN EXISTENCE—we shall try to introduce as soon as possible.

Also the famous Sierra Mountain Lillies, Rhododendrons, Strawberry Trees, etc.

Seeds of native trees and plants furnished in their proper season.

A great part of the stock that we advertise cannot be purchased of any other dealer in the world, as we are the first to advertise and introduce such trees and plants. Send for Price List.

S. L. WATKINS,

Grizzly Flats.....California.



HEADQUARTERS
For Rare new Tropical fruit and ornamental plants and trees. Palms, Ferns, Orange Trees, Pineapples, Bamboos, Aquatics, Etc.
Plants safely shipped everywhere. Send stamp for new and full catalogue which tells all about this subject.
REASONER BROS
Oneco, Fla.

The American Bee Journal,

(Established 1861.)

Is Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample.

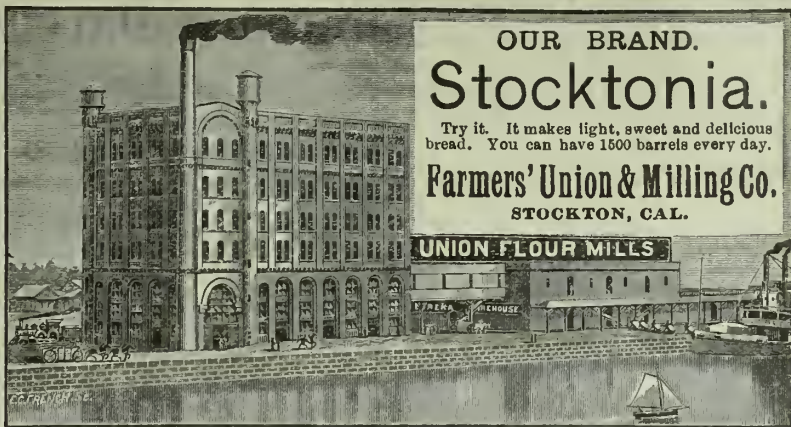
\$1.00 BEE-BOOK FREE

GEO. W. YORK & CO., 56 Fifth Ave., Chicago, Ill.

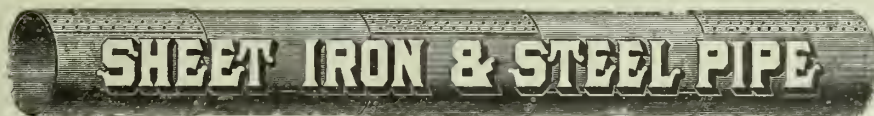
BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perfected Zinc Honey Boards, Shipping Cases, Cans and Cases for extracted Honey, Bee Tent, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.



FRANCIS SMITH & CO.,
MANUFACTURER OF



FOR TOWN WATER WORKS.

Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes
NO. 180 BEALE STREET, SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.

MEXICAN PHOSPHATE AND SULPHUR CO.
SEASON OF 1893.

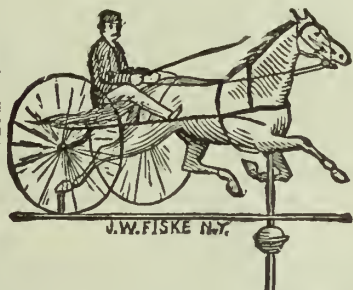
NITROGENOUS SUPERPHOSPHATE

AS AN EFFECTIVE FERTILIZER IT STANDS UNRIVALED.

.....Send for Circulars.....

H. M. NEWHALL & CO., Agents,

809-811 Sansome Street San Francisco, Cal.



WEATHER
VANES

For the Cheapest
and Best

SCALE

Grain & Store
TRUCKS

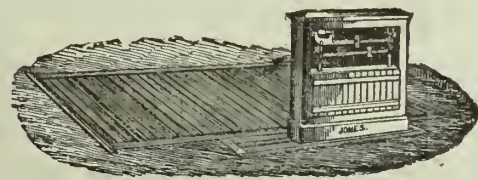
COFFEE
MILLS

Of any style known
to the trade

GROCERS'
FIXTURES

HOWE SCALE CO.

75 Front St., Portland, Or. 3 & 5 Front St., San Francisco.



THE JONES 5-TON WAGON SCALE.
Price \$66, Delivered Anywhere in the United States.

These Scales have STEEL BEARINGS, Not Wood-BEAR THIS IN MIND.
From 25 to 50 per cent cheaper than any other Scales of like quality. All sizes and kinds of Scales always in stock.

Truman, Hooker & Co., San Francisco.

Send for Price Lists

OF GUNS

And all Articles used
by Hunters and
Anglers.



GUNS SENT ON
TRIAL.

OLD GUNS TAKEN
IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.

THE
RAISIN INDUSTRY.

A PRACTICAL TREATISE ON THE RAISIN GRAPES,
THEIR HISTORY, CULTURE AND CURING.

By GUSTAV EISEN.

This is the Standard Work on the Raisin Industry in California. It has been approved by Prof. Hilgard, Prof. Wickson, Mr. Chas. A. Wetmore and a multitude of Practical Raisin Growers.

Sold only by the DEWEY PUBLISHING CO. or its Agents at the uniform price of \$3.00, postage prepaid. Orders should be addressed:

THE DEWEY PUBLISHING CO.,

220 Market St., San Francisco.

DEWEY & CO. { 220 MARKET ST., S. F. } PATENT AGENTS.

FALL 1893

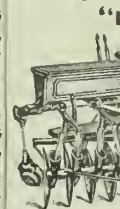
"KEYSTONE"
Corn Husker and
FODDER CUTTER.



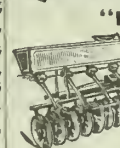
Husks the corn and cuts the fodder at same time.



"KEYSTONE"
CIDER MILLS.
Two sizes:—
Do fast and good work.



"KEYSTONE"
DISC
GRAIN
DRILLS
Pulverize the soil, drill any grain and cover it.



"KEYSTONE"
DISC SEEDER
Pulverize the soil, broadcast the seed and cover it.



"KEYSTONE"
DISC
HARROW
The great pulverizer for any soil.

Send for full descriptions.
KEYSTONE MFC., CO.,
Sterling, Ill.

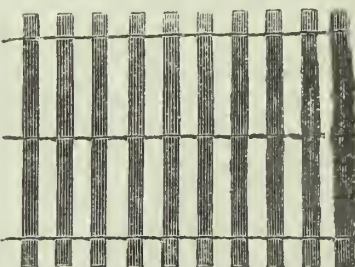
RABBIT-PROOF
STOCK FENCE.

Cheap, Durable and Effective.

Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2 1/2 ft., 4 ft., 4 1/2 ft., 5 ft. and 6 ft. high. Send for circulars and price list to

JUDSON M'F'G CO.,

13 & 14 Fremont St. San Francisco.



The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.

GRANGERS' BANK

OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED APRIL, 1874



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 800,000
Dividends paid to Stockholders.... 720,000

OFFICERS.
A. D. LOGAN.....President
I. O. STEELE.....Vice-President
ALBERT MONTELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

General Banking. Deposits received, Gold and Silver.
Bills of Exchange bought and sold.
Loans on wheat and country produce a specialty.
January 1, 1893. A. MONTELLIER, Manager.

BACK FILES of the PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes) \$4. Inserted in Dewey's patent binder 50 cents additional per volume.

Skim Milk for Manufacturing Purposes.

An English scientific journal of recent date directs attention to the utilization of skim milk for manufacturing purposes. Attention was first called to it in connection with the "Rivers Pollution Act." A large firm of cheese makers were in the habit of sending all the whey and skim milk which could not be used for pigs into the nearest river, and the prohibition of this practice has led to invention for its utilization.

One invention is a method for making all kinds of buttons, door knobs, electric lighting furniture, umbrella handles and many small articles from lactite, a substance made from skim milk. In this process the milk is heated to 85° or 88° F., and to every 58 gallons is added about four ounces of rennet. As soon as the milk is coagulated, the curds are washed once in warm water and then put into a masticator, which is warmed to about 150° F. In the masticator should be placed about 2½ pounds of borax, with about four pints of skim milk. When the masticator has been run a short time until the curd is almost converted into a solid mass, about two pounds of starch (preferably arrowroot) are made into a paste with some of the milk or whey, and three ounces of alum are also added, and the whole mass well incorporated.

The masticator is run for about an hour, and then three pounds of acetate of lead dissolved in half a gallon acetic acid are added to the mass, and carefully worked in, and when the mixings have been well made the mass is taken to the hydro-extractor, and then put into a hot press until it is properly set.

A large factory was fitted up near Manchester, England, for the manufacture of lactite, but it is said that up to the present time it is not a financial success. The lactite, when so prepared, will keep for any length of time.

The second process which is being experimented upon is to convert the skim milk or whey into a portable article of food. It is impossible to send skim milk or whey at a profit to distant towns, and some simple process by which farmers could get rid of the water at a small cost, and leave a residue rich in nitrogenous matter, is a thing very much to be desired. Lactoserin, the name given to this product, is prepared in a variety of ways as food for man, cattle and poultry. Roasted it can be used for mixing with cocoa instead of starch.

The manufacture of these products should possess great interest for the farmer, for it will enable him to turn to marketable value what has been too often a waste product. The dry curds are obtained from skim milk in the same way as in the production of cheese by adding rennet. The curds are pressed and ground and then dried in a drying oven. It has been estimated that the cost of manufacturing dry curds will not exceed more than about one farthing a gallon for the skim milk used.

Goats for Puddling a Dam.

A recent number of the *Engineering News* contains the following article describing the use of goats for puddling the reservoir dam at Santa Fe:

"The paper read by Surveyor-General Hobert, before the American Society of Irrigation Engineers, gives the time occupied by the goats in puddling as from 12 M. to 1 P. M. and 5 to 6 P. M. This was correct when the paper was read, for at that time several hundred goats were proposed to be used, and not 115 as mentioned.

"It was subsequently found that as the travel of the goats did not interfere with the teams, it would be more convenient and economical to use a less number of goats and keep them at work all day. As a result of our experience, we find that 115 goats by constant use would do well the puddling for 30 wheel scrapers averaging about 14 cubic feet per load or about 500 feet haul.

"The material was first spread while dumping, next leveled in a 3-inch layer by dragging a beam, next sprinkled with a sprinkling wagon, and then puddled by the goats. The puddling was thoroughly done in this way, and the surface left just rough enough for good joint with the next layer.

"As goats in this arid region are a dry hill-side animal, I feared such a radical change in their habits as keeping their feet muddy all day would bring on foot disease. No lameness had appeared among them up to six weeks ago, and I have had no word of any since; it seems likely their hardiness will carry them through.

"When goats were first put to work they tired easily, and were able to stand it but a part of the day; we learned this was upon account of the scanty range upon which they had fed, having to rely mostly upon brows-

ing the juniper brush. A few days, however, of feed on peas and refuse hay brought back their accustomed good spirits. And after their day's work was over, they would butt each other around the corral with the enjoyment characteristic of this singularly precocious animal."

SPECIAL ANNOUNCEMENT.

We have made arrangements with Dr. B. J. Kendall Co., publishers of "A Treatise on the Horse and his Diseases," which will enable all our subscribers to obtain a copy of that valuable work free by sending their address (enclosing a two-cent stamp for mailing same) to Dr. B. J. KENDALL Co., ENOSBURGH FALLS, VT. This book is now recognized as standard authority upon all diseases of the horse, as its phenomenal sale attests, over four million copies having been sold in the past ten years, a sale never before reached by any publication in the same period of time. We feel confident that our patrons will appreciate the work, and be glad to avail themselves of this opportunity of obtaining a valuable book.

It is necessary that you mention this paper in sending for the "Treatise." This offer will remain open for only a short time.

Three and One-Half Days to the World's Fair.

We take pleasure in advising the readers of the *Pacific Rural Press* that the UNION PACIFIC is the most direct and quickest line from San Francisco and all points in California to the WORLD'S FAIR.

It is the ONLY LINE running Pullman's latest improved vestibuled Drawing-Room Sleepers and Dining Cars from San Francisco to Chicago without change, and only one change of cars to New York or Boston.

Select Tourist Excursions via the UNION PACIFIC leave San Francisco every Thursday for Chicago, New York and Boston in charge of experienced managers, who give their personal attention to the comfort of ladies and children travelling alone.

Steamship Tickets to and from all points in Europe. For tickets to the World's Fair and all points east and for Sleeping-Car accommodations call on or address D. W. HITCHCOCK, General Agent Union Pacific System, No. 1 Montgomery street, San Francisco.

Our Agents.

J. C. HOAG—San Francisco.
R. G. BAILEY—San Francisco.
F. D. HOLMAN—California.
GEO. WILSON—Sacramento, Cal.
SAMUEL B. CLIFF—Crescent, Cal.
A. C. GODFREY—Oregon.
E. H. SCHAEFFLE—El Dorado and Amador Co's.
C. E. ROBERTSON—Humboldt Co.
D. A. MACDONALD—Siskiyou and Del Norte.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos., \$1; 10 mos., \$2; 15 mos., \$3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Hay Pressing.

If you are interested in pressing hay write Truman, Hooker & Co., San Francisco. They will save you money.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California street, San Francisco.

GERMEA
The Monarch of
Breakfast Foods
THE JOHN T. CUTTING CO. SOLE AGENTS

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular

E. FOUGERA & CO.,

30 North William Street, New York.

STAMP COLLECTORS!

NOTICE.—For TEN CENTS we will send you 50 Foreign Stamps, some of them obsolete. Agents wanted for PACKETS AND APPROVAL SHEETS. Liberal terms. THE ENCLAVE STAMP CO., 1522 Pearl St., Alameda, Cal.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE 625 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

JOHN LYNCH, Petaluma. Breeder of Thoroughbred Shorthorns. Young Stock for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER SAGE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

O. BLOM, St. Helena. Brown Leghorns a specialty.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

JOHN McFARLING, Calistoga, Cal. Importer and Breeder of Choice Poultry. Send for Circular. Thoroughbred Berkshire Pigs.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

FOR SALE at low prices—Three extra fine young thoroughbred Dishfaced Berkshire Boars. T. Chittenden, Chittenden, Cal.

O. H. DWINELLE, Fenton, Sonoma Co., Cal. Shropshire and Crossbred Shropshire-Merino Rams for sale.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

R. H. CRANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

SWINE.

P. H. MURPHY, Perkins, Sac. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, Low Prices.

TYLER BRACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.

A BARGAIN!
Two 3-year-old Imported Shire Mares in foal. Also Imported English Coach Stallion. Address W. W. RUSHMORE, Importer and Breeder of Draft and Coach Stallions. P. O. Box 86, Stables, Broadway and 32d St., Oakland, Cal.

—THE—
HALSTED INCUBATOR
COMPANY,
1312 Myrtle Street, Oakland, Cal.
Send Stamp for Circular.

The Kansas City Veterinary College

Incorporated by the State.
FOR catalogue address J. H. WATLES, D. V. S.
810 East Twelfth Street.

.....BEST MODERN STRAINS OF.....

POLAND-CHINA

.....PIGS FOR SALE.....

Sired by first class imported males. My Brood Sows, imported from the East, are the admiration of everybody, being fine individuals and, like the Boars, rich in such blood as Tecumseh, the most famous hog that ever lived, King Tecumseh, his greatest son, Tom Corwin 2d, whose owner refused \$1000 for him, Cora Scheibinger, whose produce sold for \$3300 before she died, and other prize winners at Eastern State Fairs. Inspection invited and correspondence solicited. Parties giving timely notice will be met at station. Ranch one mile from station.

H. J. PHILPOTT, Niles, Cal.

MANHATTAN
STOCK FOOD

RED BALL BRAND.

Genuine only with RED BALL brand. Recommended by Goldsmith, Marvin, Gamble, Wells, Fargo & Co., etc., etc. It keeps Horses and Cattle healthy. For milch cows; it increases and enriches their milk.

523 Howard St., San Francisco, Cal.



OXFORD DOWN SHEEP FOR THE PACIFIC COAST.

W. A. SHAFOR, Middletown, Ohio,
Largest American Importer of O. D. Sheep.

Is prepared to quote prices on the best stock of Oxford Down Sheep to be had in England. Parties wanting first-class stock should write for particulars and induce their neighbors to join them. Import will arrive in June. Write at once.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.
STOCKTON, CAL., Dec. 19th, '92.

DR. B. J. KENDALL Co.
Gentlemen:—Having read one of your Treatises on the Horse and seeing the Spavin Cure advertised, I thought I would try it. I had one horse with a prominent Spavin of 12 months standing. I removed it with 1½ bottle. I tied up one fore foot on same side the spavin was and compelling the horse to rest on lame leg while I took a surcingle and drew it across the hock or spavin until the hock or spavin got very warm with the friction, then putting on Spavin Cure. I had a mare that had a running from her nose for 12 or 14 months. I rubbed the Spavin Cure from her eyes down to nostrils, then from back of jaw bone down under the throat for a week. I have not seen any discharge for two months.

Yours truly, HUGH McDADE.

Price \$1.00 per bottle.

DR. B. J. KENDALL Co.,

Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

Dr. A. E. BUZARD, VETERINARY SURGEON.

MEMBER OF THE ROYAL COLLEGE OF VETERINARY Surgeons, London, England. Late Veterinary Surgeon in the United States Army. Veterinary Contributor to the "Pacific Rural Press." The diseases of all Domestic Animals treated on Scientific Principles. Special attention given to Chronic Lameness and Surgical Operations. 405 BRODERICK ST., SAN FRANCISCO. Calls to the country promptly attended to. Telephone No. 4667.

EGGS! EGGS! EGGS!

S. C. BROWN LEGHORNS.
S. C. WHITE LEGHORNS.
EGGS \$2.50 per setting; \$4 for two settings; \$5 for three settings. White Leghorn pen headed by "Volante," score 95; Brown Leghorn pen headed by "Imperial," score 93. Send for circular. Satisfaction guaranteed to all.

FRANK A. BRUSH,
Care Santa Rosa National Bank.....SANTA ROSA, CAL.

TREE WASH.

"Greenbank" Powdered Caustic Soda and Insecticide.

T. W. JACKSON & CO.,

Sole Agents,

No. 5 Market Street, San Francisco, Cal.

S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, June 28, 1893.

The wheat market has furnished little worth reporting during the week just ended. Local trade is practically at a standstill, sharing the general stagnation that continues to hold the markets of the world as in a vise. One feature that affords some little encouragement is the fact that there is now more tonnage on the engaged list than at any corresponding time last year. The tonnage under engagement yesterday was 41,540 tons, against 36,082 tons a year ago. For new crop loading the amount is nearly the same for both years. The list of disengaged vessels now in port is much smaller than a year ago, the tonnage being 68,700 tons and 111,400 tons respectively. The course of business here has been such for a long time past as to hold out very little inducement for any immediate large increase of seeking tonnage. The increase in the tonnage business ought ordinarily to mean activity in the foreign markets, but in this case it arises in part from a growing anxiety to get rid of surplus stocks on the part of the shipper and a desire on the part of the vessel-owner to put in movement tonnage that has been idle a long time. At any rate, the local market is being fairly well cleared of its old supplies and is progressing toward fair shape to handle the new crop.

The course of the Eastern markets is practically the same as in the past month or two. The disturbance in the money market has been a very serious drawback to speculation and has counteracted conditions that otherwise call for improvement. The unprecedented drop in the price of silver has also been an influence—remote, perhaps, but still it is and will be felt, inasmuch as it contributes heavily to instability of financial conditions throughout the country. Inspection of our Chicago market report will show that the price of July wheat is actually lower than that of June. The reason is found in the fact that banks are calling in loans on wheat which must be settled by July 1st, and the July deliveries of wheat will in consequence be very large. The banks are restricting loans on old wheat, they say, because they want to get ready to handle the new crop. But they are also compelled by hard times to husband their resources, and limit the volume of their credit business. September wheat shows a material advance over July figures—too great a spread, some think, for the intervening time. But, as a matter of fact, there is well-founded expectation that wheat figures at that time will have materially advanced, and they seem better to represent the real state of affairs, so far as average demand and supply, influenced by other considerations, are concerned, than June or July prices. That is to say, there is a general belief that a normal condition of things will have been approximately reached by September, and futures for that month are up in consequence. Henry Clews, the banker and financier, is confident that a better feeling is imminent, both in the grain and financial worlds. He claims that wheat is now moving into strong hands, and that capital in July, attracted by the high rates of interest, will enter the market and buy cash wheat for fall sale.

Summed up, the situation in the United States amounts to this: The weight of available supplies, combined with the monetary disorder, has restricted investments that would otherwise be actively engaged in grain business. Exports have been most liberal, and there is confidence on the part of the English trade that it is only a question of weeks, perhaps months, when prices will have shifted upward, perhaps even higher than the average man now contemplates. Apart from the severe financial strain, the market is actually in a bullish position.

Reports of the wheat crops in the Middle West are better than for some time or than they were expected to be at this time. That is to say, reports are less discouraging than they have been, but the prospects are by no means good, and hardly fair. Here and there no complaint is made, but in some States the yield will be very short. There is no reason to expect that there will be a crop of over 425,000,000 bushels, or a shortage of about 100,000,000 bushels from last year. European crop reports continue to indicate that there will be much less than a full crop. Available supplies in this country have been materially decreased, and heavy inroads have been made in wheat in farmers' hands.

Other Grains.

Barley is very quiet, and not much will be doing the sample market until after the Fourth of July holidays, if then. Stocks are abundant, and buyers are in control of the situation.

Oats have fallen off considerably in price during the week. The reason does not seem to lie in heavy stocks on hand so much as in a desire on the part of holders to clean up before the new crop comes in.

Corn is dull, and buyers seem to be in better position than sellers. Complaint is made that much of stock offered is poor.

Wool.

Ukiah and Cloverdale have had "wool days" recently, and prices realized were at a range of 13¢ to 14¢ per pound. The quantity sold was less than usual, because buyers did not offer within 5¢ per pound of last year's prices. Of course the main depressing factor in the situation is the fear that Congress will carry out the pledges of the Democratic party and remove the wool tariff. Locally, trade is of very small dimensions. The Chicago Wool and Hide Shipper of June 24th says: "No noticeable change in values is apparent since our last issue; however, prices are not definitely established or settled, and many are of the opinion that the lowest level will not be reached until values are on a par with free-trade prices. Manufacturers are holding off in anticipation of buying at still lower prices than those which are now in force, and it only remains to be seen whether they will be able to do so or not. If money were more easy, there would be seen a specu-

lative feeling, but operators are unable to secure money enough to purchase, and if they were, it is doubtful if they would have the nerve to do very much, under the present condition of the market. Receipts of wool among the leading commission houses have been very good and show an increase over the previous week. There is now a very fair assortment from almost all the wool-growing sections of the country, and by July 1st there should be a full and complete stock from which to select. Manufacturers as yet have shown little or no disposition to buy, even at low prices, and in many instances where wool has been offered them at a concession, they would refuse to accept the offer. The demand for bright unwashed wool has been greater than for any other class, and, on account of shrinkage, the prices show a wide range."

The shipments of wool from San Francisco by sea in May comprised the following:

To—	Pounds.	Value.
Massachusetts.....	568,677	\$143,347
Connecticut.....	107,475	46,286
New York.....	21,436	7,147

Totals.....697,588 \$196,780
The shipments East by the Southern Pacific Company's lines were as follows in May:

From San Francisco—	Pounds.
Grease.....	1,910,000
Pulled.....	18,000
Scoured.....	290,000

Total.....2,218,000

From Oakland—

Grease.....24,000

From Sacramento—

Grease.....352,000

From San Jose—

Grease.....16,000

Total by rail.....2,610,000

By sea.....697,588

Total, May.....3,307,588

January.....1,521,699

February.....895,365

March.....736,565

April.....2,889,264

Since January 1st.....9,350,481

Same time in 1892.....10,101,798

Decrease, 1893.....751,317

The above statement does not include shipments, if any, from the southern part of the State, the Southern Pacific Company declining to make any report of such.

Citrus Fruits.

Later varieties of oranges only are now out of the market. Shipments from Southern California to the Eastern markets are drawing to a close, and it appears that early estimates of 7000 carloads from California were too high, as the RURAL PRESS believed and said at the time. The crop, however, was nearly sufficient to justify the 7000 carload statement, provided that all fruit found a market, but the shipments will not be much over 5000 carloads. Small fruits are rapidly replacing oranges in the local market. Prices are about the same as they have been except that choice varieties command a better figure.

Other Fruits.

Currents are in free receipt, and find a very good demand. Peaches are beginning to appear very freely and choice varieties find excellent sales. Apricots are abundant, and while price are not as high as anticipated, there appears to be little trouble in disposing of them. Plums are abundant, and Figs from Vacaville are now here. The entire list of small fruits—berries and stone—is well represented. While prices in no case are high, there is yet very little complaint of the general state of the market. The hard times have affected the demand, and growers generally consider themselves lucky to realize any sort of profit on their products.

A carload of watermelons and some canteloupes were received yesterday from New Mexico. The watermelons were offered at \$3.00@5.00 per doz, and the canteloupes at \$2.50.

In Dried Fruit prices have been generally marked down. New bleached peaches are offered at 10¢, without sales. Prunes are offered for delivery in August and September at 5½¢.

Canned-Fruit Trade.

The present condition of the market for canned fruits is reviewed in the monthly trade circular of the Cutting Fruit Packing Company as follows:

The season is now so far advanced that prospects for a full crop of all varieties are confirmed, even apricots showing a decided improvement as to quantity, while peaches, pears and plums in particular, except the first named in a few localities, bid fair to produce a much larger crop than last year. Few packers have made prices for futures, and those even only approximate and for certain special localities or sizes. There is little or no demand for prices from either domestic or foreign markets, and both packers and buyers appear to agree at once that negotiations had better be deferred until values are better settled.

The condition of finances at all points makes it very necessary that all concerned should go slow and undertake no engagements they cannot see their way clear to carry out. As most packers depend largely on bank accommodation to carry them through the packing season, and as banks so far have not indicated any intention of supplying the needed capital, very little has been done in the way of packing, except a few cherries and gooseberries. Crops are later than usual by at least two weeks, and it is doubtful if anything of consequence will be packed before the middle of July. It is expected the financial condition will alter for the better at all points by that date and encourage both packers and buyers to be more liberal in their ideas than at present. Meanwhile, growers who expected through the spring to realize higher prices than last year for their product are steadily coming down in their asking prices, and unless some unexpected change takes place prices for all varieties should rule lower than last year.

Fruit Market and Crop Notes.

E. L. Goodsell says: The outlook is generally good for California fruits in New York, in spite of

heavy Eastern crops, and by July 1st large lots of apricots and some peaches will be on the market.

New York *Fruit Trade Journal*, June 16.—There is a better feeling in the dried-fruit trade, particularly among holders, owing to inquiries from different parts of the country, giving the belief that stock is gradually lessening. While prices show no improvement here, there are indications that goods will shortly be disposed of at a fair margin. This is especially true of raisins. Currants are low but stock is limited also.

Maryland Cor. *Fruit Trade Journal*, June 13: The "June fall" is about over here, and there will be a crop of Maryland and Delaware peaches, but nothing like the crop of 1891. Most growers place the estimate at about one-fourth as many as there were that year. In 1891 the trees were so loaded as to ruin the quality. In 1891 eight and ten baskets were frequently picked from a tree, and the average was probably four baskets to the tree (five-eighths bushel to basket). This year the average will not run more than a basket to a tree.

St. Louis, June 12.—It is not generally known that watermelons have appeared here already, yet they have, but not in sufficient quantity to be stacked up along the streets in the produce quarters.

A writer at Trenton, N. J., who has traveled through various sections of New Jersey, says: The failure of the blackberry crop will have a tendency to make the peach yield a paying one, and as there promises to be one of the biggest peach crops in recent years growers are jubilant. There were no serious late frosts to injure the buds and the trees are loaded with fruit, which promises to be of more than ordinary size. The fruit will begin to ripen about the first of July.

J. C. Evans, Sec'y of the Missouri State Horticultural Society, says in his report of June 1, 1893: The apple is the standard and we miss it more than the others, and yet we cannot give as favorable a report on this fruit as we would like. Not over one-half and perhaps less than half a crop will be the quota in this State.

Vegetables.

New potatoes are in better condition than they have been, and the market generally is strong. The quality has materially improved. Beans are plentiful, and so are cucumbers. Squash shows liberally. There is not much green okra or egg plant to be seen. Peas are scarce. Tomatoes are arriving freely and sell at reduced figures. Red onions are weak.

Poultry and Eggs.

The approach of the Fourth of July holidays has interfered with the demand for poultry, and dealers say trade is dull. Receipts are not overabundant, but choice, fat stock is very scarce and commands figures above quotations.

Eggs continue to show improvement, and choice ranch occasionally brings 26 cents. This is an outside figure, however. The market is not abundantly stocked, and prices are gradually shaping in favor of sellers. Poor qualities, however, are in heavy supply and sales drag. Not much Eastern is now coming in.

Butter and Cheese.

The market shows steadiness for choice grades of butter. Receipts of such stock are not heavy. For poorer stock prices have a weak tone.

Dealers now say that they do not expect a further decline in cheese. Stocks on hand, however, are sufficient for present wants.

Provisions.

The local provision market maintains recent high prices, though both California and Eastern hams have dropped off a point. There is no new evidence concerning the prospective supply of hogs. The condition of current marketings in the East is better than two weeks ago, and encourages the view that there has not been special pressure of late to get into market. The decline in prices, however, may stimulate the movement temporarily by creating apprehension of a still further reduction.

The English Hop Market.

The *Mark Lane Express* of June 9th says of the London Hop market: "There is much less business doing in English Hops, the falling off in the demand being a consequence of the increasing prices asked by holders, who, in view of the probability of a severe blight, consider that much higher values will be obtained later on. There is a moderate inquiry for Continentals and Californians, both of which descriptions are firm in value. Reports from the English plantations do not come much more favorable. The vermin continue very thick, except where washing has been done, but even the washed grounds are not yet clean. Some growers are beginning to get somewhat alarmed at the gloomy prospect; but others take a more sanguine view, holding that there is ample time for the vermin pest to work itself out before being able to do any serious damage to the bine. Whether this be so or not, it is certain that those planters who have seen the value of washing in previous seasons do not intend to leave anything to chance, but are determined to wash persistently, which they believe to be the only sure means of getting a sound crop of hops."

Miscellaneous.

New hay has almost entirely replaced old in the market.

Nothing much is doing in hops, and it is not likely there will be any special movement until the new crop begins to come in.

The honey market is dull and weak.

Beef is a little easier, while lamb and veal keep steady.

The flour export trade has been fairly active this month. Prices have undergone no change for a long time.

European Crop Reports.

LONDON, June 21.—As yet no official estimates of the European yield of cereals this year are obtainable.

Bell's Messenger, one of the leading British agricultural papers, says the recent estimate of the French wheat crop, which placed the yield at 675,000 quarters, understated the quantity promised. The *Messenger* bases its statement on the fact that the promise of a fine yield in Brittany and Normandy and the eastern and northern departments more than offsets the deficits in the southern parts of France.

The harvest in Spain is now under full headway,

and there are fine yields of wheat, barley and oats. A good crop of winter barley and rye will be secured. Reports from Italy show the yield of wheat will be good but scarce.

In England 100 days of drought have wrought havoc with all crops except wheat, which is not now largely grown. The hay crop is absolutely ruined. The vegetable and fruit crops are the worst known in many years. Over wide areas potatoes and peas will be a total loss.

The Dublin *Farmers' Gazette* says the crop prospects in Ireland are more favorable than in England. The oat crop is good. The condition of potatoes is far above the average, and wheat promises well. An excellent general harvest is in view. The only complaint of drought is from north Ireland.

According to *Dornbusch's Trade Circular*, only half crops of oats and barley are expected in France.

In southern Russia the yield of hay is hardly as much as usual, but the rates of freight demanded prohibit exports.

In Belgium wheat, rye and oats are suffering from drought. In the Danubian provinces wheat, barley and corn are growing well.

In Egypt the quantity and quality are excellent. There will be a good quantity of barley, but the quality will be only medium.

In Germany moderate yields of wheat and rye are promised.

In Austria and Hungary all crops are below the condition of those of last year.

Recent rains have improved the Hungarian wheat crop 50 to 75 per cent. Rye has fully recovered. The beet-root and potatoes are in excellent condition. The meadows are improving so rapidly as to remove all anxiety on the part of farmers.

California Products in New York.

NEW YORK, June 25.—Canned Fruit—There is some grocers' call for small lots of special brands of California packed, but even this trade can get the asking price of \$1.85 for standard Lemon clings, \$1.75 for yellow Crawfords and \$1.50 for apricots shaded. Baltimore continues to sell goods low.

Raisins—During the week five cars went West. The price is no stronger for outside lots, which are quoted as follows: Two-crown loose bags, 4c; three-crown, 5c. Boxed bunches and loose are neglected. Spain looks for a big crop with quality superior to last year's. This possibility should be kept in view by the new "Coast combine" we hear about.

Apricots—There is no new business. The old are quite cleaned up.

Prunes—Spot are quiet and no higher. New sixties and nineties, free on board, are offered at 5½¢—a price recently refused. The tendency of the market is low. The French crop is reported to be heavy and maturing fast. In some places the fruit has already made nearly half of its final size.

Unpeeled evaporated peaches are weak. There is a Western inquiry, but at less than the late decline.

Fresh fruits—Cherries arrived in poor condition, and the ranges are wide. Those that stood up well made good averages. The market is in good shape for California fruit, as for a while it will have little to compete with besides berries. E. L. Goodsell sold two cars as follows: Black Tartarian, per box, 45¢@1.45; Royal Anne, 70¢@1.45; Republican, 75¢@1.16; others, 85¢@1.05; Royal apricots, \$1.75@3.30; Alexander peaches, \$2.05.

Sogbel & Day sold two cars as follows: Black Tartarian, per box, 75¢@1.20; Royal Anne, 80¢@1.15; Royal apricots, \$2.30@2.70; Cherry plums, \$1.95@2.25.

Porter Bros. Company sold six cars as follows: Black Tartarian cherries, per box, 25¢@1.90; Royal Anne, 45¢@1.70; Bigarreau, 25¢@1.60; others, 20¢@1.30; Royal apricots, 75¢@3.80; others, 25¢@1.80; Alexander peaches, \$2.05@2.70.

The Earl Fruit Company sold five cars as follows: Black Tartarian cherries, per box, 60¢@1.80; Royal Anne, 55¢@1.10; Bigarreau, 80¢@1.90; others, 50¢@1.1; Republican, 75¢@1.55; Royal apricots, \$1.30@3.05; Alexander peaches, \$1.65@1.70; Cherry plums, \$2.30.

Wool—The continued lull in manufacturers' demand, and the failure of a reputed strong New England mill, do not brighten up the market for immediate prospects, and it is quite evident that the recovery of confidence cannot occur until a better financial situation lends more impetus to general trade. Sales at New York: 81,000 pounds of domestic, including 5000 spring California, 10,000 scoured new, 467,000 foreign and 50,000 camels. Sales at Boston: 1,214,600 pounds of domestic, including 40,000 spring California at 15¢@17¢ and about half a million Territory at 10¢@19¢; also 146,000 Australian and 270,000 other foreign. Philadelphia reports a quiet market, with prices ranging from 10¢@18¢ for unwashed wools and a small sale of fleece at 28¢ extreme.

Lima beans—The ship Charmer has landed per invoice, but the market still holds at \$2 15¢@2.20.

Beeswax—Easier. California, 26¢.

Honey—Light amber is quoted here, free on board, at 5½¢.

Hops—Light spot business. Brewers are receiving supplies from former contracts. The rains have favored growths. The market here is fairly firm at a range of 10¢@22¢ for State and Pacific. Export for the week, 1289 bales.

California Fruit at Chicago.

CHICAGO, June 27.—California dried fruits are ruling about the same as lately quoted. There is a moderate buying in prunes, but all other lines are quiet. Raisins are the most plentiful and they are slow. Apricots are scarce and firm. Raisins—London layers, 2-crown, per box, \$1.65@1.75; fancy, \$1.85@2; Loose Muscatels, 3-crown, according to quality, per box, \$1.25@1.35; 4-crown, sacks, per lb., 5½¢@6¢; 3-crown, 5½¢@5½¢; 2-crown, 4½¢@5¢; off goods, 3½¢@4¢. Prunes—40 to 50 to the lb., sacks, per lb., 12¢@12½¢; 50 to 60, 10½¢@11¢; 60 to 70, 10½¢@10½¢; 70 to 80, 9½¢@10¢; 80 to 90, 9½¢@9½¢; 90 to 100, 9½¢@9½¢; 100 to 120, 8½¢. Apricots—New choice to fancy, in sacks, per lb., 15¢@15½¢; fair to good, 13½¢@14¢. Peaches—Peeled, 25-lb. boxes, per lb., 22¢@24¢; sacks, 20¢@22¢; unpeeled, 8¢@10¢. Nectarines—Red, in sacks, per lb., 10¢@11¢; white, 10¢@12¢.

Oranges—The supply is in few hands. Choice oranges rule steady; some are soft and these usually sell at auction at low prices. Seedlings, ordinary to good, \$2@2.25; Riverside, sound, \$2.25@2.75; unsound goods, \$1@1.75; Navels—Boxes, sound, smooth, \$3@3.50; boxes, rough, \$2.25@3; Blood oranges, \$2.25@3.25. California green fruits in good demand. Cherries, 10-lb. boxes, \$1.25@1.50; Cherry apricot, crates, \$1.25@1.40; Peaches, 20-lb. boxes, \$1.40@1.85; Cherry plums, 20-lb. boxes, \$1.50@2; Pears, 20-lb. boxes, \$1.50.

CHICAGO, June 27.—Porter Bros. & Co. sold three carloads of California fruit to-day as follows: Brill plums, \$2; Clyman, \$2.20@2.85; Montgamet apricots, \$1.40@1.60; Royal apricots, \$1.20@1.30; Alexander peaches, \$1.10@1.40.

California Fruits at the East.

NEW YORK, June 27.—E. L. Goodsell sold three carloads of California fruit to-day—two of apricots and one of cherries. The cherries were only in fair order, about three-fourths of the lot showing mold; but notwithstanding this, prices were very good. Black Tartarian, \$1.15@1.85; unsound lots were lower: Black Bigarreau, \$1.25@1.45; Royal American, \$2.10@2.20. One car of apricots, only fair size and order, brought \$1.15@1.75; and one car, soft and ripe, 75¢@1.40.

Rodeo Live Stock Market.

RODEO, June 27.—The market was firm at the Union Stock Yards to-day. Sheep and calves were in strong

demand. Prime steers, \$2.50@2.75; cows, \$2.25@2.50; canners, \$1.25@1.50. Sheep—Good fat wethers, \$3.25@3.50; ewes, \$2.75@3.00; lambs, \$3.75@4.00. Calves—\$3.25@3.50 for good light weights.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per cwt. for the past week:

	June	July	Aug.	Sept.	Oct.	Nov.
Thursday	56.07d	56.08d	56.09d	56.10d	56.11d	56.00d
Friday	56.07d	56.08d	56.09d	56.10d	56.11d	56.00d
Saturday	56.07d	56.08d	56.09d	56.10d	56.11d	56.00d
Monday	56.07d	56.08d	56.09d	56.10d	56.11d	56.00d
Tuesday	56.07d	56.08d	56.09d	56.10d	56.11d	56.00d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	29.6d	30.3d	29.6d	Quiet
Friday	29.6d	30.3d	29.6d	Easier
Saturday	29.6d	30.3d	29.6d	Dull
Monday	29.6d	30.3d	29.6d	Inactive
Tuesday	29.6d	30.3d	29.6d	Steady

To-day's cablegram is as follows:
LIVERPOOL, June 28.—Wheat—Quiet but steady. California spot lots, 5s 11d; off coast, 2s 3d; just shipped, 3s 6d; nearly due, 2s 3d; cargoes off coast, quiet, on passage, very little inquiry; Mark Lane wheat, turn easier; wheat and flour in Paris, slow; weather in England, showery.

Eastern Markets.

The following shows the closing prices per bushel of wheat for the past week at

New York.

Day	June	July	Aug.	Dec.
Thursday	72 1/2	74 1/2	81 1/2	81 1/2
Friday	72 1/2	74 1/2	81 1/2	81 1/2
Saturday	72 1/2	74 1/2	81 1/2	81 1/2
Monday	72 1/2	74 1/2	81 1/2	81 1/2
Tuesday	72 1/2	74 1/2	81 1/2	81 1/2

The following is to-day's telegram—per bushel:
New York, June 28.—June, 70c; August, 73c; December, 81c.

Chicago.

Day	June	July	Aug.	Dec.
Thursday	65 1/2	70 1/2	74 1/2	74 1/2
Friday	65 1/2	70 1/2	74 1/2	74 1/2
Saturday	65 1/2	70 1/2	74 1/2	74 1/2
Monday	65 1/2	70 1/2	74 1/2	74 1/2
Tuesday	65 1/2	70 1/2	74 1/2	74 1/2

The following is to-day's telegram—per bushel:
Chicago, June 28.—June, 64c; September, 69c; December, 74c.

Local Markets.

WHEAT.

	May	Dec.
Thursday, highest	1 22 1/2	\$1 33 1/2
" lowest	1 21 1/2	1 32 1/2
Friday, highest	1 22 1/2	1 33 1/2
" lowest	1 21 1/2	1 32 1/2
Saturday, highest	1 22 1/2	1 33 1/2
" lowest	1 21 1/2	1 32 1/2
Monday, highest	1 22 1/2	1 33 1/2
" lowest	1 21 1/2	1 32 1/2
Tuesday, highest	1 22 1/2	1 33 1/2
" lowest	1 21 1/2	1 32 1/2

The following are to-day's recorded sales on Call:
Morning Informal Session.—Wheat—December, 200 tons, \$1.31; 300, \$1.30 1/2 per cwt. Seller 1893, new, 100 tons, \$1.20 1/2 per cwt. Regular Session.—December, 1100 tons, \$1.30 1/2; 200, \$1.30; 400, \$1.34. Seller 1893, new, 200 tons, \$1.20 1/2; 100, \$1.19 1/2 per cwt. Afternoon.—December, 1200 tons, \$1.30 1/2; 1000, \$1.31 1/2 per cwt.

BARLEY.

	New	Dec.
Thursday, highest	81 1/2	90 1/2
" lowest	81	90
Friday, highest	80 1/2	89 1/2
" lowest	79 1/2	89
Saturday, highest	82 1/2	90 1/2
" lowest	81 1/2	89 1/2
Monday, highest	82 1/2	90 1/2
" lowest	81 1/2	89 1/2
Tuesday, highest	82 1/2	90 1/2
" lowest	81 1/2	89 1/2

The following are to-day's recorded sales on Call:
Regular Session.—Barley—No sales. Afternoon.—December, 200 tons, 89c; 300, 89c; 200, 89c per cwt.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. JUNE 28, 1893.

	Extra choice fruit for special purposes sells at an advance on outside quotations
Strawberries, chest	6.00 @ 11.00
Longworth	4.50 @ 7.00
Gooseberries, lb	2.00 @ 5.00
Raspberries—	
chest	4.00 @ 7.00
Blackberries—	
chest	4.50 @ 7.00
Cherries, box	25 @ 50
Black—	25 @ 50
Royal Ann	40 @ 60
White	25 @ 40
Limes, Mex	4.00 @ 4.50
Do Cal.	75 @ 1.00
Lemons, box	1.50 @ 3.00
Do Santa Bar.	4.00 @ 5.00
Do Sicily choice	4.50 @ 5.50
Oranges, pr bx	2.50 @ 3.00
Navel, River de	1.25 @ 1.50
Seedling, River de	1.25 @ 1.50
Do Fresno	1.25 @ 1.50
Green Apples, ctn	4.00 @ 5.00
Currents, chest	3.50 @ 5.00
Apples, box	50 @ 60
Boyal	25 @ 50
Plums	50 @ 65
Pears, bkt	15 @ 25
Peaches, box	25 @ 50
Figs, Black, box	1.00 @ 1.50

Live Stock.

	BEEF.	MUTTON.
Stall fed	6 @	Wethers
Grass fed, extra	6 @	Ewes
First quality	5 @ 6	Light, 7 lb, cents
Second quality	5 @ 6	Medium
Third quality	4 @ 5	Heavy
Bulls and thin cows	2 @	Soft
VEAL.		Feeders
Range, heavy	4 @ 6	Stock Rags
Do light	5 @ 7	Dressed
Dairy	5 @ 7	

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. JUNE 28, 1893.

	BEANS AND PEAS.	BAGS.
Bayo, ctn	2 75 @ 3 80	Standard Calc Grain
Butter	2 60 @ 2 70	Spot
Peas	2 60 @ 2 70	June & July delivery
Red	2 75 @ 3 00	Potatoes, gunnies
Pink	2 80 @ 2 90	Wool, 34 lb
Small White	2 60 @ 2 70	Wool, 4 lb
Large White	2 60 @ 2 70	
Lima	2 90 @ 3 00	

	EGGS.	ONIONS.
Store	17 @ 18	New California
Ranch	18 @ 19	POTATOES.
Eastern	18 @ 19	New, ctn
		Early Rose
		Peerless
		Burbank
		Garnet Chile

	GRAIN, ETC.	PROVISIONS.
Barley, feed, ctn	— @ —	Cal. bacon
Do good	— @ —	heavy, per lb
Do choice	82 1/2 @ —	Medium
Do brewing	90 @ 1 02 1/2	Light
Do Chevalier	90 @ —	Lard
Do do	1 15 @ —	Cal. salt beef
Buckwheat	1 15 @ 2 00	Do Eastern
Corn, white	1 10 @ 1 15	
Yellow, large	97 1/2 @ 1 02 1/2	SEEDS.
Do small	1 02 1/2 @ 1 05	Alfalfa
Oats, milling	1 50 @ 1 60	White
Fest, choice	1 40 @ 1 50	Flaxseed
Do good	1 37 1/2 @ —	Hemp
Do fair	1 30 @ —	Do brown
Do common	1 25 @ —	
Surprise	1 55 @ —	HONEY.
Black feed	1 15 @ 1 25	White c m h
Gray	1 25 @ 1 30	2-b frame
Rye	1 07 1/2 @ 1 10	Nevada, choice, light
Wheat, milling	1 25 @ 1 30	Do do
Glitted	1 25 @ 1 30	Do heavy
Shipping choice	1 20 @ 1 22 1/2	Oregon, East'n, choice
Off Grades	1 05 @ 1 12 1/2	Do Eastern, poor
Sonora	1 20 @ 1 30	Do Valley

California, year's fleece 9@10c
Do, 6 to 8 months 9@10c
Do, Footbill 10@11c
Do, Northern 12@14c
Do, extra Humboldt 14@16c
Do, Mendocino 14@16c
Nevada, choice, light 12@14c
Do do 12@14c
Do heavy 12@14c
Oregon, East'n, choice 12@14c
Do Eastern, poor 9@10c
Do Valley 14@16c

HORSE COLLARS
—AND—
SADDLERY GOODS.

Davis & Son's Horse Collars are not filled with Self-Pulverizing Cork.

The U. S. Inspector of Harness Supplies and Horse Collars selected Davis & Son's make—both harness and collars. And so will all persons who want a solid, broad-faced, smooth collar which does not pinch the neck nor roll about unsteadily for three months before it settles down to a fitting shape or set squarely back on the shoulder. If you want a collar not stuffed with wads but our collars, as all other makes on this coast are wad collars. All wad stuffed collars flatten down in a short time so that a sweat collar is needed to protect the horse from the wads or ropes of straw. Davis & Son's Collars are all put under a powerful shaper or press before finished, which solidifies them into a perfect shape, which allows the collar to set with its whole face against the shoulder. When a wad-stuffed collar is brought under this force it shows the old wad-stuffed collar to be merely a Puff Ball. Send or bring in to our factory in this city any collar and see this done, and see what a Fan Cake you have been selling to the people for collars. Our Boston Team long straw collars have no wads. The Rod of our Great Machine is supplied with small teeth on its lower surface like a fine saw. It picks up and carries with it as it files through the straw a long straw in each tooth, all of which are deposited in the collar, one behind the other, with more precision and regularity than human skill could ever accomplish, thus avoiding all lumps and wads, not even two straws crossing each other.

HAME ROOM.

No Collars on this Coast or elsewhere have as good Hame Room as the Davis & Son's Collar.

410 Market St., San Francisco.

DIVIDEND NOTICE.

THE GERMAN SAVINGS & LOAN SOCIETY
528 California Street.

For the half year ending June 30, 1893, a dividend has been declared at the rate of five and one-tenth (5 1/10) per cent per annum on Term Deposits, and four and one-quarter (4 1/4) per cent per annum on Ordinary Deposits, payable on and after Saturday, July 1, 1893.

GEO. TOURNY, Secretary.

PACIFIC RURAL PRESS
Is the Largest Illustrated and Leading Agricultural and Horticultural Weekly of the West
Established 1870. Trial Subscriptions, 50c for 3 mos. or \$2.40 a year (all further notice). DEWEY PUBLISHING CO., 220 Market Street, San Francisco.

Educational.

Bowens Academy,
University Ave., Berkeley.
BOARDING AND DAY SCHOOL
For Boys and Young Men.

Special university preparation, depending not on time but on progress in studies.
T. S. BOWENS, M. A., Head Master.

Belmont School.

BELMONT SCHOOL, most delightfully and advantageously located 25 miles south of San Francisco, prepares for any college or school of science. The consolidation of the Hopkins Academy with it brings \$66,000 to the \$100,000 already invested, and so greatly adds to the resources of a school already well equipped as to place its permanence and its ability to offer the best and the broadest instruction beyond question. Twenty scholarships invite earnest and able young men of slender means. A gymnasium and athletic grounds, unsurpassed by those of any secondary school in the entire country, under the direction of the present physical instructor in Williams College, insure unexcelled physical training. The school invites inspection. References required. For catalogue address, W. T. Reid, A. M. (Harvard), Head Master Belmont, California.

HEALD'S

BUSINESS COLLEGE,
24 POST ST., S. F.

FOR SEVENTY-FIVE DOLLARS THIS College instructs in Shorthand, Type Writing, Book-keeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business for six full months. We have sixteen teachers, and give individual instruction to all our pupils. Our school has its graduates in every part of the State.

SEND FOR CIRCULAR. K. P. HEALD, President
C. S. HALEY, Secretary.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,
Surveying, Architecture, Drawing and Assaying,
728 MARKET ST., SAN FRANCISCO, CAL.
Open All Year.

A. VAN DER NAILLEN, President.
Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50
ESTABLISHED 1864. Send for circular

Treatise on the Horse and His Diseases.

By B. J. KENDALL, M. D.

85 Fine Engravings showing the positions and actions of sick horses. Gives the cause, symptoms and best treatment of diseases. Has a table giving the doses, effects and antidotes of all the principal medicines used for the horse, and a few pages on the action and uses of medicines. Rules for telling the age of a horse, with a fine engraving showing the appearance of the teeth at each year. It is printed on fine paper and has nearly 100 pages, 7x15 inches. Price, only 25 cents, or five for \$1, on receipt of which we will send by mail to any address DEWEY PUBLISHING CO., 220 Market Street, San Francisco.

BETTER THAN EVER!
P & B Fruit Dryer
RAPID—SAFE—CHEAP.

WRITE FOR SAMPLES AND CIRCULARS.

PARAFFINE PAINT CO., 116 Battery Street, San Francisco, Cal.

PROTECT YOUR TREES

GILMAN'S TULE TREE PROTECTOR.

Cheapest, Best and Only One to Protect Trees and Vines from Frost, Sunburn, Rabbits, Squirrels, Borers and Other Tree Pests.

For Testimonials from Parties who are using them send for Descriptive Circulars.

B. F. GILMAN,
Sole Manufacturer of Patent Tule Covers,

420 NINTH ST., SAN FRANCISCO, CAL.

CALIFORNIA FRUITS

HOW TO GROW THEM.

A MANUAL OF METHODS WHICH HAVE YIELDED GREATEST SUCCESS; WITH LISTS OF VARIETIES BEST ADAPTED TO THE DIFFERENT DISTRICTS OF THE STATE.

PRACTICAL, EXPLICIT, COMPREHENSIVE
Embodying the Experience and Methods of Hundreds of Successful Growers, and Constituting a Trustworthy Guide by which the Inexperienced may Successfully Produce the Fruits for which California is Famous.

THE DEWEY PUBLISHING CO.,
PUBLISHERS PACIFIC RURAL PRESS,
220 Market Street, Elevator 12 Front Street
SAN FRANCISCO, CAL.

Analyses of Figs and Fig Soils.

(Continued from page 8.)

Nitrogen.—As above stated, the fig leads among our fruits in its demand upon the soil for this substance, apricots only coming near it in this respect.

Thus we find that, for the southern localities especially, the same necessity of early replacement of nitrogen in the fig and stone fruit as for orange orchards, and partly for the same reason, viz., that California soils are usually not rich in their natural supply of this substance; however, they contain about double that found in the Asia Minor soils, as indicated by the humus. Of the other ash ingredients, lime in the fig ranges about twice that in the prune and three times that in the apricot, while the orange and lemon show some 2.5 to 3 times more. As our soils usually contain plenty of lime, even for oranges, only in exceptional cases would there be any necessity of replacing this ingredient by fertilization.

(Continued in our next issue.)

California Crops.

[Summary of Report of Observer James A. Barwick for Week Ending June 25, 1893.]

The past week has given us the most remarkable weather ever recorded so late in June. Heavy frosts were noted in the Sierra valley of Sierra county and also in Plumas county, which are mountain counties, and the oldest inhabitant says such heavy frosts are an unheard of occurrence at this time of the year even in these elevated regions. Heavy frosts reported from Del Norte county, but no damage done. Nevada county reports slight damage to young sprouts from frost, and even in the elevated regions of Santa Barbara county a light frost was reported by Mr. L. E. Blochman of Santa Maria.

The weather of the past three weeks has benefited the agriculturists of the great grain-growing regions of this great State, although the horticultural interests have suffered from the retardation of the ripening of their special products. In answer to "What will the harvest be?" it can truthfully be said that the prospects are now bright for most excellent crops of all products.

Mendocino County (Ukiah)—Hops doing well, though north wind somewhat damaging.

Sutter County (Meridian)—Vegetables, corn, etc., looking well. Watermelons will be in market in a few weeks. Corn, beans, potatoes, etc., will produce good crops.

Yuba County (Wheatland)—Hops in good condition. Some sections more favored than usual.

Placer County (Penryn)—Crop of early peaches good. Cool weather retarding fruit ripening.

Yolo County (Arbuckle)—Barley, of which not much was expected, turning out 15 sacks to the acre. Grain generally turning out much better than anticipated. (Davisville)—Prospects excellent for a good crop of fruit, especially grapes.

Sacramento County (Orangevale)—The shipping of apricots to Chicago has commenced. The crop is a large one.

Napa County (St. Helena)—The vineyards look well. (Berryessa)—Grain crop good. (Napa)—Royal apricots in market. (Brown's Valley)—Corn nipped slightly by frost; no serious damage done.

Sonoma County (Sonoma)—Potatoes promise a large yield. More fruit than usual will be dried. (Healdsburg)—Cherry crop nearly all marketed; yield fair. (Mark West Springs)—The grape yield will be large. (Forestville)—North wind ripened grain rapidly and broke down many hop vines. Prunes and plums falling from the trees; blackberries promise well. Potatoes being planted for late crop and acreage large.

Solano County (Tremont)—Apricot crop will be large. (Maine Prairie)—Grain turning out poorly, falling below expectations. (Binghamton)—Harvesting begun and yield poor.

Santa Clara County (San Jose)—Fruit is in a wonderful state of development and promises to be the best in quality ever harvested in this county. Prunes are a third larger than usual and peaches and apricots are large in proportion.

San Joaquin County (Lodi)—Cool, pleasant weather. Grain ripens slowly. Barley harvest begun; output fair. All fruits coming on well, though late and the crop short.

Alameda County (Livermore)—Growing crops are doing well, though later than common. Harvesting now in progress. Grain in good condition and fair as to quantity.

Fresno County—The apricot crop is very good.

Kings County (Lemoore)—Fruit picking begun and yield excellent.

Tulare County (Milo)—Weather pleasant. Haying finished. Cattle plentiful but buyers scarce. (Three Rivers)—Haying over, crop short. There is a fair prospect for a good crop of mast this fall. (Visalia)—Grain

in the Monson country is averaging five to seven sacks per acre. Yield will be as large if not larger than last year. Fifteen harvesters are at work in the grain fields and the yield promises to be something extraordinary.

San Luis Obispo County—Strong trade winds affected the tender bean plants. Barley crop spotted. Prunes doing well.

Santa Barbara County (Santa Maria)—Wind slightly injured the wheat crop. On Monday, 19th, light frost nipped beans in the bean belt. Pears and apricots very light.

Orange County (Anaheim)—G. W. Schneider is now thinning an acre of sugar beets on land which he irrigated on the 1st of June. All the hay in this district is now cut excepting one or two pieces that were sown late.

Los Angeles County (Downey)—In this vicinity this will be an off year for fruit. Deciduous fruit will yield barely a half crop. The seedling orange crop will be an entire failure. The Los Nietos and Ranchito Walnut Growers' Association estimates half a crop of walnuts.

Riverside County (San Jacinto)—The haying season has nearly closed but harvesting will keep many men and heading machines busy until September 1st. The hay crop is reported to be immense and the harvest from wheat and barley will pan out extremely good.

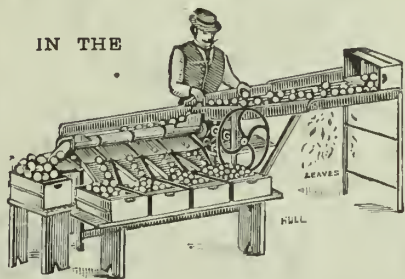
To the World's Fair!

WEEKLY EXCURSIONS!

Are you going? If so, call on or write to the undersigned before arranging for your trip. The "SANTA FE ROUTE" is the only line under one management from California to Chicago! Palace and Tourist Sleepers through to Chicago every day without change! Excursions every Tuesday. W. A. BISSELL, G. P. A., 650 Market Street, Chronicle Bldg., San Francisco, Cal.

FRUIT GRADED

IN THE



California Fruit Grader

RIDES ON RUBBER BELTS.

Which carry it along smoothly until reaching the proper space, it slides into the boxes waiting to receive it. The Roller keeps the Fruit gently revolving until it is perfectly assorted according to size. Gravity no longer depended upon, but perfect, accurate and rapid grading secured.

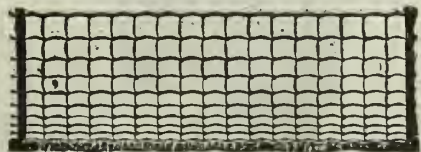
Write for Description and Price List.

G. G. WICKSON & CO.,

3 and 5 Front St., San Francisco.

221 So. Broadway, Los Angeles, Cal.

141 Front St., Portland, Or.



THREE POSIS TO THE HUNDRED FEET.

Height: Five feet, the standard.
Spaced: Close at the bottom where prowls the obtrusive pig. Wide at the top where sweeps the unobstructed view.

Strength: To stop the mad career Of running steeds Though wild with fear.

Every foot of every panel, a perfect self-regulator. This is the ready-made fence built by the

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

DIVIDEND NOTICE.

SAN FRANCISCO SAVINGS UNION,
536 California Street, corner Sansome.
Branch, 1700 Market Street, corner Polk.

For the half year ending with 30th of June, 1893, a dividend has been declared at the rate of five (5) per cent per annum on Term Deposits and four and one-sixth (4 1/6) per cent per annum on Ordinary Deposits, free of taxes, payable on and after Saturday, 1st of July, 1893.

LOVELL WHITE, Cashier.



FOR THE BEST IMPROVED

ARTIFICIAL LIMBS

ADDRESS

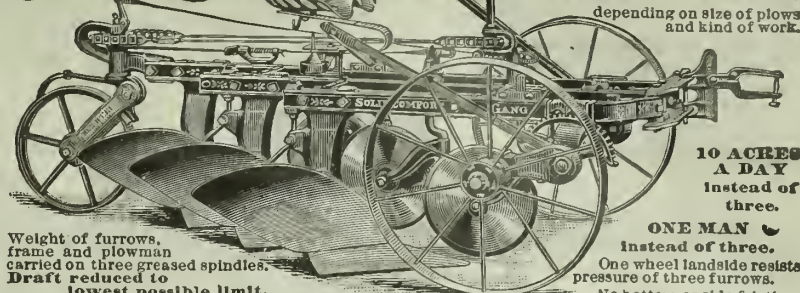
MENZO SPRING,

9 Geary St.,

SAN FRANCISCO, Cal.

OFFICE - 5.

SOLID COMFORT THE "WONDER ON WHEELS"



Weight of furrows, frame and plowman carried on three greased spindles. Draft reduced to lowest possible limit.

Foot brake prevents Gang running on team. Levers and turning device in easy reach. Can be turned in the length of itself. Easier Driving. LIGHTER DRAFT frame—can be narrowed or widened at will. Made with steeple, sod and stubble, or breaker bottoms, in steel or chilled metal. Ten or twelve inch cut.

ECONOMIST PLOW CO., So. Bend, Ind., or Stanton, Thomson & Co., Sacramento.

Special prices and time for trial given on first orders from points where we have no agents.

A WORD ABOUT THE "RURAL."

TO RURAL SUBSCRIBERS:

The RURAL PRESS appeals to its readers to assist in the work of extending its circulation. If you have friends or neighbors who are not but who ought to be readers of the RURAL, please give us their names and we will send them sample copies of the paper with subscription blanks.

If any subscriber of the RURAL will send us three *new* names, accompanied by cash, for one year in advance (\$2.40 each), we will advance his own subscription one year on our books. Or if he will send us one *new* name with payment in advance for one year we will advance his subscription four months on our books.

To any present subscriber or member of his family who will undertake to act as local agent for the RURAL in the way of getting new names and collecting from old subscribers we will give liberal cash commissions. A young woman in one of the central counties of the State averages, by thus acting for us, a monthly cash income of \$15.00 without neglecting her domestic duties.

The paper is putting forth renewed efforts to answer the demand for a journal clean and pure in tone, independent and intelligent in its dealings with public questions, thorough and practical in its treatment of agricultural, horticultural and live-stock subjects and careful and accurate in its market reports. It has within the past year taken on a new editorial department—"From an Independent Standpoint"—which deals with public questions of political character without partisan bias. It is the aim of the writer of this department to tell the exact truth about public questions and public men, without regard to party faith or partisan effect. It seeks to give the reader straightforward statements of fact and the best results of a sober, non-partisan judgment.

The chief strength of the RURAL is the friendship which has grown up between its readers and itself. Confident in that friendship, it appeals to them to speak a good word for it whenever they can.

Address all communications to the RURAL PRESS, 220 Market Street, San Francisco.

A. T. DEWEY } Dewey & Co.'s Scientific Press Patent Agency { ESTABLISHED 1860
W. B. EWER.
Geo. H. STRONG.

INVENTORS on the Pacific Coast will find it greatly to their advantage to consult this old, experienced, first-class Agency. We have able and trustworthy Associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO. Patent Agents, San Francisco.

NOW! NOW IS THE TIME! BALE YOUR HAY WITH YOUR OWN PRESS.

10 TO 14 TONS OF HAY IN A BOX CAR.
CAPACITY OF PRESS 10 TO 15 TONS PER DAY.



HAS BELL-RINGING ATTACHMENT TO REGULATE SIZE OF BALES.

THE ELI CHALLENGE FULL CIRCLE HAY PRESS

WILL PAY FOR ITSELF IN ONE SEASON.

ELI CHALLENGE PRESS, weight 3200 pounds, makes bales 17 inches by 22 inches and any length desired.

WE CHALLENGE comparison with all other presses and beg the hay bair to notice that no other press has all the following points of excellence combined in one machine.

THE POWER is made wholly of steel and malleable iron, hence no danger from broken castings. THE PITMAN is wholly of steel. THE PLUNGER or heater and the beam connecting same to pitman is of steel. THE BALE CHAMBER is constructed of steel plates fastened by steel bolts to steel angles which form the edges. THE WHEELS have steel tires and spokes and run on steel axes. EXTRA LARGE FEED OPENING, which in condenser shown below and which is attached to all our presses, makes total feed opening 46 inches. There is no jar or jerk when plunger rebounds. The holes through which shafting passes are drilled out as smooth as a habited box. All have an extra pole that goes on tongue to which the doubltree is attached when horses are at work.

All presses have Oil-Can, Monkey Wrench, Feeding Fork, Lifting Jack, Doubltrees and Neck-Yoke.

EVERY PERSON KNOWS that more hay can be fed into a large opening than into a small one. With this fact in view, we have recently made an improvement in the feeding device of our presses, and now offer to our patrons the advantages of an enormous condensing feed opening, the length of which, when expanded, is 46 inches, or nearly double the length of the feed openings in most other presses. By reason of the Condenser, the feeder on one of these presses has very light work, as the opening is so large that it is no trouble to feed the very largest of charges with ease. The operator is saved the trouble of lapping and forming the charges in the press hopper, as this is accomplished by the machine, and will at once be appreciated by any experienced operator. Again the Condenser utilizes the expansive force of the hay and acts as a cushion to the rebound of plunger. However, it is not entirely dependent upon the expansive force of the hay for its action, but will work equally well in light work as when making heavy bales.

THE ELI CHALLENGE IS THE MOST DURABLE PRESS MANUFACTURED.
RUNS LIGHTER AND IS THE EASIEST HANDLED OF ANY PRESS.

WE ARE HEADQUARTERS FOR ALL KINDS OF HAY PRESSES and Haying Tools. We carry the following Hay Presses always in stock:

ELI CHALLENGE FULL CIRCLE.....	} WRITE FOR PRICES
CHAMPION FULL CIRCLE.....	
JUNIOR MONARCH.....	
PETALUMA.....	
MILLER LIGHTNING.....	

Send for Catalogue.

BALE YOUR HAY WITH TRUMAN, HOOKER & CO.'S BALE TIES.
Cheaper than wire and better than rope.

SAN FRANCISCO AND FRESNO. **TRUMAN, HOOKER & CO.** SAN FRANCISCO AND FRESNO.

HERCULES! ..STEEL.. ..and.. ..IRON...

The Best Windmill for Deep or Shallow Wells.
CENTRAL ACTING. |||| DOUBLE BEARINGS.

Warranted to Run with Less Oiling than any other Windmill.

AUTOMATIC OIL BEARINGS.

Thirty Days Trial, 76822, 51'93" fired.

DEEP WELL PUMPS. ALL BRASS CYLINDER PUMPS.

PRICES ARE LOW.

Save money by DEALING DIRECT with the MANUFACTURER.

Improved Davis, San Joaquin and Hercules Windmills.

PUMPS, Etc. PATENT NON-SHRINKABLE REDWOOD TANKS.

WRITE FOR PRICES.

Works, Cor. Main and Otter Sts.; Office, 347 Commerce St., STOCKTON, CAL. R. F. WILSON.

ONLY 25 YEARS OLD
AND A GIANT!

THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.

CALIFORNIA If you want to know about California and the Pacific States, send for the **PACIFIC RURAL PRESS**, the best Illustrated and Leading Farming and Horticultural Weekly of the Far West. Trial, 6c for 3 mos. Two sample copies, 10c. Established 1870. DEWEY PUBLISHING CO. 720 Market St., S. F.

WELL MACH'Y All Kinds, Water, Gas, Oil, Mining, Ditching, Pumping, Wind and Steam, Heating, Boilers, &c. Will pay you to send 25c. for Encyclopedia, of 1500 Engravings. The American Well Works, Aurora, Ill. Chicago, Ill.; Dallas, Tex.; Sydney, N. S. W.

F. W. KROGH & CO.,

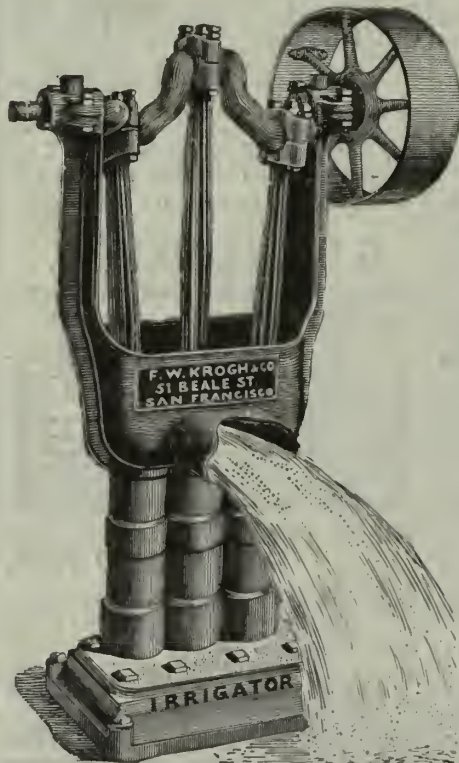
51 BEALE STREET,
SAN FRANCISCO.

DEEP WELL
Pumps,
POWER PUMPS,
Steam and Irrigating
PUMPS,

—AND—
Pumping Machinery
OF ALL KINDS,
Also, several different kinds of
HORSE-POWERS.

F. W. KROGH & CO.

Send for Catalogue and Price List.
Kindly mention this paper.



The Judson
Fruit Company,
308 and 310
WASHINGTON STREET
San Francisco, Cal.

— We are now better than ever prepared to receive consignments of all kinds of perishable products, such as Fruits, Vegetables, Eggs, etc. Our facilities for cool, dry storage and packing for long-distance shipping cannot be excelled. It is our constant aim to make our consignors and our customers stay with us.



Vol. XLVI. No. 2.

SAN FRANCISCO, SATURDAY, JULY 8, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market St.

California Tomatoes.

The tomato has not hitherto ranked high as an exponent of California climate, and yet it has made a creditable record in such capacity. The degradation of the tomato to the level of garden sass, and robbing it of position as flower or fruit, have apparently prevented its association with the all-the-year strawberry, the winter-blooming rose and the winter-ripening orange as evidence of frost-free winters. And yet the tomato continues to declare its loyalty to the clime. It puts forth its golden bloom and fills its glowing scarlet skin with delicious juice, thus declaring its appreciation of high winter temperatures. In the thermal belts of the State it is prone to live and bear fruit into the second summer, thus starting on a perennial course. This behavior is also of more than thermometrical moment, for usually the earliest tomatoes in the San Francisco market are the fruit of hold-over vines growing in the warmer regions of the south. They do not have the size nor the flavor of the first crop, but they answer well for an early treat and are often measurably profitable. There is another tender vegetable which follows the same course, and that is the garden pepper. It is, however, much hardier than the tomato, and is held over the year in the field for second year's bearing in places where the tomato would not survive.

Our engraving shows something of the rapid growth and free bearing of the tomato in choice parts of California. The engraving is from a photograph, taken January 1, 1893, in San Diego county, and shows a plant eight months old which in that time had attained a height of 19 feet and a width of 25 feet. Indisputable evidence of these dimensions is found in the figure of the man which the photograph has introduced. Whatever may be the standing of the so-called "tree tomato," which eastern seedsmen have recently catalogued, it can be safely claimed on the basis of this engraving that California can grow tomato trees, if not tree tomatoes.

PRODUCERS of seedless raisins will be interested in the statement which we find in an eastern exchange that the downy mildew has appeared upon the vines in Patras Zante and other Greek regions producing "currants," and that much damage is anticipated. This disease can be checked by spraying with copper solutions like the Bordeaux mixture, but how far the growers will use such treatment does not appear. The production of the true currant grape, the grape of Corinth, does not attain great extent in California though some are grown. The profitability of these varieties is not fully demonstrated here, but we have other seedless raisins, the Sultana and Thompson's seedless which can be produced in any amount which the traffic will bear. If the eastern cooks will try these clean seedless fruits they will find them vastly superior to

the time-honored Zante currant. Fortunately the downy mildew has not gained a foothold in our vineyards, yet though we have the *crysiphe* and other troubles to contend with.

FOREIGN FRUIT-GROWERS are seizing upon the spirit of the year. They are marketing in New York an orange

A Special Edition on Fruit Drying.

The next issue of the RURAL PRESS will contain a notable contribution to the literature of drying fruit by sun heat, as practiced in California. We have in hand articles written by those who themselves produce first-class dried apricots, prunes and peaches, describing in detail their methods and the labor-saving devices which they have found most satisfactory. These writers are resident in different parts of the State, from Marysville on the north to Santa Ana on the south, so they represent not alone successful individual experience, but success achieved under different local conditions, and are therefore broader in their scope and applicability than the experience of a single producer or a single region could be.

We are glad to make this publication of practical points on fruit drying just at this time, because of the probability that drying must be largely resorted to this year in view of the moderate requirements of canners. The articles fortunately reflect the most advanced practice and systematic manner of operation on a large scale, and will therefore be suggestive even to those who have been themselves successful driers. They also have points for the beginner, and are explicit in the small details which the novice might overlook at his cost. For this reason we shall be glad to secure as large circulation as possible for next week's RURAL. There is not attainable in any printed form such records as actual, successful practice in fruit drying as will appear in next week's RURAL.

IT IS ESTIMATED that there are now in stock in this State 16,500,000 gallons of wine. Wine has been shipped out of the State during the last six months at the rate of 1,100,000 gallons a month, and the local consumption is about 500,000 gallons monthly. On this basis there will be on hand when the next vintage commences about 10,000,000 gallons. This is the smallest stock on hand at the commencement of the season for any year since 1886, and the outlook for good prices is therefore excellent. The yield for the season is estimated at from 13,000,000 to 15,000,000 gallons.



A TOMATO TREE IN SAN DIEGO COUNTY.

called the Columbus, which comes from Rodi, Italy, and it is said by a New York paper, *Garden and Forest*, to be "superior to any other Mediterranean fruit, best of the summer oranges and ranks with first-class Florida fruit in winter." The Columbus sells in New York at 60 cents per dozen. Here is another variety for our fruit-growers and nurserymen to look after.

REPORTS FROM DELAWARE AND NEW JERSEY are to the effect that the peach crop will be heavy. In Delaware it is expected to be the heaviest for three or four years.

THE first bale of hops for the season was shipped from Sacramento Monday by John Markley.

THE RURAL PRESS TWO WEEKS SINCE mentioned a contest on Puget Sound between English and American hop sprayers. Its result, or, rather, lack of result, has reached us. The general testimony of the Sound hop men is that the test proved the superiority of American sprayer, while Mr. LeMay, the English contestant, and some others, are equally firm in the opposite opinion. There the matter rests.

EVERY TIME THE STATE FLORAL SOCIETY meets after this—and that's once every month—valuable and attractive art premiums are to be given for the best show of cut flowers. The meeting this month will be held a week later than usual, on Friday, July 18th inst.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 15 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half inch (1 square).....	1.00	2.50	6.50	22.00
One inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....Business Manager

San Francisco, July 8, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—A Tomato Tree in San Diego County, 21.
EDITORIALS.—California Tomatoes; A Special Edition on Fruit Drying; Miscellaneous, 21. The Week; Death in the Milk; From an Independent Standpoint, 22.
MISCELLANEOUS.—Cleanings, 24. California Crops, 39. Co-operation in Sonoma County, 37.
THE DAIRY.—The Black Pepsin Butter Fraud; World's Fair Dairy Tests, 25.
THE STABLE.—Speed Programme at State Fair, 26.
THE APIARY.—Honey at the World's Fair, 26.
POULTRY YARD.—Sulphur Process of Preserving Eggs; Green Food for Fowls, 26.
HORTICULTURE.—An Australian in a California Orchard, 26. Shrinkage in Dried Fruits; To Take in More Fruit Growers; Kerosene Emulsion and Lice; Prices for Packing Raisins; Cure for Curl Leaf in Peaches, 27. Analyses of Figs and Fig Soils, 28.
THE HOME CIRCLE.—30.
YOUNG FOLKS' COLUMN.—31.
DOMESTIC ECONOMY.—31.
AGRICULTURAL NOTES.—33.
PATRON OF HUSBANDRY.—From Worthy Master Davis; An "Average" Meeting of Yuba City Grange; Field Day at Grass Valley; From North Butte, 38.
MARKET REPORTS.—39.

BUSINESS ANNOUNCEMENTS.

(NEW THIS ISSUE.)

Road-Making Machinery—Deere Implement Co.....	40
Carriages, Carts, Wagons, Etc.—Allison, Neff & Co.....	40
Fruit Pitter—G. G. Wickson & Co.....	38
Gas Works—Badlam Bros.....	37

See Advertising Columns.

The Week.

As we go to press on Wednesday, the shadow of the Fourth of July still lingers over the city. The long respite of which many in the trade availed themselves extended practically from Saturday until to-day, and to-day's commercial affairs consist in vain efforts to remember last Friday's situation after the lapse of distractions which has intervened. The ordinary individual, too, is much in the same condition as the course of commerce. But the doctors proclaim the advantage of "complete changes." So the body politic must be improved even if it does take a day or two to find it out.

The weather has been very favorable for the progress of the fruit crop and no great mishaps are reported, though as a rule "dropping" has been more complained of than usual. Drying will soon be in full swing, having already been opened with apricots in the earlier regions. There will be a good lot to sell and growers will not care particularly whether they get silver or gold for it, so long as they get enough.

Death in the Milk.

We have so often commented upon the utter uselessness and folly of dwellers in San Francisco and her suburban belongings partaking of unclean and dangerous milk, that we fear our readers will consider us afflicted with a sort of lacto-phobia. If, however, our suggestions and exhortations had been heeded, there would have arisen no occasion to repeat them, accentuated as they now are by a most grievous and fatal epidemic of typhoid fever which is now raging in the city of Oakland.

California is, perhaps, the best place in the world to produce pure milk. The climate favors health in the animals. The long dry season does all that natural agencies can possibly do to promote the health of the animals, and consequently the purity and wholesomeness of their products. In the hay region of the State, at least, there is no earthly excuse for miasmatic pools or swamps. There is no high heat and humid air which are such a tax upon animal life in the moist climates of the world. There is abundant circulation of air, moderate temperature, and where any decent care is taken there is pure water. There can be nowhere any better natural conditions for the production of pure, wholesome, nutritious milk.

And yet even in such a region and encompassed by such advantages there has cropped out an epidemic, which has already reached several hundred cases, of which the exciting cause seems to be infected milk attended possibly

by defective sewerage of the region encompassed. There is some doubt as to the relative influence of bad milk and bad sewage, but it is claimed that the doctors' carriages in visiting patients, follow the routes of the milk wagons from the infested dairy, and that other parts of the city as badly sewered, but not having the same milk supply, are not included in the outbreak.

Nor does the source of infection in the dairy remain in doubt. It is stated that for some time there has been a case of typhoid at the milk ranch, and other cases have appeared later in the same immediate region. Chemical examination of the drinking water of the cows showed filth and organic matter in large excess, and besides this, there is a shallow well, from which water was taken for can-washing and for domestic use, the well being contaminated with sewage, although the chemical examination did not find the same objection to the water that pertains to the tank-water used by the cows. It seems likely, however, that this well water, by bacteriological examination which will probably be made, will disclose the deadly germs which have brought death and disease to so many people.

Such is the record of the evil work which has been wrought upon an unsuspecting community by carelessness and lack of proper precautions which present knowledge prescribes and the neglect of which is little less than criminal. In this case, however, the criminal charge lies against the community rather than against any individual. The dairyman who will supply cows water which he does not know to be pure and wholesome is not to be freed from an atom of the blame which should pertain to such criminal neglect or ignorance. Well-informed and progressive dairymen know that impure water in dairy practice is deadly and they exercise the utmost precaution in their practice. There are, however, especially in the neighborhood of cities, milkmen who are ignorant, careless and filthy in their life and work, and upon them the progress of dairy art and science can exert no influence. They keep filthy cows upon filthy food and drink in a filthy place, and filthy milkers put the filthy product into filthy cans from which is drawn the food supply of the babe and the invalid, as well as the strong man—all drinking disease instead of the health and strength which pure, wholesome milk would freely bestow. Is the public to endure it?

This is the phase of the question which touches most closely upon our field as publishers of a producer's journal. We hold that it is the consumers duty to himself and to the lives entrusted to his care, to know that the source from which his milk is drawn and the surroundings are such as wholesomeness requires. In the case of large towns and cities, it is, of course, impossible that each consumer should personally know these things. For this reason municipalities should give the consumer the assurance which he cannot personally secure. There should be careful and unimpeachable inspection. The parade of the ward-striker whom political interests may sometimes make custodian of the peoples' food and drink, does not answer the need. There should be expert, honest, disinterested inspection. The result would be that the abominable city milk ranches would be made unprofitable, and the crowding together of animals, and its unavoidable dangers would be done away. The city should have pure country milk from cows which have suitable range and the purest air, food and drink. If the present epidemic does not exert an influence toward the improvement of the milk-supply of our cities, we wonder what sort of a dispensation will be required to secure it.

THE PEACH CROP of the State of Delaware and the Maryland portion of the peninsula for this season is estimated at 5 600,000 baskets and exceeds that of 1891, which was considered an excellent year. The peach-growers have sent out the following circular: "From present appearances the peach crop of the Delaware and Chesapeake Peninsula will be very large and the fruit fine; and the attention of dealers and consumers is invited to these facts. If proper facilities of transportation are offered, and proper arrangements for sale and distribution are made in time, every town within 1000 miles can be supplied with good fruit at reasonable prices."

KANSAS IS GETTING ON NICELY with her wheat harvest. The weather in the largest part of the State has been quite favorable for gathering the crop. It is not yet known whether it will be 20,000,000 or 30,000,000 bushels.

THE SANTA OLARA FRUIT EXCHANGE, in a recent market bulletin, says it believes the opening price for dried prunes should be six cents per pound f. o. b. in California. Sales have been made already at five and one-half.

A PEAR FROM OREGON displayed at the Horticultural building at the World's Fair weighs 4½ pounds.

From an Independent Standpoint.

The financial situation, which seemed bad enough before, was made worse on Thursday of last week by the announcement that the Indian Council—that is, the administrative body in India through which England imposes her policies upon the country—had closed the mints to silver and put the finances of India upon a gold basis. The significance of this act lies in the fact that India has been the backbone of silver as a money metal. Her change of policy, therefore, removes the main prop of silver, and leaves the United States supported only by Mexico and half a dozen small South American and Asiatic countries in the effort to hold up the white metal to its natural and proper place in the world's fiscal system. The demonization of silver by India could not have come at a worse time for the United States. It finds us in the throes of a panic largely the consequence of an effort to uphold silver; and to a situation already very serious it has added a new element of alarm. All this was fully understood by the English financiers who are, of course, the real authors of the Indian policy, and who have purposely promulgated that policy at a time nicely calculated to demoralize the financial market in the United States.

The basis of the present agitation, the reason why money is tight and the primary cause of dull markets and low prices, is nothing more nor less than the fear that we shall be forced from a gold to a silver basis; that is, that our Government will find itself unable to meet its obligations in gold coin of which it has but little, and thus be obliged to pay in silver coin of which it has much. The suspension of gold payments by the Treasury would in effect displace gold as the measure of values in the United States and substitute silver as the measure of value. Now, the difference between the actual bullion value of the gold dollar and the actual bullion value of the silver dollar is approximately 40 cents, and the change from the yellow to the white standard, if it should in fact come about, would involve the wiping out of two-fifths of all the property of the country which is owned in the form of credits. This would be the inevitable consequence of adopting the silver 60-cent dollar in the place of the 100-cent gold dollar. Those who are creditors—that is, holders of obligations in the form of Government paper, stocks, bonds, certificates of deposit, notes, insurance policies, bills receivable, or any or all of the ten thousand intangible forms which property takes under our system—will readily comprehend what this would imply. It would, in fact, scale down all property in the form of credits of whatever kind or character by at least two-fifths. It is the fear of this scaling down that is back of the uncertainty and distrust which just now fills the air; it is the fear of this scaling down which makes those who have gold hesitate to exchange it for credits upon which they may be able to collect two-fifths of the value of the gold given for them. The current "uncertainty" means doubt as to the ability of the Government to keep to the present gold standard; and the current "distrust" means doubt of the stability of values as they stand adjusted to the gold standard. This is the secret, the whole of the reason, why there is a panic just now.

This brings us face to face with that hug-a-boo, the silver question, which confronts the country and which is very soon to become the subject of Congressional consideration. It is our desire to place that question fairly before the public and it can only be done by sketching the lines so broadly as to include not only the history and present status of financial legislation in the United States but, as well, by reviewing the financial situation of the commercial world at large; and this we shall do at the risk of being tedious. Our silver problem, it will be seen, is a mere side question of a much broader question, and it can only be settled by and through the settlement of that broader question. To begin at the beginning: By the consent and concurrent action of the commercial nations, gold and silver have for many centuries been regarded as royal or money metals. The ratios at which they have been relatively equal have been changed from time to time, but for the past three hundred years the figures have stood approximately at 15½ to 1—that is 15½ grains of silver equal to 1 grain of gold. This ratio has prevailed in European exchanges until a few years past. In the first law regulating American coinage the ratio was fixed at 16 to 1, and permission given to holders of silver bullion to coin silver dollars on their own account in the Government mints at the fixed ratio—16 to 1. The result was that for three-fourths of a century, or up to 1873, few silver dollars were coined and none remained in circulation. Those which were coined at the ratio of 16 to 1 were upon Government account and, being worth as bullion more than gold dollars, they were gathered up by speculators and soon found their way through the melting-pot to the bullion market. Up to 1873 we had practically no silver currency save subsidiary coins used for con-

venience in making change—that is, half and quarter dollars and dime pieces—and these were coined on Government account and were purposely made light weight or less than standard to save them from the melting-pot and the bullion dealer.

In 1873 Congress undertook to embody in one single enactment all that was valuable in a long series of coinage laws. In this enactment, which superseded everything which came before it, no provision was made for the coinage of silver dollars, and this omission is what is termed the "demonetization of silver." By Senator Sherman, who was chairman of the committee which compiled the enactment of 1873, it is claimed that the omission was accidental; that, as a matter of fact, no silver dollars had been coined for many years, and that the provision authorizing owners of bullion to take their own silver to the mint to get it made into dollars was dropped as unnecessary and as cumbering the statute book. This claim is scouted by silver advocates, who charge that the omission was a deep and villainous scheme to drop silver from the money system of the country in the interest of gold as the single standard or sole measure of value. Be this as it may, when the bill of 1873 was before Congress, nobody thought enough about it to note the omission, and among those who voted for its adoption was Senator William M. Stewart of Nevada, now the first of silver advocates and the most positive of those who denounce the "demonetization" of silver as a crime.

About this time the bullion markets began to show the effect of the enormous development in silver mining in Nevada, Mexico and South America. The world's yearly average production of silver from 1851 to 1875 was \$51,000,000, while from 1875 on to the present it has been \$116,000,000, an increase of 127 per cent. On the other hand, the yearly average product of gold has largely declined since 1875, but of this we shall speak later. In 1873 silver bullion was worth \$1.30 per ounce; in 1874 it dropped to \$1.27 per ounce; in 1875 to \$1.24; in 1876, to \$1.15. The mine-owners, whose profits were of course seriously curtailed by the decline in the market price of silver, saw, or believed they saw, in that decline the effect of the "demonetization" of silver in the enactment of 1873; and, supported by a large body of public sentiment, they undertook to restore the right of silver to coinage—that is, to enact a law directing that any owner of silver bullion could take it to any United States Mint and have it coined into dollars, under the ratio of 16 to 1, for his own benefit. But silver at \$1.15 per ounce was worth much less than under the ratio of 16 to 1, and Congress refused to make the desired law. After a long controversy and many delays, Congress decreed in 1878 as a compromise a law which resulted in the purchase of silver by the Government of two million dollars' worth per month at the market price, and requiring that it be coined into silver dollars at the ratio of 16 to 1, the Government issuing the money and making the profit between the market price of bullion and the face value of the minted coin. Under this law, which remained in effect from 1878 to 1890, 405,000,000 silver dollars were coined by the Government. Of this vast sum approximately sixty millions are in circulation and approximately \$345,000,000 lie stored in the vaults of the Treasury at Washington.

It was hoped that the purchase by the Government of two million dollars' worth of silver bullion per month would hold up the price of silver bullion, but the result did not justify these hopes. In spite of the monthly purchase on Government account, the bullion market went steadily down and farther down till in 1890 the price of crude silver per ounce was approximately one dollar, which made the value of the bullion contained in the minted silver dollar about 66 cents as compared with the 100 cents in the gold dollar. The agitation for free silver coinage had been kept up, and in this year, 1890, a strong stand was made in Congress for a free coinage measure, the claim being that such a measure would at once put silver on a par with gold. On the other hand, it was the judgment of the financial men of the country and of people generally that instead of raising silver to equal value with gold, free coinage would put the country on a silver basis, send gold to a premium and ultimately drive it out of the country. The fight in Congress was long and very bitter, and its end was, as usual, a compromise, this time Congress decreeing the purchase of 4,500,000 ounces of silver per month at the market price and leaving it discretionary with the administration to coin the bullion so purchased or to hold it in store. Under this law we are now, and have been since 1890, paying out approximately \$4,000,000 in gold per month from the United States Treasury. The silver bullion bought with this money is not minted (for it has been found impossible to force it into circulation), but stored in the treasury vaults along with the three and a half million minted dollars above referred to.

The regular monthly outlay has been a steady and

severe strain upon the resources of the Government. At first it was easily borne because prior to the last modification of the tariff we got in a great deal more money than was necessary for current expenses; but of late we have received from ordinary revenues barely enough to support the charges of the Government, and the monthly payments for silver have been taken from a reserve gold fund which has been held as a support to the greenback currency of the country. This reserve fund, which three years ago was about two hundred millions of dollars, is now reduced to approximately ninety millions (less, it is claimed by financial experts, than is safe, considering the volume of the greenback currency based upon it); and this remainder of ninety millions of gold is rapidly melting away under the operation of the law which decrees that four millions per month shall be spent to buy silver bullion and store it in the vaults of the Treasury. It is easy to see that it will not take long to exhaust all the gold that is on hand, and that if things go on as they are going now, the Government will soon have to meet its obligations with silver coin. It is this prospect of silver payments which the world of business dreads, for it means a drop to the silver basis with all the disadvantages that were outlined in the opening paragraph.

The gravity of the situation—that is, the fear of falling to a silver basis, which makes the present financial pinch, with its accompaniment of dull markets and low prices—has profoundly alarmed the country. The President, whose note of warning we quoted last week, has determined to convene Congress to meet in special session on the 7th of August. His announcement is in the following form:

EXECUTIVE MANSION, WASHINGTON (D. C.), June 30, 1893.—WHEREAS, The distrust and apprehension concerning the financial situation which pervade all business circles have already caused great loss and damage to our people and threaten to cripple our merchants, stop the wheels of manufacture, bring distress and privation to our farmers and withhold from our workmen the wage of labor; and whereas, the present perilous condition is largely the result of a financial policy which the executive branch of the Government finds embodied in unwise laws which must be executed until repealed by Congress; now, therefore, I, Grover Cleveland, President of the United States, in performance of a constitutional duty, do, by this proclamation, declare that the extraordinary occasion requires the convening of both houses of Congress of the United States at the Capitol in the city of Washington on the 7th day of August next, at 12 o'clock noon, to the end that the people may be relieved through legislation from present and impending danger and distress. All those entitled to act as members of the Fifty-third Congress are required to take notice of this proclamation and attend at the time and place above stated. Given under my hand and the seal of the United States at the city of Washington on the 30th day of June, in the year of our Lord 1893 and of the independence of the United States the 117th.

GROVER CLEVELAND.

The terms of this proclamation leave no room for doubt as to Mr. Cleveland's views concerning the financial situation or as to what in his judgment should be done at this time. The administration finds, he says, the "financial policy of the country embodied in unwise laws;" he makes it plain that in his judgment the act requiring the purchase of 4,500,000 ounces of silver bullion per month, should be repealed. This is the compromise measure of 1890 outlined above, and is known as the "Sherman law." There will probably be a great contest in Congress concerning it. The administration will urge its repeal and the business interests of the country will support the effort. But on the other hand there will be fierce opposition for the silver-producing states backed by a large body of public sentiment which calls for "cheaper money, and is profoundly of the opinion that free silver coinage would give financial relief.

The fight will not be a party fight, as between Republicans and Democrats. For repeal of the Sherman law the President, the Speaker of the House of Representatives; a large number of other prominent Democrats and with them such Republicans as Ex-President Harrison, Senator Sherman, Ex-Senator Edmunds, Gov. McKinley and a host of others. On the other hand, scores of prominent Republicans will stand with scores of equally prominent Democrats for free silver.

Those who supported and secured the passage of the Sherman law, including Mr. Sherman himself, are among the most earnest in the efforts for its repeal. The act did not at the time of its adoption express their views, for it was simply a compromise. It was prepared and supported to prevent something more radical. Ex-Senator Edmunds gives its history as follows:

When we passed the Sherman act we were between the devil and the deep sea; something had to be done. A crisis was impending. I voted for the measure and am willing to take my share of the responsibility, although I was not personally in favor of it. A canvass showed us that if we did not pass the act the silver men would pass a free silver bill. About three-fourths of the Democrats and one-fourth of the Republicans would have voted for a free coinage bill. I voted for the Sherman law to prevent a financial crisis or a free silver bill. The Senators from New York, New England, New Jersey and Maryland voted for the bill for the same reason.

As stated above, ex-President Harrison is among those who oppose free silver coinage and who favor the repeal of the Sherman bill. He realizes the gravity of the situa-

tion, and his utterances concerning it are worthy of his character. When interviewed a few days ago he said:

Our bitter political struggles are only the safety valves for our emotions, and we should respect each other for the intensity of our respective beliefs. When trouble comes, as we have it now, there is no real question of Republicanism or Democracy. Every man becomes an American and tries to do his best for the common good. I have not the slightest doubt of the issue. We will emerge from all difficulty strong, reliant and confident of the future of the republic.

Let us hope that the contest will be waged and ended in this admirable spirit.

We have noted in passing that of late years while the annual product of silver has largely increased, the annual product of gold has decreased. The annual average production of gold between 1851 and 1875 was \$127,000,000; and between 1876 and 1893 it was \$108,000,000, a decrease of 15 per cent. While the production of silver has of late years as compared with former years increased 127 per cent, the production of gold has decreased 15 per cent. This fact affords an explanation of the decline in the price of silver, independent of the "demonetization" in 1873; and it also affords a justification which the gold-standardists either ignore or deny for the popular demand for cheaper money. Since the values of things—of all commodities including silver—are practically measured by gold, the decline in the annual production of gold naturally gives to that metal an increased purchasing power. It is not to be denied that there is a distinct relation between the general fall in prices during the past fifteen years and the steady appreciation of gold, and it is such a relation as justifies the clamor for a money whose value is stable and whose steady appreciation does not put the creditor and the producer at a disadvantage.

Of course, an absolutely infallible standard of value is not possible since the conditions which create and destroy values, including the value of the standard itself, change from time to time; but it is the theory of bi-metalism—and in the United States most of us are bi-metalists—that the highest practicable degree of stability is found in the concurrent use of gold and silver at a ratio as nearly as possible approximating their natural commercial relationship. Each metal, it is assumed, will under bi-metalism check the rise or fall of the other and their point of balance will be a standard as nearly just as the wisdom of man has as yet been able to devise. It would seem that all the commercial nations would be willing to join in the creation and maintenance of such a standard, particularly since they once did so and though a long course of years proved its working efficiency. But England, the creditor nation of the world, sees in the decline in the annual yield of gold and the advance in the annual yield of silver, a chance to speculate to her own advantage. The nations of the earth owe her a thousand millions of money, and if the single gold standard be the accepted money policy of commerce then she gains vastly each year by the steady appreciation in the value of that standard. The circumstance which twenty years ago threw gold and silver out of balance, put a club in England's hand and she has not failed to wield it vigorously. She gains enormously through the steady increase in the value of the commercial standard of value—gold—and she resists the restoration of the old and good rule of bi-metalism because it would stop these gains. In this matter we have struggled against the commercial power of England, but in vain; not because we have wanted strength, but because we have failed to recognize the contest as an international affair. We have persisted in treating it as a purely American matter, and have tried to get relief by juggling with the currency at home when we should have been in the world's field of finance fighting England with her own weapons.

Our mistake, we repeat, in dealing with the silver question, is in regarding and treating it as a purely American matter. There is to be sure a very serious American phase of it, but it is incidental—a mere symptom of a disease which is universal. Partly by accident, largely through the influence of England, gold has become the sole measure of commercial values. Therefore, since gold is growing scarce and relatively dearer the values of other things decline. Year by year the holder of gold—that is, as matters now stand in the world, England—is able to command a larger share of the world's earnings without a relative increase of nominal wealth. We, as a debtor nation, are at serious disadvantage; and that disadvantage would be confirmed and perpetuated by resorting to the silver basis. It is the scheme of English financiers to put us on that basis, for it would imply perpetual commercial subordination on the part of America, and perpetual commercial dominance on the part of England. To concede to England possession of the gold, to consent, hold ourselves to the use of silver, would be to accept a subordinate position, to submit to losses by every fluctuation of the silver market, to pay discounts and exchanges upon every transaction.

What we should do is to compel England to act with us

in the restoration of bi-metalism. How can we do this? In the words of Mr. Andrews, one of the American members of the Brussels conference, we answer: "By ceasing to purchase silver and refusing to coin more until other nations will, and at the same time making a law ordering the Secretary of the Treasury to open our mints to free coinage of silver at any date when he shall be informed that England, Germany and the Latin Union, or any two of those, will do so. Such a stand would probably make impossible the proposed introduction of the gold standard in India. By dropping silver for the time being and joining the struggle for gold we shall perceptibly precipitate in Europe another fall of prices so aggravated that the most obdurate banker of Lombard street will have to admit that gold cannot be safely taken as the sole international money."

This is not the position of the Wall-street "gold bugs," for they, like England, want a currency by which the creditor may gain through the automatic appreciation of the standard of value. Mr. Andrews' plan is the true bi-metalist position, and it will lead to a sound and honest currency; it will elevate the standing of our country in the commercial world; it will help commerce and trade, and it will make justice between creditor and debtor.

The policy proposed—to meet England in the contest for the world's gold—is put forth as good policy only for the time at hand. It is good only as it leads to bi-metalism just as war is good only when it leads to peace.

In this outline—and it is of necessity only an outline, for the subject is a very complex one—we have made no attempt to conceal our own view. And it is the result of no calculation, of no attempt at smartness, that in one sense it contradicts the position of the gold men and in another contradicts the position of the silver men. We favor first, the repeal of the Sherman law whose operation makes us poorer in gold each day. Then, with all our resources at hand, we favor going boldly in and measuring swords with England in the fight for commercial and financial supremacy. She cannot live six months without the benefits which come to her through commercial relations with this country. Surely, with this advantage and backed by our vast national resources and a high degree of resolution and fortitude, we can bring England to terms. And those terms should be the acceptance of bi-metalism—that is, the concurrent use of gold and silver—upon such conditions and under such ratios as will imply justice in commercial exchanges, justice between nation and nation, justice between creditor and debtor, and justice between buyer and seller.

We recognize no obligation on the part of the Government to the silver-mining industry. That is a business pursued by private parties for personal advantage, and is entitled to protection to the same, but to no greater degree, than coal mining or wheat growing. Our contention for bi-metalism is not in the interest of silver mining, but in the interest of the world of production and exchange, which demands HONEST MONEY—money measuring the same value this month, next month, and next year, and which will yield no advantage to the creditor as against the debtor, to the purchaser as against the producer.

The theory of the advocates of free coinage in the United States, is that a law permitting any holder of silver bullion to take his metal to the mint and have it coined into dollars (at the old ratio of 16 to 1), would at once jump the commercial price of silver from where it now stands (approximately 25 to 1) to par or 16 to 1. But against this theory is the judgment of the whole commercial world. The quantity of silver in the world seeking a market is vast, and under such a law it would at once flow toward us. Our financial system would break down, and we would find, not silver equal to gold, but silver as our sole money metal, and our gold flowing to England to be used as a club to keep us away from the solid rock of financial and commercial stability; and, after losses in the change of standard, frightful to contemplate, we should have a silver currency shifting in value with every variation of the bullion market, while in the commercial world we would have to accept the disadvantages of the continuing appreciation of gold.

There is one way out of it, and only one, and that is to meet England in the competition for gold, beat her at her own game, and compel her to yield to a financial policy based on honesty and equity.

In a letter addressed to the editor, Col. John P. Irish takes us to task for the suggestion in an article reviewing Senator Stanford's career that "a large measure of Mr. Stanford's wealth belonged in fact to the government if the debt of the Central Pacific railroad had honestly been paid," and sustains his criticism by reference to the provisions of acts of Congress relating to overland roads. Strictly speaking, Col. Irish is right, and we have to

apologize for a careless form of expression. Our intent, as every reader probably understood, was to refer to the nefarious means by which a large part of the late Senator's wealth was acquired—namely, the frauds in the construction and capitalization of the Central Pacific road, perpetrated through the instrumentality of the Contract and Finance Company, etc., whereby the means intended and furnished by the public for the construction of the road were diverted to the private gain of individuals having the control of the Board of Directors. These things have been so frequently exposed through the press as to have become common knowledge. If a specification of details is desired, we refer Col. Irish to the proceedings in the suits brought by Samuel Brannan and Anthony Dugro, to the nine volumes of testimony taken before the United States Railway Commission, the record in the Colton case, etc.

We cannot agree with Col. Irish in a suggestion which he makes in the course of his note that the "highest infamy known in business is the dishonest evasion of an honest debt for personal enrichment!" We hold it a greater depth of baseness, or greater "height of infamy," if that be the preferable expression, to avail oneself of a great crisis in the affairs of the nation, to promote selfish ends by legislation ostensibly designed for a patriotic purpose; to seize upon such a time and such an occasion, and for the sake of gain to hoodwink an honest-minded care-burdened President into the belief that the Sierra Nevada Mountains begin seven miles east of Sacramento; to employ one's means and opportunities in corrupting public officers of all classes, legislative, executive, administrative and judicial; to obtain grants of public land and property under pretense of public benefit, and appropriate them to private gain and to the oppression of the public which granted them; to mortgage property for amounts far exceeding its cost or value, and palm the securities off on the public by devices calculated to deceive people unversed in the tricks by which railroad securities are marketed. Does Col. Irish wish specifications?

We recognize the good points of Senator Stanford's character; for the public purpose to which he has devoted his wealth after he can no longer enjoy it we give him praise. It is especially due where so many others similarly situated have made themselves conspicuous by their niggardliness. But we cannot shut our eyes to the facts of history.

Gleanings.

Full account of the organization of the Sonoma County Fruit-Growers' Association will be found on page 38.

It is proposed to call it the "California Midwinter International Exposition." Let us hope the fair will be as big as the name.

A GRADUATE OF THE KEELEY INSTITUTE at Los Gatos has declared himself unanimously in favor of changing the name of the pretty little city to Lost Jag-u-s.

THE STATE HORTICULTURAL SOCIETY proposes to find a more suitable term than "green" fruit. It is misleading and inadequate. The objections to continuance of its use are obvious.

A SANTA CAZ FRUIT COMPANY had 20 Chinamen shipped to Pixley, Tulare county, to work in their orchard at that place. The people took offense at their presence and ran them off with shotguns.

WE HAVE WAITED for it long and patiently, but up to the hour of going to press the New Jersey peach crop had not failed for this season. Something shipped a cog somewhere, evidently.

A CITIZEN OF SONOMA COUNTY placed a gate across a public highway and was mulcted in \$1150 damages by the road overseer. He contended that it was not a public thoroughfare, but seems to have been mistaken.

LOUI is discussing the possibility of securing a cane sugar-planting experiment station. The government has appropriated \$10,000 for the purpose and wants from 10 to 40 acres of land to make its experiment upon.

DAVID FRYE PICKED 230 POUNDS OF CHERAIRES Tuesday during a burst of speed, with George O'Brien close behind with 230, says the *Petaluma Courier*. This is an extraordinary day's work, as 150 pounds is considered a good day's picking.

THE VISALIA *Delta* ANNOUNCES that there is already quite a demand for help in the orchards in that vicinity, but it will be much greater when peaches commence to ripen rapidly, and will continue through the season. There is no excuse for idleness nowadays.

D. W. PARKHURST, OF FOWLER, FRESNO COUNTY, last season imported a number of boys from San Francisco to pick grapes in his vineyard, and he announces that he proposes to do the same thing this season. A number of boys have already applied for work.

A WAR IS REPORTED likely between the sheepmen and farmers of Colorado. It is the irrepressible conflict between early and later material development. In the settlement of any new country sheep must inevitably retire before the plow, asserts the *Red Bluff Sentinel*.

THE FRUIT-GROWERS OF ANALY TOWNSHIP should identify themselves at once with the co-operative scheme inaugurated at Santa Rosa, says the *Sebastopol Times*. Don't wait to see if the proposition is going to be a go, but get in line and make it go. The way to co-operate is to co-operate.

NAPA SHIPPERS OF FRUIT complain of slow railroad service overland this season. They paid for passenger train time, but in no instance got it. One carload was nine days making a distance which should have been covered in five. Such delays are always bad for the fruit, says the *Register*.

THE FRESNO CANNING COMPANY has closed its doors for the

season, being unable to borrow money to conduct its business. During the two years it has operated, the canning company has paid out \$50,000 or \$60,000 for labor alone. The suspension of operations is keenly regretted in Fresno.

A SELMA MAN, says the *Fresno Republican*, has imported some edible frogs and placed them in a small lake on his farm, and will permit nature to take her course. The froggy will be run for profit as well as for the pleasure of listening to the mellow and musical notes of the amphibian songsters.

SWARMS OF LOCUSTS have settled in the neighborhood of Dibble creek, Tehama county, and multitudes of insects are to be found all the way from a mile or so above Red Bluff as far north as Cottonwood creek. They have not troubled the crops or fruit trees as yet, seeming to subsist entirely upon chaparral brush.

THE OAKLAND *Enquirer* SAYS: "California fruit canneries are not running this year because there is no market for the goods and last year's stock has not yet been sold." The *Enquirer* is mistaken. A good part of the canneries are going and the prospect is favorable that others will start before the month ends.

GOOD OR POOR CROPS make but little difference to the grape-growers, says the *Gilroy Gazette*. Last year the crops were poor and the prices moderately good. This year the crops promise to be large and the prices immoderately had. It's a case of heads I win, tails you lose, with the San Francisco syndicate of wine and grape buyers.

IT WAS FEARED that the failure of ex-Senator De Long might injuriously affect the Petaluma Packing Company, in which he was a principal stockholder. The statement is made, however, that the canning will go right ahead, the De Long stock being taken in possession of I. S. Wickersham, a well-known local capitalist. This intelligence is gratifying.

ONE KERN COUNTY FARMER a few days ago bought 23,000 grain sacks. It is significant that a very few years ago all the merchants in Kern county did not handle that many grain sacks in a year, says the *San Jose Mercury*. Kern county is making wonderful strides forward. It is annually bringing vast bodies of land under cultivation that only a few years ago were regarded as arid and desert.

THE STATE PRESS is freely printing a law said to have been passed by the late Legislature giving a rebate of highway taxes to all persons owning wagons with wide tires. Editor Green, the Mentor of the Press, is constrained to remark in consequence that the alleged law is "something that does not fit any road law California has had for a quarter of a century at least." And he warns the brethren not to print.

SEVERAL YEARS AGO Chinese pheasants were turned loose on the Rideout farm in Sutter county, and recently quite a number were seen there, having increased rapidly. The pheasant is a fine game bird, and we want him in California, but not too much of him, for he is a nuisance in young grain fields. Under proper laws, however, he can be protected sufficiently and at the same time prevented from increasing too rapidly.

THE YUBA CITY CANNERY began 15 days since on the apricot pack with about 80 hands at work, and will continue on that fruit until next week. About 2000 cases of apricots will be put up this year. The peach crop will begin to come in about July 20th, when the force of employees will be greatly increased. The drying department will be run during the peach season. The engine and boiler of the cannery are being repaired.

REPORTS TO THE OLIVE-GROWERS' ASSOCIATION show that the California olive-oil product for the last season has aggregated about 10,000 gallons. All of this has been bottled, and nearly all of the product has been sold at prices ranging from 10 to 30 per cent higher than the prices obtained here for French and Italian oils. The season's product was not so great, for various reasons, as the output of 1891 when over 11,200 gallons of oil were made.

CALIFORNIA'S PRODUCTION OF PRUNES, which exceeded 20,000,000 pounds last year, seems enormous, but twice that quantity was imported from Europe during the year, remarks the *Los Angeles Express*. There may be enough prune trees planted in California to eventually supply a demand no greater than the present consumption, but population grows rapidly and there need be no fear that a prune orchard in this State will fail to be good property as production increases.

THE TRAVELER *Advocate* risks a heretofore unblemished reputation by publishing the following: "They say 'the early bird catches the worm,' and it is astonishing what early-risers will see before breakfast. One morning last week we passed a blackberry patch and saw two ladies among the treacherous bushes of thorns picking berries with men's pants on." Truly, Tulare is a marvelous county. The tailor business ought to boom if there are grown many "berries with men's pants on."

THERE IS A PROSPECT that a packing-house will be built here soon, where the product of the vineyards may be handled, says the *Madera Mercury*. This is something which is needed, and which will be of great benefit to the people of Madera and to the raisin-growers in the vicinity. All that is necessary to make the packing-house a fact will be for the raisin-growers to guarantee 100 carloads of raisins. This they can do if they will operate together and take the interest which they should in the matter.

FOLLOWING IS A LIST of cars of fruit shipped East from Vacaville for the week ending Thursday, June 29th:

	Cars.
Earl Fruit Company and Garlicks & Robinson	16
Vacaville and Winters Fruit Company	8
California Fruit Association	8
National Fruit Association	8
F. H. Buck	6

Total..... 45
Total shipped to San Francisco..... 7

MA. F. SMITH, OF YREKA, was killing woolly aphis in his orchard with a pan of kerosene and sat the pan down, when to his surprise a large number of moths came to it as bees would to honey. In a couple of hours there were over 200 of the moths in and around the pan. His chickens ate large numbers of them. He afterwards put a number of pie pans with kerosene in them throughout the orchard and the results were astonishing. The early morning is the best time, as the sun shines on the oil, the fumes rise and the moth is attracted. He thinks that it would be wise to have a flock of chickens in the orchard, as they readily eat the moths as they lie on the ground around the pan.

THE DAIRY.

The Black Pepsin Butter Fraud.

The United States Department of Agriculture has just issued a Farmers' Bulletin on butter frauds, from which we take the following on "black pepsin:"

During the year 1892 the department received many communications relating to the methods of increasing the yield of butter—nearly all the correspondents speaking of the agent employed as "black pepsin." Advertisements appeared in agricultural and other newspapers and many unwary and uninformed persons became victims of the fraud.

In spite of the warnings given in the reports of the department and by the dairy commissions and agricultural experiment stations of many of the States, a brisk and apparently increasing trade has been kept up in these substances, greatly to the detriment of those innocently purchasing the nostrums and to the consumer of the product—a product not butter, but a mixture of butter fat with water, casein, milk, sugar, and other constituents of milk. Such a product soon suffers a separation of its constituents, and is exposed to the decay of its nitrogenous components and a speedy rancidity of its fatty ingredients. The magnitude of these fraudulent practices and the extent to which they have spread throughout the country have been revealed in quite a startling manner by replies to a circular asking for information on this subject sent to boards of health, members of dairy and pharmaceutical associations, and city officers throughout the country.

The numerous replies to this circular which have been received have been referred to Mr. A. J. Wedderburn, special agent of the department for the investigation of the general aspect of food adulteration. As a result of his study of these replies, Mr. Wedderburn has prepared the following preliminary report:

"(1) Of over 2500 letters received from all parts of the United States only two indorse the use of black pepsin.

"(2) While many of the replies state that nothing is known of the article, numerous correspondents say they have had inquiries for it. A large number have it in stock and are selling it. A majority unite in pronouncing it a fraud, and one writer says he has written the manufacturer that if any more of his printed matter is sent to him he will forward it to the postal authorities to ascertain whether the sender is not liable for prosecution for using the mails for fraudulent purposes.

"A reputable chemist sends an analysis of the butter made with this solidifying adjunct, and it shows only 63 per cent of butter fat. Butter should not contain less than 85 per cent.

"The advertisement above alluded to is printed on a postal card, and states that \$125,000 will be spent this season in advertising black pepsin and two other articles, one of which is a preservative powder for fruits and vegetables, and, as the correspondent states, nothing more nor less than salicylic acid, an article which, in unskilled hands, is most dangerous to health and life. The black pepsin is retailed at \$2.50 a box of two ounces and wholesaled at \$2. The preservative powder is sold at retail for \$1.25 a box, and at wholesale at \$10 per dozen. For obvious reasons the name and address of the vendor are withheld.

"An analysis of the so-called 'black pepsin' made for the *Evening News*, Detroit, Mich., and published in that paper April 1, 1893, shows the following result:

	Per cent.
Salt.....	83
Anatto.....	15
Rennet and organic matter.....	2

"The value of the two-ounce box sold at retail for \$2.50 is about three cents.

"Extensive advertising is undoubtedly creating a large inquiry for these products, though their sale and use are fraudulent. The milk solids are curdled and the sugar and casein 'turned to butter,' as the advertiser expresses it. The use of black pepsin certainly violates the spirit if not the letter of the oleomargarine law, and dairymen who insist that oleomargarine and other imitations of butter shall be properly branded of necessity must oppose the use of any chemical that certainly perpetrates as great a fraud on honest butter as any other imitation."

WHAT IS BLACK PEPSIN?

So complete is the fraudulent nature of this material that it has been doubted by some eminent chemists whether the supposed active material in it is of any value whatever. This phase of the case is thoroughly set forth in the following extract from a letter received from Prof. H. A. Weber, of Columbus, Ohio:

"* * * Black pepsin is made and sold by a man named Bane, under the style of 'U. S. Salyx Co., New Concord, Ohio.' According to Prof. Kedzie, it consists of salt and coloring matter. It is sold for making two pounds of butter out of one pound of butter and one pound of milk. It is also claimed to be patented, and county rights are being sold in this State. But as the assignments which have come to my notice do not even contain the number of a patent, it is reasonable to suppose that this claim is not true. Many people have been induced to buy the fraud, in hope of making money out of it. Numerous inquiries have come to the office of our dairy and food commission as to whether this butter could be sold under our laws as unadulterated. But, as it is one-half butter and one-half milk, it could of course not be allowed to be sold.

"It is true that a pound of soft butter and a pound of milk slightly warmed, churned or shaken together will unite to a solid mass weighing two pounds. But the black pepsin plays no part in this operation, as it can be accomplished just as well without as with it.

"About three years ago a party in Marion, Ohio, sold a preparation of this kind for the same purpose for \$1 a box, containing about an ounce of a powder. He sent the powder through the mail to purchasers all over the country. A postal detective sent me a box for analysis. It consisted

of alum, bicarbonate of soda and turmeric. The circular accompanying the box gave instructions for making butter out of equal parts of butter and milk, and for two pounds it was only necessary to add of the powder what would be held on the point of a penknife. I told the detective that the powder was a fraud, as the same thing could be accomplished without the addition of the powder. The party was arrested, tried before the United States Court at Toledo, Ohio, convicted and sent to the penitentiary for using the mail for fraudulent purposes. This black pepsin is just as great a fraud.

"If you wish to make the experiment, put a pound of soft butter into a wide-necked bottle, add a pint of lukewarm milk and shake for a moment, and you will see how readily the milk and butter will emulsify. * * *

From our correspondents we learn that many other nostrums are in use besides those which we have mentioned in this report. All of these preparations make the same claim for increasing the yield of butter. Among others, one correspondent says that a mixture of alum, pepsin and yolk of egg has been employed, which with one pound of butter and one quart of milk will make two pounds of richly colored butter.

It is not probable that butter made in any of the ways mentioned or by any of the means employed can secure a permanent hold in the market. Its tendency to separation, decomposition and rancidity would be so great as to condemn it for general use. Nevertheless such butters are found in the Eastern market.

A simple test can be easily applied by any one to distinguish one of these so-called butters from the genuine article. On melting a genuine article of butter the amount of water which will separate on the top of the melted mass is very small and should not exceed 12 per cent in volume of the whole material. By placing a little of the suspected butter in an ordinary test tube and melting it at a gentle temperature, and comparing the same with a sample of genuine butter, the difference in the amount of material not butter fat will at once be noticed. In the adulterated article almost half of the whole volume will be a mixture of water, curd and other materials, while with the genuine article of butter the fat will separate in a clear, limpid mass, and a small amount of water and a little curd only will appear at the top. It is not difficult for any person, no matter how unskilled in manipulation, to distinguish the fraudulent from the genuine butter by the test described.

World's Fair Dairy Tests.

In the *Breeders' Gazette* of June 14th we have the weight of butter recovered by the churn from each of the three herds in the World's Fair dairy test; for the first ten days of the trial. In no case does the credited butter equal the estimated butter (i. e., all the butter in the milk as shown by analysis) in weight, both being calculated on an 85 per cent fat basis; for instance, when the butter churned shows by analysis more than 80 per cent fat, the quantity over and above that is added to the weight of the butter, the result being what is called the credited butter. The per cent of fat in the churned butter ranges all the way from 81 per cent up to 86.08 per cent. The latter is the highest, and from the Jersey herd on the sixth day of the test; in the Guernsey herd 86 per cent is the highest, and in the Shorthorn 85.8 per cent the highest per cent of butter fat in the churned butter.

Comparing the weight of the credited butter with that of the estimated for the ten days we find it to be as follows: Jerseys, 472.9 pounds estimated and 459.5 credited, being an average of 1.8 pounds per day per cow. The Guernseys have 397.8 pounds estimated and 385.1 pounds credited butter, an average of 1.5 pounds per day, and the Shorthorns 318.5 pounds and 302.7 pounds, being an average of 1.3 pounds a day for the 23 cows. In each of the other herds there are 25 cows.

The above figures show that there is a considerable loss of butter in the churning, yet a loss which is probably less than the average in dairies where the gravity system of cream-raising is followed, a fact that should not be lost sight of in dairy practice at any time.

The daily yield of butter from each herd has been scored from June 1st to 6th inclusive by the three Judges—Messrs Barber, Gurler and Eldridge—and the average of their ratings on each point (which pretty closely agree) is taken as the official score.

In neither of the breeds does the butter containing the highest per cent of fat score the highest. The scale by which the butter is judged is as follows: Flavor, 55; grain, 25; solidity, 10; color, 10. Total, 100."

The average of the five days scoring of Jersey butter was as follows: Flavor, 48.9; grain, 23.4; solidity, 9.7; color, 8.4; total, 90.4.

The average of the six days scoring of Guernsey butter was as follows: Flavor, 49.7; grain, 22.3; solidity, 8.6; color, 9.1; total, 89.8.

The average of the six days scoring of Shorthorn butter was as follows: Flavor, 49.3; grain, 22.2; solidity, 8.5; color, 9.6; total, 89.5.

The *Gazette* gives the results of each day's milking, as well as scoring of butter, as far as it is done, in tabulated form, but the averages, as given above, we think will give a sufficiently good idea of the performances of each separate breed.

The *Gazette* also publishes, for the first time, the revised rules under which the dairy test is conducted, and says:—"The chief object of the test is clearly set forth; it is not to find the cow which will make the largest yield of product, but the cow which shows the greatest profit. Different results could doubtless be produced if no account of profit were taken by the feeders."

We give below the dates for the test now on, and the ones that are to follow; it is also stated what disposition is to be made of the milk in each test, and the time for which it shall continue.

d. Wednesday, May 31, to Aug. 28, inclusive, ninety days: *Breed Test No. 2*. In this test all commercial products, i. e., butter, skim-milk, buttermilk, and increase or decrease in live weight, and cost of color, if used, will be considered in making the award. The test

is to be conducted under such uniform methods of handling the milk and cream and of manufacturing butter as may be agreed to by the Committee on Tests, subject to these rules and the approval of the Chief of the Department of Agriculture.

e. Tuesday, Aug. 29, to Sept. 27, inclusive, thirty days: *Breed Test No. 3*. In this test no product will be considered in making an award except butter. The authorized representative of a breed shall have the right in this test to decide the method by which the milk and cream of such breed shall be handled and the manner in which the same shall be manufactured into butter, subject to these rules and the approval of the Chief of the Department of Agriculture.

f. Saturday, Sept. 28, to Oct. 27, inclusive, thirty days: *Breed Test No. 4*. This test will be of young herds, entered in accordance with Sec. 7 of these rules and will be conducted under the same conditions and requirements, and the awards will be upon the same basis as provided for in Test No. 2.

g. Thursday, Sept. 28, to Oct. 27, inclusive: Illustration of methods of handling cream and manufacturing butter. Under a. c. and g. records will be kept as provided for in the regular tests.

A. and c. refer to illustrations of methods of handling milk and cream during the month of May.

Since writing the above we have received the *Gazette* of June 21st, in which we have milk records for another week.

There is a noticeable falling off in the quantity of milk given by both the Jerseys and the Guernseys, while the Shorthorn herd shows an increase in quantity.

From June 10th to 17th, inclusive, the 25 Jersey cows gave 6860.5 lbs. of milk, an average of 27.44 lbs. a day per cow.

The 25 Guernsey cows gave 5937.9 lbs. of milk in same time, an average of 23.75 lbs. a day for each cow, and the 24 Shorthorn cows gave 6612.4 an average of 27.55 lbs. of milk a day, which, for the first time since the milking trials began, shows a fraction better than the Jerseys in quantity of milk; the latter however, are still far ahead of the other two breeds in the quantity of butter produced.

THE STABLE.

Speed Programme at State Fair.

Following is the speed programme of the coming State Fair at Sacramento:

Thursday, September 7th.—The Occident Stake (closed.)

Pacing purse, \$1,000, 2:17 class; to close August 1st. Horses making a record of 2:14 or better on or before August 26th are to receive a return of entrance money and shall be barred from starting in this race, but may re-enter August 26th in their proper classes.

Trotting purse, \$1,000; 2:22 class; to close August 26th. Saturday, September 9th.—Two-year-old stake, closed with twenty nominations.

Trotting purse, \$1,000, 2:27 class; to close August 1st. Horses making a record of 2:22 or better on or before August 26th are to receive a return of entrance money, and shall be barred from starting in this race, but may re-enter August 26th in their proper classes.

Trotting purse, \$1,000, 2:16 class; to close August 26th. Tuesday, September 12th.—Three-year-old trotting stake; closed with eighteen nominations.

Pacing purse, \$1,000, 2:20 class; to close August 26th. Trotting purse, \$1,000, 2:24 class; to close August 26th.

Thursday, September 14th.—Four-year-old trotting stake; closed with sixteen nominations.

Three-year-old pacing stake; closed with four nominations.

Trotting purse, \$1,000, 2:20 class; to close August 26th. Trotting purse, \$800, 2:30 class; to close August 1st.

Horses making a record of 2:22 or better on or before August 26th are to receive a return of entrance money, and shall be barred from starting in this race, but may re-enter August 26th in their proper classes.

Free-for-all pacing purse, \$1,000; to close August 26th.

Saturday, September 16th.—Pacing purse, \$700, 2:25 class; to close August 1st. Horses making a record of 2:20 or better on or before August 26th are to receive a return of entrance money, and shall be barred from starting in this race, but may re-enter August 26th in their proper classes.

Free-for-all trotting purse, \$1,200; to close August 26th. Four-year-old pacing purse, closed with four nominations. Futurity stake for the two-year old division.

Running Stakes. No. 1.—The opening scramble for two-year-olds. A sweepstake of \$25 each; \$15 forfeit, or only \$10 if declared before September 1st; with \$300 added, of which \$50 to second. Winners when carrying weight for age, or more, must carry five pounds extra. Maidens that have started once, allowed three pounds; twice, five pounds; three or more times, ten pounds. Six furlongs.

No. 2.—The Sunny Slope Stake, a sweepstake for two-year-old fillies of \$25 each; \$15 forfeit, or only \$10 if declared September 1st, with \$250 added, second to receive \$50 from stake. Winners when carrying age weight or more to carry five pounds extra. Non-winners allowed five pounds. Five-eighths of a mile.

No. 3.—The California Annual Stake, a handicap for two-year-olds of \$50 each; half forfeit, or only \$15 if declared; with \$350 added, of which \$75 to second. Weights to be posted by 10 A.M. day before race, and declarations to be made by 6 P.M. same day. Six furlongs.

No. 4.—The Autumn Handicap, for two-year-olds. A sweepstake of \$50 each; half forfeit, or only \$10 if declared; with \$500 added, of which \$100 to second, third to save stake. Weights to be posted day before race; declaration to be made by 6 P.M. same day. One mile.

No. 5.—The Del Mar Stake, for all ages, of \$50 each, \$15 forfeit, with \$300 added, of which \$100 to second, third to save stake; \$200 additional if 1:41 1/4 is beaten. Stake to be named after the winner if Del Mar's time (1:41 1/4) is beaten. One mile.

The remainder of the running programme will be announced on Saturday, August 26th, and will provide for sixteen additional races to cover the four days' running and accommodate all classes of horses. The State Agricultural Society's rules are to govern. There will be no added money for less than three starters.

THE APIARY.

Honey at the World's Fair.

TO THE EDITOR:—"Is California well represented at the World's Fair?" is a question we hear on all sides these days. We Californians take a great pride in our State and its resources. Eastern people say we are given to bragging about our products; that we have not half what we claim, and what we have is not near as fine as we represent it to be. Those easterners who have been here to see for themselves, are no longer "doubting Thomases;" they saw, and they went away convinced that we are all that was said about us; that we can and do raise fine fruits, big vegetables, in fact, that nearly everything that we have is wonderful.

The California World's Fair Commissioners had it in their power to help disabuse the minds of a large number of the denizens of the East that we are not a wide-awake people; that we have and can raise a greater variety of agricultural products than any other State in the Union.

I was at the World's Fair recently, and, like many another Californian, I was deeply interested in seeing what sort of a showing our State is making at the fair. I found some of our exhibits in several different buildings; these exhibits were for the most part good—they were a credit to the State, yet, I did not approve of the way some of them were placed in position. I don't know whether this lack of artistic display was due to the non-esthetic taste of those directly engaged in installing said exhibits, or to some red tape rule of the head management of the exposition. But this is a minor matter—one hardly worth noticing at this late day. I shall not undertake to tell what there is of California at the big show; that would take a good deal of space. Neither will I say anything about how money has been foolishly spent in getting a lot of truck into some of our exhibits.

One of the most glaring oversights at the fair is: We are not represented in the honey exhibit. This is all the more noticeable from the fact that this State has a world-renowned reputation for being not only a sort of a bee paradise, but the greatest honey-producing country in the world. At the fair I was told by a gentleman who was installing the honey exhibit of one of the western States, that the California commissioners had a large show case, such as are set apart for the States and countries that desire to make an apian exhibit of the product of the beehive, set apart for California; that they had to pay \$250 for this case, and that they had it nicely lettered with the name of our State. This was all the State or even the general managers did to have the greatest honey State of America represented at the exposition. There our great long honey and beeswax case remains unfilled and unused. Those who see it wonder what it is there for.

New York has a honey show that it well might be proud of; even some of the States that are not of half of the im- of California, have very creditable exhibits. From present appearances it is more than likely that some of the States or Canada, which already have their exhibits in place, will carry off the prizes for honey and other products owing their origin to the honey-bee.

The non-appearance of a California honey exhibit is not the fault of the apianists of this State, for during the winter they made application to the California commissioners for the means to make a respectable honey exhibit; they were informed by the commissioners that if they wanted to make such a showing they would have to make it at their own expense.

When the members of the California State Bee-Keepers' Association heard this reply to their request they decided to do nothing in the way of an exhibit; and it is more than probable that the State will not occupy the grand show case that so conspicuously bears its name in golden letters. It is not too late yet to make a display, for this year's honey—that is not later, I believe, than June's—can be placed in the exhibit. I trust that the palm for fine honey won't be allowed to pass away from California on account of the meanness of the aforesaid commissioners.

I will not pass the honey side of this question without saying that the first honey sent east this year was from Alameda county, and it was left at the office of the *American Bee Journal* in Chicago, for one of the managers of a certain county exhibit to call for and place it in his county's exhibit. It remained there three weeks, and up to the time of my leaving the city of the big fair it was still uncalled for. This gives but a single instance of how things have been mismanaged. All the time these men are drawing the people's money—money from the county funds appropriated by the supervisors that their county might be properly represented at the fair. I shall not go further into the injustice of this manner of doing things.

Then, I was unable to find any of our wool at the fair. As a wool-producing country we are not a bit behind the rest of the world. We can show about as fine fleeces as one could well desire to see. But these samples of our wool are not to be seen at the World's Fair, at least, I could not find them, and on inquiry, I was told that we had none there. Now, if this is not a great injustice to our State, I don't know what is.

There are a few other things which we might have had represented, if the right sort of brains were brought into use at the fair. It will not be necessary to multiply cases. The above will suffice to show that our State is not as well represented at the Columbian Fair as Californians who have any interest in their State could wish for.

We are making a pretty fair exhibit of native stones and minerals, preserved fruits and oranges, native woods and a few other things; many of our staple crops and commodities are not shown at all, and if shown, they are of such insignificant size as to proportions and quality that they will not attract that attention which they should. Anything Californian should be done on a scale gigantic—this is the way

to call attention to our products. Southern California understood this, for we find the counties which are allowed to be designated as "Southern California" making a grand display of their oranges. These oranges are the talk of the fair. These exhibits of oranges from the lower part of the State are not confined to one building but are to be found in several. The oranges from our State are so fine when shown beside the Florida oranges that the latter are "not in it," to put it in the slang language of the day.

Just see what an impression we would have made upon the world if we were to have formidable arrays of our wool, honey, beet sugar, salt, etc., at the fair. And we could have had it if our commissioners had gone about getting up an exhibition in the proper manner.

If we are to have a winter fair here, let us have the right sort of men take charge of it. Let them not be a lot of men who care more for the amount of patronage there is in the affair for their relatives and lady friends than they do for the State. Politics and patronage are things which should be kept out of the management of fairs, as well as churches.

W. A. PRYAL.

North Temescal, Cal., June 29, 1893.

POULTRY YARD.

Sulphur Process of Preserving Eggs.

The *Poultry Keeper* recommends the following method of preserving eggs. In the beginning it should be said that eggs so packed in a box as to permit them to be turned over daily will keep twice as long as those not so treated. By packing them in a box with oats for a filling, and then turn the box upside down, a large number can be turned at once. Another point is that eggs from hens that are confined in yards without the companionship of cocks keep better than under the reverse conditions, or rather, infertile eggs keep better than those that are fertile. Supposing the reader intends to try one dozen eggs as an experiment, one of which is to be broken each month for a year (of course a large number may be used if preferred) we will give the sulphur process: "Taken a common starch box with a sliding lid. Put the eggs in the box, and upon an oyster shell or other suitable substance, place a teaspoonful of sulphur. Set fire to the sulphur, and when the fumes begin to rise briskly shut up the lid, make the box tight, and do not disturb it for half an hour. Now take out the eggs, pack in oats, and the job is done. If the oats or packing material be subjected to the same process it will be all the better. If a barrel full is to be preserved, place the eggs in a tight barrel two-thirds full, with no packing whatever. Fire a pound of sulphur upon a suitable substance, on top of the eggs in the vacant space over them, shut up tightly, let stand an hour, and then take out the eggs. As the gas is much heavier than the air it will sink to the bottom, or, rather, fill up the barrel with the fumes. In another barrel or box place some oats, and treat in the same way. Now pack the eggs in the oats, head up the barrel, and turn the barrel every day to prevent falling of the yolks, using each end alternately, and they will keep a year; or, according to the efficiency of the operation, a shorter, or even a longer time."

It will be seen from the above that the process is a dry and neat one, and very inexpensive, sulphur being a very cheap article. The process was sold several years ago by certain parties in Cincinnati as "Ozone," but it is an old one, and the parties were exposed, not that the process was a fraud, but because they sold a pound of sulphur for \$2 as ozone.

Green Food for Fowls

When I began taking care of poultry I had not read any article about the benefit that clover was to them, says "Country Gentleman." It is only in the last few years that the poultryman's attention has been called to its usefulness as a food to help hens in the formation of eggs. I commenced using it the first season I had the care of poultry through observing the hens night and morning picking in the clover field not far from the house, and, concluding it must be good for them, I plucked it by hand until it was high enough to mow with a scythe, and I prepared it for their use by rolling it up in a wad and with a sharp knife slicing it off about half an inch long, holding the clover and cutting down over the edge of a board as one would cut dried beef. It used to take me some time to prepare enough for 200 hens, but now, with a clover-cutter, it is only a few minutes' work. I think it very necessary to have it cut short, for I fed some once about three inches long to some game roosters in coops that had not had any green food in a number of days, and they gorged themselves so that I lost two valuable ones. One I saved by opening his crop and taking out the contents and then sewing it up. He came out all right. The clover was all wadded up and would have surely killed him; so I have been very careful ever since. I have followed gardening the last 20 years in connection with poultry, and when weeding in my vegetables I keep a wheelbarrow near and whenever it was filled I wheeled it to my hens, and it is astonishing how many weeds a flock of hens of from 200 to 350 can utilize. It is a good deal better to let the hens turn them into a fertilizer than to pile the weeds up in a corner as some gardeners do and let them rot down. The wheelbarrow I used had a tire on the wheel about 3 1/4 inches wide, and I could wheel it in the garden over soft ground. I think it is just as necessary to have some kind of green food for fowls as any other ration, and for winter I have usually put all my soft heads of cabbage that were not salable where I could get them at any time and have fed a great many every winter. When these were gone I have fed malt sprouts from the breweries and consider them very good. Prof. Steward says they are very nitrogenous.

HORTICULTURE.

An Australian in a California Orchard.

[Mr. Fred C. Smith, horticultural representative of the South Australian government, has been making systematic investigation of California fruit culture during the past six weeks. At the request of the *RURAL PRESS* he has furnished us a copy of one of his first letters to Australian papers. It tells of a visit to the great orchard of Mr. Frank Buck, near Vacaville, and is altogether so interesting and is such a clear and intelligent statement of the methods of a successful fruit-grower, that we present it in full.]

Here, in California, the busy fruit season has begun. Cherries and all the small berries are being canned, and early peaches and apricots shipped East to the great cities. You will be in the middle of pruning and will shortly, or, where necessary, should be doing your spraying. This letter will deal principally with those two subjects, as being most opportune. California, as the majority of our Australian growers know, is by far the most progressive and enterprising fruit region in the world.

One of the foremost of its fruit-growers, both in intelligence and in the size of his orchards, is Mr. Frank Buck, of Vacaville, some 60 miles north of San Francisco. This district, extending some miles up a narrow valley to Winters, contains about 12,000 acres of fruit trees and vines, though the latter are gradually being superseded by fruit trees, owing to the phylloxera. Being the earliest district of the State, it is able to pack and send fresh fruits very early and to great advantage to the Eastern States. The earliest apricots here are the Pringle and Newcastle. These should ripen in Australia, in early situations, during November, or even before. They are, however, much too small for canning or drying, and the former is a clingstone. The Royal is the great apricot of the State, setting better, ripening more evenly and earlier than the Moorpark and Blenheim, perhaps the two next best in favor though a little smaller in size. The Centennial cherry is a very fine fruit, but apt to split or crack. The old Napoleon Bigarreau is undoubtedly the great standard cherry in the State for canning and shipping.

The orchards of this valley consist principally of prunes (*Petite Prune d'Agen*), pears (*Bartlett*), peaches and apricots.

Mr. Buck has over 1000 (one thousand) acres of orchard, and is said to make more per acre per annum than any other large orchardist in the country. The reason is, that he personally supervises every operation in the orchards or the packing-rooms and spares no time nor expense to have everything done thoroughly. It is for these reasons that I have decided to describe some of his methods, particularly of course where they could be followed to advantage by our Australian growers. One of the first things that struck me was the remarkable uniformity in the pruning, bearing and shape of his peach trees; so different from those in far too many of the orchards of our country, where the trees are allowed to grow up, too often, with long bare branches and a bunch of twigs at the end. Mr. Buck treats his young trees up to the third and fourth year much in the same way as we do, but after he has got them into the shape he intends them to grow, he cuts the previous season's growth back half way, thins out (as a rule) every other twig on the branch and cuts those left back by a half. He showed me whole blocks of 12-year-old trees, bearing a heavy uniform crop right through and well clothed with spurs and foliage to within three feet of the butt. I was hardly astonished when he told me that his most expert Chinese pruners could not get over more than eight or nine of such trees in a day, while the average was six or seven per day per man. In reply to my remark that in very many places in our country the profitable and consistent bearing life of the peach appeared to be from the third to the eighth or tenth year, he stated that in the eastern peach-growing States, and in some parts of this State, the very same idea was entertained. He felt sure that by a proper pruning this idea would soon disappear. He assured me that peach trees, with him, bore regularly and well long after their twelfth year. Another feature of Mr. Buck's peach culture is the evenness of size and shape of his fruit. This is the result of careful thinning.

I passed by blocks of nectarine and peach trees with thousands of fruits lying under the trees as if a hurricane had passed over them. It takes as long to thin the trees as it does to prune them. His rule in thinning is, roughly, to leave a hand's breadth between each fruit on the wood. The result is in every way preferable to the system of over-cropping so often pursued with us. Though he gathers less fruit in number, he gets superior quality and weight and far more money for the crop than if he had not thinned.

In addition to this, his trees having less drain upon them, are in better condition for the following season. The reproduction of its species is the highest form of energy and most exhaustive of any living thing, and where, as it has been stated it takes several times more of the amount of the vital force of a tree to mature the kernel of its fruit than the outside pulp, the common sense and value of thinning will be readily understood.

Again, as Mr. Buck observed, where the twigs are thinned out and kept well clipped back, the enormous number of blossoms usually to be seen upon a peach tree, is largely reduced and the setting of the fruit greatly helped. He thins both apricots and peaches before the kernel has become white and firm, and while still watery, as he holds that after that the mischief is done. Pointing to some trees that were shedding immature fruit, he said:

"We have occasionally to take the risk of the tree doing that after we have thinned, and then it looks as if the man who lets things take their course and does not thin, will get ahead of us. Where the season has been exceptionally wet and there is plenty of moisture in the soil to support the tree and perfect the crop, he may do so, but in quite three seasons out of four the careful gardener comes out on top, and it pays well to consistently prune and thin every year and take no chances."

The buyers who come early in the season to contract for the future crop will hardly look at a heavy, unthinned tree,

It costs Mr. Buck \$30 (£6 1s 1d) per acre per year for the combined work of pruning and thinning alone, but then he averages over four tons per acre per year at \$40 (£8 1s 1d) per ton sold to the cannery and a great deal more than that for what he sends East. Here are a few facts of remarkable yields of peach trees on the Buck orchards. Seven acres of Salways produced 102 tons of fruit one year at \$90 per ton, \$9000, or over 1800 pounds sterling. From 91 trees of Alexander's Early, upon one acre of ground, he one year took 2630 16-pound boxes of fruit, or more than 19 tons. Big figures, though, prove of very little use except as curiosities.

I noticed that some of the peach trees had curl leaf and found that they had been forgotten during the spraying time. Most of these trees were so badly effected that the crop had all fallen.

Mr. Buck is an enthusiastic believer in spraying and some years back spent thousands of dollars experimenting with different washes and mixtures to try and kill the San Jose scale, an insect pest that for some time threatened the orchards and their owners with absolute ruin. Now, by the use of the lime, salt and sulphur mixture this deadly enemy is no longer feared; though one spraying in the winter just before growth commences, is applied as a preventive, and this particular mixture has proved to be a capital combined insecticide and fungicide. I mentioned that in the experiments conducted by myself and others as a committee on behalf of the Agricultural Building of South Australia the "Bordeau mixture" had proved a perfect preventive of curl leaf. This he was glad to know, because the lime, salt and sulphur mixture is very much more tedious and difficult to make than the Bordeaux. I found that, right through this State, spraying is looked upon, where necessary, as simply one of the ordinary operations of orchard work, and that years ago just the same sort of suspicion of and prejudice against it prevailed here as at present is the case with comparatively few exceptions throughout the colonies. I have been a strong advocate of spraying in South Australia, but am, if possible, now more convinced than ever of the immense value of judicious spraying to Australian orchardists. Mr. Craw the State Entomologist of California tells me that there are only two diseases or pests known here, which are fatal to the production of trees, or rather vines, which have as yet defeated all the efforts of science to find a cure, and they are "phyloxera" and another and mysterious disease on vines in the southern part of this State. In face of the fact that hundreds of tree and vine pests are known here and all but these two are as yet incurable, we should be far more advanced in our knowledge and practice in this matter than we actually are, in Australia.

Mr. Buck had tried, among other things, "Kerosene Emulsion" and "Resin Compound." The former he condemned as being too expensive, dangerous and uncertain, and the latter, though good, was not absolutely effective. He uses the lime salt and sulphur mixture successfully for the "pear phytoptus" or mite, which is particularly partial to the Bartlett.

In the Vacaville valley, Chinese or Japanese are usually employed, and they work for \$1 per day and keep themselves. In some places they receive the same wages as Europeans, viz.: \$1 and their keep. Mr. Buck cultivates his orchard, after the plowing, five or six times during the season, and the ground round the trees is hoed up to a distance of one or two feet with pronged hoes. The lands are then finally rolled with a roller with iron teeth all round it, which breaks up the clods and does not pack the soil down too tightly. This implement he calls a clod-crusher, and it certainly does the most perfect work I have ever seen. Wherever the butts of his trees are too exposed to the sun by being too tall or from part of the top having been cut back for grafting, or budding, a thick coat of white wash is applied to about 3 feet from the ground. He pointed out some pears that he had budded to Bartletts. These had been cut back, half at a time, and the other branches left till the buds were a year or two old. By this means, he saved a crop of good fruit all the time. The buds grew slowly enough to grow strong and not blow off, and the roots had plenty of outlet for their sap instead of throwing up innumerable suckers. Incidentally he stated that he had dried the worst and smallest of his Bartlett pears, and that they were really the only pear worth drying. This agrees perfectly with my own experience in the matter. We went from Mr. Buck's pear orchard into a neighbors, and the contrast in the matter of pruning was very marked. The former cut well back even into the old wood and the trees were well laden in the centre and on limbs well able to carry them. The latter were not pruned, and in consequence already bending down hundreds of their branches though the fruit was not more than one-fourth grown, and as the Bartlett wood is brittle, one can imagine the state of the trees when next pruning season arrives.

I can as yet see no difference between what we in South Australia call "Duchesse d'Angouleme," and the Victorians call "Williams Bon Chretien," and the Bartlett—in every respect they appear to be one and the same. Mr. Buck has 70 acres of these pears. He had a contract with a cannery for 5 years to supply Bartletts at 2 cents (or one penny) per lb., none to be delivered smaller than three to the pound. After the sixth year the average crop per tree per annum was 100 lbs. His pears are planted upon some of the richest soil in his property, but a common saying there is, if you have soil that pears or myrobalan (cherry plums) will not grow in, no other fruit tree will thrive there.

To illustrate the striking difference between careful and careless cultivation. Mr. Buck drove me over to a 15-acre block of apricots planted by him 4 years ago, which in their fifth year were 12 to 16 feet high and loaded with fruit. In the third year (1891) he took \$500.00 and last year \$2000.00 worth of fruit from that tract, and expects to take more this year. On our way back we drove through a 10-acre block of apricots planted the same season; but the owner had sown almonds and peach pits between the rows and had not properly cultivated it. Last year he got no apricots worth speaking of, and very little for his young

stock, and this season he has sold the little fruit on his stunted trees for \$25.00 (five pounds sterling.)

A very noticeable feature of the fruit industry here is the absence of small orchards, with a few trees of each of several dozen kinds of fruits in them, as we see too often in Australia. "It doesn't pay" as one man remarked when showing me his ten acre garden all planted to the best sort of prune, "I can have the fruit all picked and handled and dried or shipped off fresh in the shortest possible time and do other work after." If Australia is to have a large foreign trade with her fruits, there must be a large enough number of trees planted of the sorts best suited for that market, to be able to send large shipments of uniform quality, size, flavor, etc. No one here would think of planting Coe's Late Red Damson and scores of other really second and third rate fruits. A first rate fruit must be fit not for jam and pie-making only but for drying and canning too, and must be healthy and prolific also. The inferior pears, peaches, plums, apricots and apples must be grafted to sorts best fitted for two or three uses. Possibly the jam-making industry in the colonies has had unwittingly no little part in the present state of things, because as long as growers could get any sort of price from the factories they would not cut their trees back to work them and so lose two or three years in some cases.

The tinning of jams is hardly known here, and only a small quantity of whole fruit jam sold in glass jars. The most progressive men here and those who most carefully study the markets, both domestic and foreign, pooh-pooh the cry of over-production, which is at regular intervals here and indeed everywhere else.

Mr. Buck is making pear, peach, apricot, prune and table grape growing pay well on land that cost him \$600. per acre. Think of it, you Australians, with land every bit as good, to be bought for from \$25 to \$100 per acre. What you want is to know what to grow for the foreign markets, and know how to grow and handle it, and make it fit for competition with the very best in those markets.

FRED C. SMITH.

San Francisco, June 29, 1893.

Shrinkage in Dried Fruits.

Mr. Adams' article in the RURAL of June 24th opens up a very important and interesting question, and it is to be hoped that others will contribute further results of experiments until the table already begun can be extended to cover a full line of fruits and vegetables with the accuracy required in choice business estimates.

When the Alden process was introduced, twenty years ago, tables were carefully prepared showing the shrinkage of different kinds of fruit and vegetables. If any one has any of the pamphlets or circulars left they may serve as a guide, until better and more accurate data are at hand.

The writer kept a close account for two seasons of almost every kind of fruit and vegetable grown in the vicinity of Vacaville. The books are in Iowa, but he can remember some of the data. Some Hale's Early peaches yielded only 7½ per cent of pared fruit, while the general average was 12½ per cent for pared peaches and 16½ per cent for unpared peaches. The larger fruit was pared and the smaller unpared. At that time there were very few or none at all of the Muir, Susquehanna, Salway, and many others that have since grown famous as drying peaches.

Probably a season's run in that section, at this time for a factory that did not start before Imperials and McKeitt's ripened, would show as high an average yield as 15 per cent for pared peaches and 20 per cent for unpared. If they slipped the peel off when loosened by sulphur, they would realize a still better yield on the pared fruit. It is very likely that first-class Muirs would run as high as 25 per cent.

Apples and pears yielded an average of 12½ per cent. Had account been kept of separate varieties it would have been likely to show as much variation between Red Astrachan and Roxbury Russet as between 8 and 15 per cent. Onions yielded 10 per cent., potatoes yielded 25 per cent., tomatoes yielded 7 per cent. These latter were the small early varieties then grown at Vacaville for the San Francisco market. It is probable that some of the more solid meat varieties lately introduced would yield at least 10 per cent. Currants, blackberries and raspberries were then dried in considerable quantities. A large concern was built at San Lorenzo, mainly to supply a market for the currants which were then beyond the demands of the market as fresh fruit. Almost everything eatable was dried in an experimental way, and goods were taken at prices to justify the hope that a permanent trade might be built up in most articles. The price of rights and machinery generally loaded down the factories with so heavy a capital that it was impossible for them to buy fuel and compete with the results realized from sun drying, especially after the introduction of the sulphur process made the appearance of sun-cured fruit equal to the evaporated. With such machinery as is now used in curing raisins, operated upon a line of fruits and vegetables planted with a view to furnishing a long and constant supply for the machinery, and operated by a firm prepared to use the means necessary to introduce the products to the trade, it is quite probable that success might now follow where failure has pointed out the way.

For Destroying Moths.

Mrs. Kerrick, of Sanger, recommends burning rags saturated with turpentine in pans attached to stakes, at an elevation above the vines and trees, as efficient in attracting and destroying the moths that deposit the eggs that produce cutworms. They fly during the early part of the night when warm weather approaches. Perhaps some cheaper and more efficient material might be provided, but it seems as though this idea might be extended to plans for destroying much insect life.

A Point in Running Harvesters.

Upon asking Mr. Clark, of Reedley, why he had three mules in the lead of his harvester team, he replied that when hitched in that way the off mule walked in the track

made by the leader wheel, and so guided the team that the machine always cut a full swath and kept a steady motion without turning from a straight line. This was one of many useful points that he had learned in running a Houser Harvester for eight years, and it seemed strange to think that all others had not adopted the same plan.

FRANK S. CHAPIN.

To Take in More Fruit Growers.

TO THE EDITOR:—Campbell Fruit Growers' Union has just decided to increase its fruit-drying plant to more than double its present capacity. Enough stock will be sold, in addition to that already placed, to cover the cost. All those now wanting stock can be accommodated provided the stock to be placed will go around. A portion of the stock can be paid for out of the returns from the present fruit crop, which gives the incoming stockholders a little advantage over the old stockholders since the newcomers get the benefits before fully paying for them.

The June drop has been a very heavy drop of apricots, and the end is not yet. Some of the half crops of apricots are more than half gone. What is left will be worth something.

Peaches are dropping but not so badly, but the prunes thus far give no evidence of dropping.

The Directors of the Fruit Exchange hold regular meetings on the first Saturday of each month.

The Fruit Exchange building is being pushed rapidly to completion.

Santa Clara County has put a man into the field to gather fruit to be exhibited at the Columbian Exposition for a time, and then sold for account of the grower who furnished it.

The financial flurry seems to have come and gone.

Offers of 5½ cents for the 4 sizes, new crop of prunes, are being made freely but holders are not disposed to consider a price so low. Some business could be done at 6 cents f.o.b. A few sales of choice apricots at 10½ cents f.o.b. are reported from the southern part of the State. It is thought that most of these have been made by buyers who have sold short. What they will have to pay to fill their shortage will be determined later. It now looks as though it would be considerable more than they will get.

Campbells, June 28, 1893

CAMPBELLTIE.

Kerosene Emulsion and Lice.

Some of our readers desire us to repeat the kerosene emulsion, which formula we have frequently given. There are several methods given, the following being according to Prof. Riley:

Soap..... Half pound.
Kerosene..... Two gallons.
Water..... One gallon.

Use hard soap, cut into slices, and boil it in the water until the soap is dissolved. Add the boiling solution of soap (away from the fire) to the kerosene, and churn the mixture by means of a force pump and a spraying nozzle for five or ten minutes. The emulsion, if perfect, forms a cream which thickens on cooling, and should adhere without oiliness to the surface of glass. Dilute, before using, one part of the emulsion with nine parts of water. The above formula gives three gallons of emulsion, and makes, when diluted, 30 gallons of wash. A frequent cause of failure is the attempt to form an emulsion churning together a small quantity of kerosene and a large quantity of diluent. Only a very unstable compound is thus formed. The very essence of the process requires that the oil shall be broken down by driving into union with it a smaller, or at most, an equal quantity of the emulsifying solution; after which, if a genuine emulsion is formed, it may be diluted to any extent with water. No insecticide is equal to the kerosene emulsion against lice. It is much more important to make the treatment thorough than to have a strong emulsion. A two per cent emulsion is as strong as ever need be used against plant lice if the application be thoroughly made. Much weaker emulsions have given good results.

Prices for Packing Raisins.

The California State Raisin-Growers' Association has formulated a basis of prices for packing raisins, as follows:

London layers, 40 cents per box; plain paper, 35 cents; extra loose 25 cents; plain loose, 22½ cents; loose, extra for facing, 10 cents; stemming and sacking, \$7.50 a ton; 20 cents added for half boxes and 50 cents for quarter boxes.

The packers agree not to pack or put up in boxes any layers except clusters and the two grades of London layers.

Reports must be made daily to the State executive committee of all sales made, etc. Commissions 5 per cent, and Eastern brokerage not to exceed 2½ per cent.

No raisins shall be sold for prices less than those fixed and determined upon by the executive committee.

Twenty-five cents per ton must be paid on all raisins purchased or handled outside of members of the association.

The packers will pay the association for its support \$1 for each car-load shipped.

The pack on each grade must be uniform.

The recent meeting of the association at Fresno was somewhat inharmonious, the executive committee, consisting of Messrs. Gordon, Narris and Motheral, withdrawing. At the next meeting a definite plan of action will be determined upon.

Cure for Curl Leaf in Peaches.

R. C. Kells of Sutter states that a certain and positive cure for curl leaf in peaches has been discovered. Spraying with lime, sulphur and salt has demonstrated beyond all question that curl leaf can be readily and cheaply cured. Mr. Cutts at Marysville took a number of trees he sprayed portions of. The lower half of the trees, fully sprayed with the lime, sulphur and preparation, were bright and clean and free from any sign of curl leaf, while the upper half of the same trees were seriously injured by this disease. An expert who examined the trees thinks that spraying with sulphur alone would fully answer the purpose.

Seeds, Plants, Etc.

AN INVITATION

IS EXTENDED TO ALL INTERESTED TO VISIT THE SAUSAL FRUIT FARM DURING THE FRUITING SEASON, WHERE ALL VARIETIES ARE TESTED THAT ARE GROWN AT

NAPA VALLEY NURSERIES.

AN INSPECTION OF THE NURSERIES ALSO SOLICITED. CLEAN STOCK, UNIRRIGATED, PROPAGATED FROM BEARING TREES.

LEONARD COATES, NAPA, CAL.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrobalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

OLIVE TREES.

ALL KINDS OF
Nursery Stock.

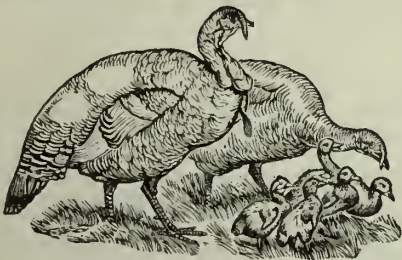
Send and get book on Olive Culture.

HOWLAND BROS.,
Pomona, Cal.



HEADQUARTERS
For Rare new Tropical fruit and ornamental plants and trees. Palms, Ferns, Orange Trees, Pineapples, Bamboos, Aquatics, Etc.
Plants safely shipped everywhere. Send stamp for new and full catalogue which tells all about this subject.
REASONER BROS
Oneco, Fla.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular
E. FOUGERA & CO.,
30 North William Street, New York.

THE American Bee Journal,



(Established 1861.)
IS Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample.
\$1.00 BEE-BOOK FREE

GEO. W. YORK & CO., 56 Fifth Ave., Chicago, Ill.

BEE-KEEPERS' SUPPLIES.

Doveetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

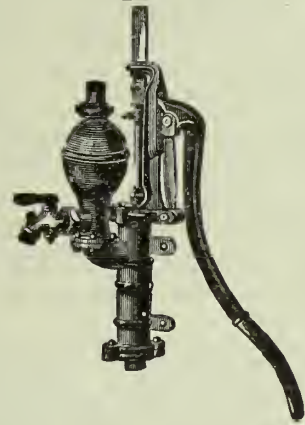
WM. STYAN, San Mateo, Cal.

CALIFORNIA If you want to know about California and the Pacific States, send for the **PACIFIC RURAL PRESS**, the best illustrated and leading Farming and Horticultural Weekly of the Far West. Trial, 6c for 3 mos. Two sample copies, 10c. Established 1870. DEWEY PUBLISHING CO., 720 Market St., S. F.

STEEL OR WOOD WINDMILLS.



PUMPS, PIPE,
Pipe Fittings,



Tanks,
Brass
Goods
—AND—
Hose.

Be Happy While You Live, for
**You Will Be A Long
Time Dead**

To Be Happy Buy a
DANDY STEEL MILL

AND A
Dandy Steel Tower.
With graphite boxes the
Dandy Wind Mill Re-
quires No Oil for Years,
therefore
No More Climbing Towers
No More Tilting Towers
to break down
and injure you or your cattle.
Needs no attention and is
warranted to last longer than
other mills that are oiled, and
Will Be Sent to Good Par-
ties on 30 Days Test Trial.
If not satisfactory freight will be
paid both ways. The **Dandy**
Steel Tower is a **Four**
Corner Tower, the corners
being made out of heavy angle
steel. The girts and braces
are very strong and substan-
tial, and of the very best steel
made. It is the most graceful,
strong and durable tower on
the market, and can be erected
in one-half the time of a
wooden tower. We will not
allow ourselves to be under
sold.



TRY OUR

GRAPHITE BEARINGS

ON DANDY MILLS.

PACIFIC MANUFACTURING CO.

575 MISSION STREET, SAN FRANCISCO.

BETTER THAN EVER!

P & B Fruit Dryer

RAPID—SAFE—CHEAP.

WRITE FOR SAMPLES AND CIRCULARS.

PARAFFINE PAINT CO., 116 Battery Street, San Francisco, Cal.



PROTECT YOUR TREES
—WITH—
GILMAN'S TULE TREE PROTECTOR.

Cheapest, Best and Only One to Protect Trees and Vines
from Frost, Sunburn, Rabbits, Squirrels, Borers and Other
Tree Pests.

For Testimonials from Parties who are using them send
for Descriptive Circulars.

B. F. GILMAN,
Sole Manufacturer of Patent Tule Covers,
420 NINTH ST., SAN FRANCISCO, CAL.



GEM STEEL WIND MILL

WITH GRAPHITE BOXES.
Never Requires Oiling or Climbing of Towers.

Guaranteed more durable without oil than other mills that are oiled. Practically, these mills require no attention. TRULY A GEM, and worth its weight in Gold. It combines beauty, strength, durability and simplicity. Govers itself perfectly, is easily erected and is sold on its merits; in fact, it is the best mill on earth. They are geared back three to one—the wheel making three revolutions to one stroke of pump—making them run in the lightest wind or breeze. The mill is made entirely of Steel and Cast Iron. Each one of our Gem Wind Mills is warranted. If not satisfactory, freight will be paid both ways and money refunded. We also carry Pumps of all kinds, Tanks, Pipe Fittings, Hose, Etc.

WOODIN & LITTLE, San Francisco, Cal.

GRANGERS' BANK

OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 800,000
Dividends paid to Stockholders.... 720,000

OFFICERS.

A. D. LOGAN.....President
I. O. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

General Banking. Deposits received, Gold and Silver.
Bills of Exchange bought and sold.
Loans on wheat and country produce a specialty.
January 1, 1893. A. MONTPELLIER, Manager.

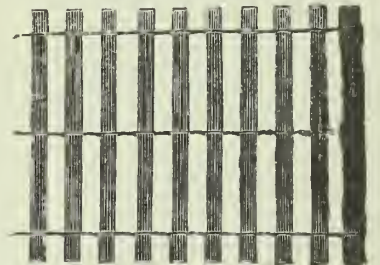
RABBIT-PROOF STOCK FENCE.

Cheap, Durable and Effective.

Pickets colored red by holding in a chemical paint to preserve the wood. We make it 2 ft., 2 1/2 ft., 4 ft., 4 1/2 ft. and 6 ft. high. Send for circulars and price list to

JUDSON M'FG CO.,

12 & 14 Fremont St.....San Francisco.



The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE. -
STOCKTON, CAL., Dec. 19th, '92.

DR. B. J. KENDALL CO.
Gentlemen:—Having read one of your Treatise on the Horse and seeing the Spavin Cure advertised, I thought I would try it. I had one horse with a prominent Spavin of 12 months standing. I removed it with a hot iron. I tied up one fore foot on same side the spavin was and compelling the horse to rest on lame leg while I took a surcingle and drew it across the hock or spavin until the hock or spavin got very warm with the friction, then putting on Spavin Cure. I had a mare that had a running from her nose for 12 or 14 months. I rubbed the Spavin Cure from her eyes down to nostrils, then from back of jaw bone down under the throat for a week. I have not seen any discharge for two months.

Yours truly,
Price \$1.00 per bottle.
HUGH McDADE,
DR. B. J. KENDALL CO.,
Enosburgh Falls, Vermont.
SOLD BY ALL DRUGGISTS.

STOCK SCALES

4 TON \$45.

U.S. STANDARD. FULLY WARRANTED.

Delivered at your R. R. Station and ample time for building and testing allowed before acceptance.

OSGOOD & THOMPSON, Binghamton, N. Y.

PORTABLE PLATFORM SCALES,
TRUCKS, ETC.

Twenty-five per cent cheaper than any other on the market. Send for Catalogue.

C. H. LINDEMANN, Agent,
126 KEARNY STREET, SAN FRANCISCO.

BACK FILES of the PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes) \$4. Inserted in Dewey's patent binder 50 cents additional per volume.

THE HOME CIRCLE.

A Grocery Oracle.

Oh, I've heard Daniel Webster, an' he spouted like a good 'un,
An' the rippin', roarin' ravin' of the slam-bang
Rufus Choate,
But for undiluted elerklunce an' intelchul pudd'n'
Sam Pickering at Blancom's store jest gethers in
my vote.

With jolly and gogefry and rifeetick he rastles,
An' he grahs the cyclopedy an' he slings it fair
and flat,
An' he rings up all the sciences an' flings 'em
roun' in pannels,
For the reservoy of wisdom spouts frum jest
beneath his hat.

He knows the Presidents' messages from Wash-
ington to Grover,
An' the eighteen-ninety census, he can say the
hull thing over,
The congressional reports lie packed inside his
brain,
An' then jest turn it back'ards an' say it once
again.

An' we all gether rcun' to get the drippin's of his
knowledge,
An' we drink it in an' like it ol' an' young an'
great an' small,
'Tain't no good to go to high school or to waste
four years at college,
Or to take the county paper, for Sam Pickering
knows it all.

Oh, I've heard Daniel Webster, an' he spouted like
a good 'un,
An' the rippin', roarin' ravin' of the slam-bang
Rufus Choate,
But for undiluted elerklunce an' intelchul pudd'n'
Sam Pickering at Blancom's store jest gethers
in my vote.

—Sam Waller Foss in the Yankee Blade.

The Little Arm Chair.

Nobody sits in the little arm-chair,
It stands in a corner dim;
But a white-haired mother gazing there,
And yearningly thinking of him,
Sees through the dusk of long ago
The bloom of her boy's sweet face,
As he rocks so merrily to and fro,
With a laugh that cheers the place.

Sometimes he holds a book in his hand,
Sometimes a pencil and slate,
And the lesson is hard to understand,
And the figures hard to mate;
But she sees the nod of his father's head,
So proud of the little son,
And she hears the word so often said,
"No fear for our little one."

They were wonderful days, the dear sweet days,
When a child with sunny hair
Was hers to scold, to kiss and to praise,
At her knee in the little chair.
She lost him back in the busy years,
When the great world caught the man,
And he strode away past hopes and fears
To his place in the battle's van.

But now and then in a wistful dream,
Like a picture out of date,
She sees a head with a golden gleam
Bent over a pencil and slate.
And she lives again the happy day,
The day of her young life's spring,
When the small arm chair stood just in the way,
The center of everything.

—Margaret E. Sangster in Harper's Bazar.

California Flowers at the World's Fair.

[Written for the RURAL PRESS by LAURA B. EVERETT.]



O, NO, it will not do when
one talks of flowers. "Her
poppies fling a cloth of gold."
One quotation leads to an-
other, and Ina Coolbrith,
Lillian Shuey, E. R. Sill and
a dozen others stand ready to give us poetic
words to describe California's flowers.

Do they really need description? Not
when one can see them, or their perfect
likenesses, gathered into a Flower Congress,
as has been done in the California building.
The room opens upon the upper gallery,
from which it is separated by burlap curtains
that hang from the oak-branch fresco below
the words:

WATER COLOR COLLECTION
CALIFORNIA WILD FLOWERS
FROM
S. F. WOMAN'S WORLD'S FAIR
ASSOCIATION.

The matting on the floor is light green,
and the walls, painted to match, are wreathed
with grapevines and festooned with leaves
and with oak-tree moss. The flower paint-
ings, in plain frames that take nothing from
the beauty of the pictures, are a very well
chosen selection of California's blossoms.
If words could bring the flowers before the
reader, it would be worth while to name

them over. So rarely, however, are the cor-
rect names used that many fail to recognize
blossoms that are entirely familiar.

A young artist was heard lamenting that
so few children are familiar with the correct
names of plants. "I asked a little girl what
flowers grew over in the field, and she said,
'Candlesticks and blankets, and rat-tails and
ladies' watches.' Her father said reproving-
ly, 'Can't you tell them so we shall know
what you mean?' 'That's all the names
they've got,' said the little girl, and no won-
der she was so positive. She had never
heard others. Yet I am sure that a child
who remembers 'Harkasi, quartisi, quin-
derum, quee' (a line of the counting-out
rhyme) would have no trouble with *calo-
chortus* or *mimulus*. The suggestion of
color in the first name and the meaning of
the second (monkey-face) will hardly be
needed by the child of nine or ten, for until
the age of twelve, sometimes beyond it, the
word-learning faculty is most active.

Without, however, adopting the long
names, children may use intelligent terms.
Mariposa lilies is not hard to remember.
We find these represented, as we enter at the
right hand of the flower-room, by two groups,
the second containing *brodiaea* and harebells.
"California's Flower," the largest picture in
the room, shows every variety of our wild
poppy (*eschscholzia*). Of the room devoted
to this flower, more anon. Familiar buckeye
waves its feathery spikes near the iris (ant
lily), and beyond is the tiger lily in a family
group. Five varieties of thistles, delight of
a Scotchman's heart, are neighbors to the
common lobelia and several colors of gilia,
one being our little cream-cup.

Convolvulus, the wild morning-glory that
strikes terror to the farmer's heart while it
strikes its roots deep into his best soil, is
here also. It looks as innocent as the col-
umbine, maonanita, pipe-vine and azalias
among which it hangs.

The mosquito-bill (*dodocatheon*) is most
natural. Do you want to know a scientist's
way of telling it from the cyclamen (culti-
vated)? Volney Rattan points out that the
wild flower has the protruding nose or bill
not possessed by the garden flower. "The
wild variety," he says, "is the *dodocatheon*;
cut off its nose and it becomes a *sickly
man*." If Prof. Rattan can thus play with
the weighty names, we need fear them less
than we do.

We can have no long-name objection to
the pitcher plant, and, as one of the curiosi-
ties of the vegetable kingdom, it interests
every one. Another rare plant from a high
altitude is the snow plant of the Sierras.
There is a pretty Indian legend telling that
this edelweiss of the New World was once
a dusky maiden, who, to escape an unwell-
come suitor, became the *sarcodes sanguinea*
of the mountains. Perhaps she would have
gained a more poetic name had she adopted
that of the young brave who sought her.

For "blue eyes" (*nemophila*) and violets
and larkspur and the others that are more
or less familiar to you according as you live
in northern, central or southern California—
for these, what? Praise for the selection,
praise for the painting; and whom shall we
praise? What is this work? The vacation
sketches of some young artist? No, it is a
life work. May we not say so when forty
years have been devoted to it? The artist,
Marianne Mathieu, an Englishwoman, be-
gan her work at Napa. Her present home
is in San Francisco. And her collection of
wild flower paintings? "The finest at the
World's Fair," that is what is said of it.

Bits of Wisdom.

A young girl once heard a bit of wisdom
from the lips of a very aged woman—a wo-
man who had rounded the full terms of 90
years, and with eyes still bright and clear
looked out on the inrolling waters of eter-
nity. The girl was impressed by the empha-
sis with which the venerable dame said to
her, "Bessie, never insist on having the last
word." The determination to have the final
word leads to more quarrels and more bit-
terness of feeling at home than almost any-
thing else in domestic life. The fact is,
that one may so control her tongue and her
eyes that she may allow her opponent the
pleasure of this coveted concluding thrust
and yet placidly retain her own opinion, and
in the homely colloquial parlance of the up-
country, where one finds strong-willed peo-
ple living together in great peace with the
most pronounced diversity of characteristics,
"do as she's a mind to."

Another bit of wisdom may be condensed
into a pithy sentence. Avoid explanations.
In some families every decision, every new
departure, every acceptance or rejection of
an invitation, must be endlessly talked and
fussed over, explained and re-explained. In
that way life all sorts of stumbling-blocks.
As a rule, beyond your parents or husband
there is nobody who has the right to demand
of you explanations at each step of your on-

ward path. Don't give them. Establish a
reputation for keeping your own counsel. It
will serve you well in many a crisis, and be
no end of a comfort.

Again, don't be forever setting people
right. There is a household fiend with a
memory for dates and details, who can never
sit still and hear papa say he went down
town on Monday, at eight, without correct-
ing the statement with the remark that the
hour was half past. If mamma happens to
allude to Cousin Jenny's visit as having oc-
curred last Thursday, this wasplike imper-
sonation of accuracy interposes with the
statement that it was Friday, not Thursday,
which brought Cousin Jane. A dozen times
a day exasperating frictions are caused by
needless corrections of this sort, referring to
matters where exactness is not really impera-
tive, the affairs in question being unimportant,
and no violation of truth being for an
instant intended.

A manifest bit of wisdom is to refrain
from criticism of food. The sauce may
not be quite piquant enough, the salad may
be wilted, but in the name of decency say
nothing about it in either case.

Silence is golden in nearly every instance
where a defect obtains in the home economy.
To abstain from superfluous apologies is
also the habit of discretion. There should
seldom be the occasion for apology in the
household, where all would do well and
wisely to be constantly gentle and courteous.

Gems of Thought.

Where a book raises your spirit, and in-
spires you with noble and courageous feel-
ings, seek for no other rule to judge the event
by; it is good, and made by a good work-
man.—De la Bruyere.

You despise books—you whose whole
lives are absorbed in the vanities of ambi-
tion, the pursuit of pleasure, or in indolence;
but remember that all the known world, ex-
cepting only savage nations, is governed by
books.—Voltaire.

As the inheritance of an illustrious name
and pedigree quickens the sense of duty in
every noble nature, a belief in pre-existence
may enhance the glory of the present life,
and intensify the reverence with which the
deathless principle is regarded.—William
Knight.

Do you think that you can think selfish,
avaricious, lustful, uncharitable, revengeful,
deceitful or cruel thoughts and nobody know
it? Well, indeed, you cannot. Everything
that comes to you in your life is either the
result of your own thoughts or the thoughts
of some person or persons by whom you are
influenced.—Anon.

In books lies the soul of the whole Past
Time—the articulate, audible voice of the
Past, when the body and material substance
of it has altogether vanished like a dream.
No magic Rune is stranger than a book.
All that mankind has done, thought, gained
or been, is lying in magic preservation in
the pages of books. Do not books still ac-
complish miracles as Runes were fabled to
do? They persuade men.—Carlyle.

Out of Plato come all things that are still
written and debated among men of thought.
Great havoc makes he among our originali-
ties. We have reached the mountain from
which all these drift boulders were detached.
The Bible of the learned for 22 centuries,
every brisk young man who says fine things
to each reluctant generation, is some reader
of Plato translating into the vernacular his
good things.—Emerson.

A Lesson to the Students.

"Gentlemen, you do not use your facul-
ties of observation," said an old professor,
addressing his class. Here he pushed for-
ward a gallipot containing a chemical of ex-
ceedingly offensive smell. "When I was a
student," he continued, "I used my sense of
taste," and with that he dipped his finger in
the gallipot and then put his finger in his
mouth. "Taste it, gentlemen, taste it," said
the professor, "and exercise your perceptive
faculties." The gallipot was pushed toward
the reluctant class, one by one. The stu-
dents resolutely dipped their fingers into the
concoction and, with many a wry face,
sucked the abomination from their fingers.
"Gentlemen, gentlemen," said the professor,
"I must repeat that you do not use your
faculties of observation, for had you looked
more closely at what I was doing you would
have seen that the finger which I put in my
mouth was not the finger I dipped in the
gallipot."—Medical Record.

Irrigation Beneficial.

The fact that portions of California have
been under irrigation for a quarter of a cen-
tury, with no concomitant of fever or ague,
argues against the baseless theory of attend-
ant diseases. In this, as in other matters,
care should be taken to avoid the mistake of

assuming as cause and effect what is merely
a coincidence. On the whole there is much
cause for congratulation on the progress
which irrigation has already made, hope for
its spread in the future, and no reason to
fear that its effect will be deleterious to the
health of the community.—Exchange.

Daniel Webster Did Not Know It All.

During a debate in Congress in 1838, upon
a measure to establish a post route from
Independence, Missouri, to the Columbia
river, Daniel Webster said: "What do we
want with this vast, worthless area, this
region of savages and wild beasts, of deserts,
drifting sands and whirlwinds of dust, of
cactus and prairie dogs? To what use could
we hope to put these great deserts or those
endless mountain ranges, impregnable and
covered to their very base with eternal snow?
What can we ever hope to do with the west-
ern coast, a coast of three thousand miles,
rock-bound, cheerless, uninviting and not a
harbor on it? What use have we for such a
country? Mr. President, I will never vote
one cent from the public treasury to bring
the Pacific coast one inch nearer to Boston
than it now is." But Daniel Webster did
not forecast the discovery of gold in Cali-
fornia ten years later, or near Pike's Peak
in 1859. Gold has been to the settlement
of the Pacific coast and to the opening of
the Rocky mountains what the illusions of
life are to us all. They lead us to different
but greater things. The real wealth of Cali-
fornia and of Colorado is in the harvest of
their fields, but it required the glittering
attractions of gold and silver to bring in the
populations which were to find independence
and wealth in prosaic husbandry.—Watch-
man, Boston.

Incorrect Sayings.

A remarkable instance of the way in
which a word may be changed or even
mutilated is found in the expression "jerked
beef," which is a ready English substitute
for "charqui," the Peruvian word for meat
cooked in smoke or "jerked." Such a
liberty taken with a foreign word may readily
be pardoned when so happy in result, but
the necessity for changing "lustrine," a
French word for silk, into "lustrering" may
be questioned, seeing we have many words,
such as "lustre" and "lustrous," from the
same root. But there is no accounting for
fancies. The well-known phrase "Every-
thing is lovely and the goose hangs high"
is always misquoted. It should read:
"Everything is lovely and the goose honks
high." This saying originated away up in
the Northern States, where, in rainy, foggy
or stormy weather, it is a well-known fact
that the geese fly low—skimming over the
house-tops. In fine, pleasant weather you
will remember that they fly in long strings
so high in the heavens that their peculiar
cry, "Honk, honk," can scarcely be heard
on the earth below, hence the old saying
that everything is lovely when "the goose
'honks' high," and not "hangs high," which
is a most nonsensical perversion of the
original old New England saying.

Ignorance of Military Rank.

At the beginning of the civil war a great
many people were quite ignorant of the
pomp and splendor of military rank and the
importance of military titles. Their igno-
rance led to many amusing incidents, one of
which is told in connection with Gen.
Hardee. It was at the time that Albert
Sidney Johnston was in command at Bowl-
ing Green, Ky., and Gen. Hardee was or-
dered with his command to that place from
Columbus, Ky. At that time the bridge
over the Tennessee river at Danville, Tenn.,
had not been completed, and the General
and his command had to be ferried over the
river to cars on the opposite side. When
Gen. Hardee had crossed the river—sup-
posing, of course, that a special car had been
provided for himself and his military staff—
he accosted a brakeman belonging to the
train with the question: "Where shall I
and my staff go?" The brakeman, having
no idea who the General was, or of what his
staff consisted, after surveying him and his
sword thoroughly and somewhat contemptu-
ously, replied: "You can go into the car
there, and you can stick your old staff out of
the window."—Chicago Journal.

Moon and Barometer.

The influence of the moon on the barom-
eter is dealt with by Mr. Bornstein in a
recent article in the *Meteorologische Zeit-
schrift*. He refers to the question as to
whether there exists any relation between
the pressure of the atmosphere and the
altitude of the moon. This study is based
upon observations made at four different
stations in Germany and Austria, and does
not take into account the phases of the
moon or the distance from the earth, but

considers merely the lunar day. The results obtained are: First, that the variations of pressure do not indicate any atmospheric tides, and second, that at three of the stations the pressure shows but one oscillation during the lunar day. At Berlin and at Hamburg the maximum takes place a little before the moon sets, and at Vienna, at the moment of least culmination, whereas the minimum takes place, at all the stations, at the moment of the moon's rising.

Money In Times Past.

India, cakes of tea.
China, pieces of silk.
Abyssinia, salt.
Iceland and Newfoundland, codfish.
Illinois (in early days), coon skins.
Borneo (Africa), cotton shirts.
Ancient Russia, skins of wild animals.
West Indies (1500), cocoanuts.
Massachusetts Indians, wampum and musket balls.
Virginia (1700), tobacco.
British West Indies, pins, snuff and whiskey.
Central South America, soap, chocolate and eggs.
Ancient Rome, cattle.
Ancient Greece, copper nails.
Lacedonia, iron.
Burmah, lead.
Russia (1828 to 1845), platinum.
Rome (Numa Pom.), wood and leather.
Rome, under Cæsars, land.
Carthage, leather.
Ancient Britons, cattle, slaves, brass and iron.
England (James II), tin gun-metal and pewter.
South Sea Islands, axes and hammers.
Ancient Jews, jewels.
Africa, shells.
Holland (1573), pieces of pasteboard.
China (1200), bark of the mulberry tree.—Philadelphia Justice.

Taking the Husband's Name.

The practice of the wife assuming the husband's name at marriage, it is said, originated from a Roman custom, and became the common custom after the Roman occupation. Thus Julia and Octavia, married to Pompey and Cicero, were called by the Romans Julia of Pompey and Octavia of Cicero, and, in later times, married women in most European countries signed their names in the same manner, but omitted the "of." Against this view may be mentioned that during the sixteenth and even at the beginning of the nineteenth century the usage seems doubtful, since we find Catherine Parr so signing herself after she had been twice married, and we always hear of Lady Jane Grey (not Dudley) and Arabella Stuart (not Seymour). Some persons think that the custom originated from the Scriptural teaching that husband and wife are one. It was decided in the case of Bon vs. Smith, in the reign of Elizabeth, that a woman by marriage loses her former name and legally receives the name of her husband.

To Make Washing Blankets Easy.

If one has a suitable place for the purpose, the washing of blankets may become an easy matter. In an open space have a line tightly stretched out of doors. To this fasten the upper edge of the blanket. Have strips of cotton sewed to the bottom at intervals; tie these to pegs, which drive well into the ground. Now turn on the hose. Cold water, of course, and plenty of it. Drench the blankets well on both sides. If much soiled, rub spots with soap, and drench again. The force of the stream will do more than wringing. After the article is quite clean, leave it to dry; never mind if it does rain; if the work has been done thorough it will not streak, but be all the better for it. When the sun has completed the task, you will possess blankets as white, soft and unshrunk as new, and the nap will not be destroyed.—Ladies' Home Journal.

Letting in the Sun.

I think the superb health of my family is to a great extent due to the habit we have of almost living in sunshine. Every bright day all of the shutters are open, and the entire house gets the benefit of sunlight. It drives away dampness, mold, microbes and blue-devils, and puts us all in good humor and health. I cannot imagine good sanitary conditions and darkness. Even my cellar is as light as I can possibly make it, and whatever fruits and delicacies need to be shut away from light I put in close cupboards or covered boxes. I have sheets of canvas that can be thrown over them before they are put away, and always take pains to so arrange my stores that nothing will injure by an abundance of light. People who live

in badly lighted apartments have little color and less health. I for one do not intend to spend my days in an atmosphere of gloom.—New York Ledger.

Good Advice to Young Women.

There is nothing so certain to make you disliked as to tell your troubles to a friend. Prosperity means friendship, but once you take it into your head to retail your woes, you will soon discover that your company is not wanted, and the people who once bowed to you in pleasant recognition now walk on the other side of the way with a cold and stony glare that looks over your head or through your body, but never meets your eyes as of yore.

The people are not hard-hearted that turn the cold shoulder to you. They are only averse to knowing of any more misery than they already have to bear. We every one of us have our little troubles. In some cases they grow to be very large ones, and it isn't pleasant to have the dark side continually thrust before us just when we begin to feel a bit comfortable in our minds over some unpleasant occurrence that has upset us for a time.

Take a bit of valuable advice, and when you feel like telling some one of your spat with your intended, or how low your finances are, just remember our warning and don't do it. Your mother, your father and your husband are the truest sympathizers, and, outside of them, you are certain to be soon called a bore if you persist in your harrowing confidences.—Philadelphia Times.

Children's Sleep.

The amount of sleep needed by children is in inverse proportion to their ages, and in direct proportion to their mental and muscular activity. Thus, the younger the scholar is, and the more actively he exercises mind and body, the more sleep he requires. During the whole period of growth the child needs a longer night's sleep than does the adult. Many parents seem to be entirely unmindful of this fact, and the requirements of some schools which necessitate or encourage more home study equally disregard one of the prime requirements for the present and future welfare of the child. The bloodlessness, weakness and hysterical excitability that characterizes the young lady of modern life, who is neither well nor ill, are due mainly to her bad habit of taking too limited a supply of sleep at irregular hours.

Fathers of Great Men.

George Washington's father was a farmer. Shakespeare's father was a wool merchant. Lincoln's father was a farmer and a poor laborer. The father of Martin Luther was a peasant and a woodman. Virgil's father was a porter, and for many years a slave. Demosthenes was the son of a sword-smith and blacksmith. Benjamin Franklin was the son of a soap-boiler, and was himself a printer. Daniel Webster was the son of a farmer in very humble circumstances. Christopher Columbus was the son of a weaver and learned that trade. John Calvin was the son of a cooper, and helped his father in this humble calling.

Clergyman and Baker.

A clergyman in Scotland desired his hearers never to call one another liars, but when any one said the thing that was not true they ought to whistle. One Sunday he preached a sermon on the miracle of the loaves and fishes, and being at a loss how to explain it, he said the loaves were not like those nowadays; they were as big as some of the hills of Scotland! He had scarcely pronounced the words when he heard a loud whistle.

"Who is that," says he, "ca's me a liar!"
"It is I, Willy McDonald, the baker."
"Well, Willy, what objection have ye to what I ha' told you?"
"None," said he; "only I want to know what sort o' ovens they had to bake those loaves in?"—New York Ledger.

Children's Foods.

Tea, coffee, beer and other stimulants should be wholly excluded from the dietary of young children. Food eaten without relish is not so likely to be beneficial to the system. Food should not be restricted to a purely vegetable diet, but meats and other animal products should be given in moderation together with cereals, vegetables and fruits. Dr. Fothergill says: "There is much reason to hope that ground cereals and milk will again become the favorite food for children, and the taste for fats will be revived. When that day arrives, the death-rate from tubercle, especially among the young, will be materially lowered."

YOUNG FOLKS' COLUMN.

The Drum.

O the drum!
There is some
Intonation in thy grum
Monotony of utterance that strikes the spirit dumb,
As we hear
Through the clear
And unclouded atmosphere,
Thy palpitating syllables roll in upon the ear!

There's a part
Of the art
Of thy music-throbbing heart
That thrills a something in us that awakens with a start.
And in rhyme
With the chime
And exactitude of time,
Goes marching on to glory to thy melody sublime.

And the guest
Of the breast
That thy rolling robs of rest
Is a patriotic spirit as a Continental dressed;
And he looms
From the glooms
Of a century of tombs,
And the blood he spilled at Lexington in living beauty blooms,

And his eyes
Wear the guise
Of a purpose pure and wise,
As the love of them is lifted to a something in the skies
That is bright
Red and white
With a blur of starry light,
As it laughs in silken ripples to the breezes day and night.

There are deep
Hushes creep
O'er the pulses as they leap,
As thy tumult, growing fainter, on the silence falls asleep.
While the prayer
Rises there
With the sea and earth and air
As a heritage to Freedom's sons and daughters everywhere.
—James Whitcomb Riley.

Up the Ravine.

ABOUT 1 o'clock in the morning the settler whose cabin was on the Little Colorado river, under the shadow of the Mogollon mountains, aroused me from sleep and gave me the news that the Apaches had crossed the stream both above and below and were advancing on the house. He and his son, the latter a boy of sixteen, had been out scouting. My left arm was in a sling from a recent wound, but I had ridden thirty miles the day before to warn him and others that the band of redskins were making for Mexico by that route, burning and killing whenever opportunity offered.

There were the settler and his wife, the boy above mentioned, a girl of ten, another of eight and a boy of five or six. In addition, there was a little boy four years old, whose parents had been killed by the Indians about a month before. It was decided that we should get into the ravine in the rear of the house at once. The man and wife and youngest child went first. His boy and the two girls followed, while I, having charge of the little orphan, brought up the rear. All the children were awakened, and there was fear that the two little boys would betray us by crying out. Before starting, I whispered to Tommy:

"The Indians are coming, but if you keep still we shall get away all right. You will ride on my back. We are going among the brush and trees where it is very dark. If I fall down or the limbs switch your face, you must not cry out."

"No, me no ky out!" he whispered, as I bent down for him to climb on my back.

I heard the clatter of the ponies on the hard road as I left the back door, and was only fairly concealed by the cedars when the Indians began yelling and battering at the door. The others had such a start that I could not overtake them. And, too, they turned into the first ravine on the right, while I kept straight on. A dozen times I almost fell headlong, and a dozen times the boy was brushed almost off my back. I felt that he was crying, but very quietly. Perhaps he

feared I suspected him, for as I stopped to take breath he drew himself up and whispered in my ear:

"Me no ky out and make Injuns come!"

The redskins did not fire the house, as it would have been a beacon light to their pursuers, but they smashed everything breakable, took what they wanted, and, after about half an hour, continued on their way. I reached a point a mile from the house and then sat down on a rock in the deep ravine to pass the rest of the night. I took Tommy on my lap and hugged him closely, but no words were exchanged. After awhile I thought he dropped off to sleep, and I was getting a bit drowsy myself when I suddenly heard a bear coming down the ravine. The click of his claws on the stones was proof that it was a bear, and his heavy step signified that it was a big one. I could not see my hand six inches away, but pretty soon I got the odor of the bear.

The ravine was about thirty feet wide, and I was sitting close to the west wall. Bruin came down sniffing and growling, and just opposite me he stopped, and doubtless had a good, square look at the invaders. I had lost my revolver in my flight, and was perfectly helpless. I simply shut my eyes and waited for the attack. It did not come. The bear sniffed and growled for a while, and then took a sudden panic and started down the ravine. I was drawing long breaths of relief and feeling glad that the boy in my arms had known nothing of the danger when he suddenly reached up, drew my head down, and whispered in my ear:

"He went 'woof!' 'woof!' but I no ky out and bring Injuns!"—New York Sun.

DOMESTIC ECONOMY.

CHOCOLATE LOAF CAKE.—Cream one cup of butter, add 2½ cups of sugar and beat to cream. Beat the yolks of five eggs light, add to butter and sugar, with one cup of milk and three cups of flour. Beat until smooth, then add the whites of the five eggs beaten to a stiff, dry froth, and two teaspoonfuls of baking powder. Mix lightly and gently as quickly as possible, and add two teaspoonfuls of vanilla and one-half of a cake of chocolate, melted. This seems to be a very difficult cake to make, and by putting in the melted chocolate last, it is not only mixed throughout the cake better, but avoids the heavy dark streaks. Bake in a moderate oven.

CREAM PUFFS.—Put one cup of water and one-quarter of a pound of butter over the fire to boil. As soon as it is boiling stir in one cup of flour, stirring until it is perfectly blended and cooked, and the paste leaves the sides of the pan forming a ball. Stand away to cool. When cool, add five eggs unbeaten, one at a time, beating until each egg is well mixed in the dough before adding the next. Beat vigorously for two minutes and let stand in a warm place for 15 minutes, stirring occasionally. Drop with a tablespoon on buttered tins forming little cakes some distance apart. Bake in a quick oven 15 minutes. Watch carefully and try by picking them up, for if done they will be perfectly light. When cold make an opening on one side with a sharp knife and fill.

TOMATO FRICANDEAU.—Get some slices of veal cutlets, pound and wash them, season them with pepper and salt, and fry them slowly till they are done. They should be of a light brown on both sides. Stew some tomatoes very dry, strain them through a sieve to get out all the seeds, pour the pulp into the gravy after the meat has been taken out, and thicken it with a piece of butter rolled in flour. Pour this over the meat and serve it hot.

FRIED CHICKEN.—Clean and wash it well, and with a sharp knife cut it open in the back. Dredge with flour, pepper and salt. Put equal quantities of butter and lard in a hot frying-pan. Then put in the chicken and keep it well covered until brown on both sides. The secret of a nice fricassee is in having plenty of hot lard or butter.

Highest of all in Leavening-Power.—Latest U. S. Gov't Report.

Royal Baking Powder
ABSOLUTELY PURE

HAY PRESSES.

Eli Challenge Full Circle.
Champion Full Circle.
Junior Monarch.
Petaluma.
Miller Lightning.
Ingersoll's.

ECONOMY HOP PRESSES.

Write for prices and get full particulars.

WE ARE HEADQUARTERS
On Hay Presses and Haying Tools.

BALE YOUR HAY WITH T. H. & CO.
BALE TIES.

TRUMAN, HOOKER & CO.,
San Francisco and Fresno.

HAY PRESSES.

The Monarch, Junior Monarch, and other kinds of Presses, made by the Celebrated Hay Press Manufacturer, Jacob Price, for sale by

L. C. MOREHOUSE,

San Leandro, Cal.



CHOPPERS ATTENTION!

ASK FOR THIS AXE.
USE NO OTHER.

Wood-choppers, try the Kelly Perfect Axe. It will cut more wood than any other axe.

The scoop in the blade keeps it from sticking in the wood, and makes it cut deeper than any other axe. Ask your dealer for it. Send us his name if he don't keep it. It is the Anti-Trust Axe.

Kelly Axe Mfg. Co.
LOUISVILLE, KY.



REGULATE THE
STOMACH, LIVER AND BOWELS,
PURIFY THE BLOOD.

A RELIABLE REMEDY FOR
Indigestion, Bilelessness, Headache, Constipation, Dyspepsia, Chronic Liver Troubles, Dizziness, Bad Complexion, Dysentery, Offensive Breath, and all disorders of the Stomach, Liver and Bowels.

Ripans Tablets contain nothing injurious to the most delicate constitution. Pleasant to take, safe, effectual. Give immediate relief.

Sold by druggists. A trial bottle sent by mail on receipt of 15 cents. Address:

THE RIPANS CHEMICAL CO.,

10 SPRUCE STREET, NEW YORK CITY.

ALAMEDA STEEL WIND MILL.



10, 12 and 14 ft.
Cheaper than any First-Class Mill in the market.

Every One Guaranteed.

No bearings, no springs, no wheels to get out of order. The simplest mill in the world.

10-foot..... Write

12-foot..... for

14-foot..... Prices

Agents Wanted

— ADDRESS —

TRUMAN, HOOKER & CO., San Francisco or Fresno.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos. A. Carey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

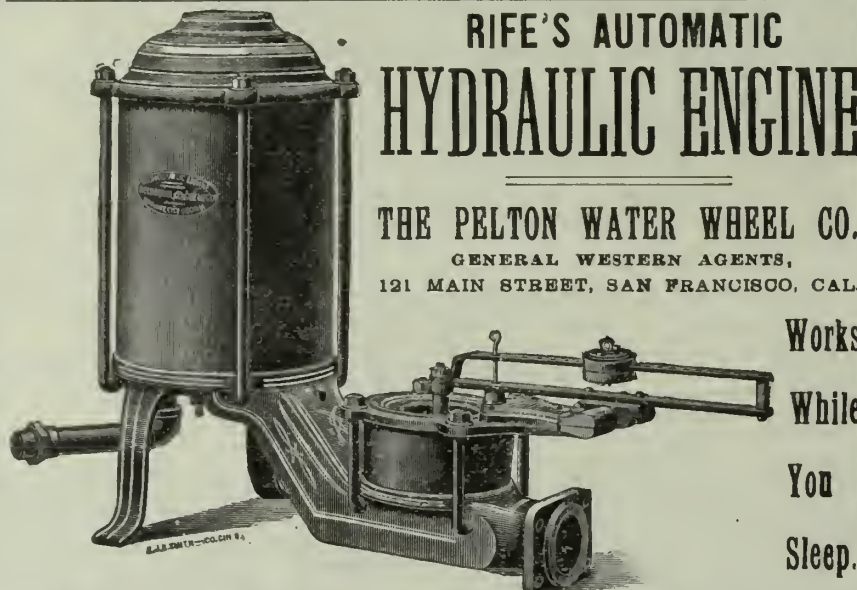
The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St., San Francisco.

STEVEN'S FRUIT CASE!

A notable invention of the Columbian year, for transporting California's fresh fruit to market. Look into it! It is worthy of trial! Its advantages truly stated are: Fruit can be picked later and riper; requires no wrappers; no decay from pressure, bruising or rubbing; the ventilation is absolute and positive; it grades and counts the fruit in the carrier; fruit all open to inspection; no rehandling or repacking at destination; no skilled labor for packing. Gives the grower all the advantage arising by arrival of his fruits in markets ripe, sound, luscious and attractive, instead of half ripe, bruised or decaying. It isolates each piece of fruit by double, elastic walls, with air spaces between, over and around it. It is not an untried quantity. Messrs. Brown & Wells, of California Market, San Francisco, say: "We have made shipments of green fruit in it to Honolulu, Panama, Boston, New York, Philadelphia, Australia and Arizona, and have received report to the effect that the fruit arrived in perfect condition. We believe it is surely destined to become in the near future the universal package for short or long distance shipments." Nothing to equal it for fine apricots, peaches, plums and pears. Will carry fresh figs successfully. Carriers now ready for delivery for apricots. Send in early orders to insure supply.

PRICE (for ordinary standard package) \$15 00 per hundred, including outside and inside cases. Call on us or send for circulars.

STEVENS FRUIT CASE CO., 307 Front Street, San Francisco,
Agents for the Pacific Coast.



RIFE'S AUTOMATIC HYDRAULIC ENGINE

THE PELTON WATER WHEEL CO.
GENERAL WESTERN AGENTS,
121 MAIN STREET, SAN FRANCISCO, CAL.

Works
While
You
Sleep.

THE RIFE HYDRAULIC ENGINE is the most simple and efficient machine yet devised for elevating water for irrigation, filling railroad tanks, supplying mills, factories, dairies, stock yards, country residences, small towns, and for various other purposes. This ram is self-operating, constant in action, and is not only much more efficient than anything of the kind ever put upon the market, but from absence of wearing parts, more durable and every way reliable. Many may be referred to that have run for years, elevating water in some cases from 100 to 300 feet without any attention or expense in the way of repairs.

These machines have already come largely into use in all parts of the country, and are rapidly superseding every other device for the purpose. They will work effectively under a head as low as two feet and for every foot of fall will elevate 20 feet. By means of an adjusting lever the capacity of any of the various sizes can be reduced 50 per cent or more, as may be desired, to provide for a variation in water supply, without disadvantage or loss in efficiency.

WATER RAISED AND WASTE.—The fall from the spring, stream or other source of supply to the engine determines the height of which the water can be elevated, as well as the relative proportion between the water raised and wasted, the quantity raised varying according to the height it is carried and the distance conveyed. For ordinary purposes it is sufficient to say that with a discharge pipe 1000 feet in length, one-sixth of the water can be raised and discharged at an elevation five times the height of fall or one-twelfth ten times the height of fall.

Parties writing for information should give the quantity of water that can be supplied to the engine, either in gallons, cubic feet or miners' inches; the head or fall from source of supply to point where the engine is to be located, length of drive pipe, height to which the water is to be raised, distance from engine to place of discharge and the quantity of water it is desired to elevate. No reliable information can be afforded without an explicit answer to these inquiries.

ARE YOU A

Hay Baler? If so, do you use our Patent

Steel Wire **CROSS HEAD** Bale Ties?

IF NOT, WHY NOT?



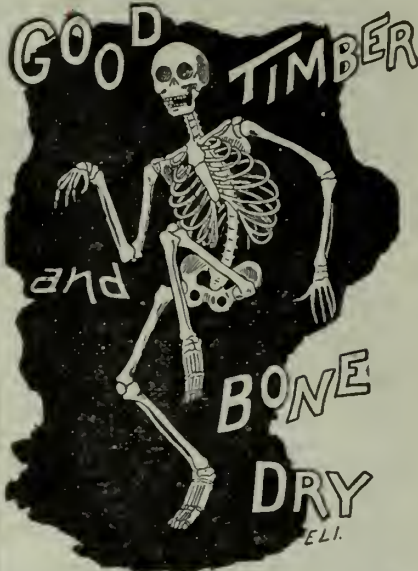
— MADE ONLY BY —

THE WASHBURN & MOEN MFG. CO.

San Francisco Office and Warehouse

8 and 10 Pine Street.

DEWEY & CO.
AMERICAN AND FOREIGN PATENT SOLICITORS
ESTABLISHED 1860.
OFFICE OF THE
"Mining and Scientific Press"
Pacific Rural Press
No 220 Market St.
TAKE ELEVATOR NO 12 FRONT ST.
SAN FRANCISCO, CAL.



RUSHFORD FARM WAGONS

LIGHTEST DRAFT WAGONS
IN THE WORLD.

EVERY ONE GUARANTEED.

TRUMAN, HOOKER & CO.,

SAN FRANCISCO AND FRESNO.

Deep Well Pumps.



The Valves and working parts of the Fulton Pump can be removed, repaired and replaced without taking the pump out of the well.

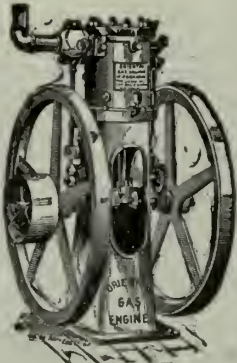
Pumps fitted up for all depths of wells, ready to put in.

Send for Circular and Price List to

A. T. AMES,
GALT, CAL.

MANUFACTURER OF PUMPS AND
WINDMILLS.

THE ORIENTAL GAS ENGINE



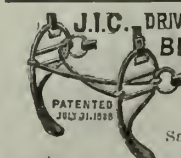
IS THE BEST, because it combines simplicity of construction with power and economy in space. It can be run with natural or manufactured gas or gasoline at a cost of 20 to 25 cents per horse power per day.

It can be used for pumping purposes, as well as for all purposes where a perfect engine is required, with the advantage of lessening the risk of explosion. No licensed engineer at a high salary needed to operate it.

Send for circulars and prices if a good safe engine is what you need.

The Oriental Launch is Perfection.

M. A. GRAHAM,
Inventor and Manufacturer,
105 BEAL STREET, SAN FRANCISCO.



J.I.C. DRIVING STILL LEADS THEM ALL.
IT WILL CONTROL THE MOST VICIOUS HORSE.

75,000 sold in 1891.

100,000 sold in 1892.

THEY ARE KING.

Sample mailed XC for \$1.00

Nickel, \$1.50.

Stallion Bits 50 cts. extra.

RACINE MALLEABLE IRON CO. J. P. Davies, Mgr.



AGENTS \$50 to \$100 — A WEEK.

Ladies or Gents. Best seller known. Needed at every house, place of business or farm.

the year round. "Home" Electric Motor runs all kinds of light machinery. Cheapest power on earth. Connected instantly to wash or sewing machine, corn sheller, pump, fan, lathe, jeweler's or dentist's machinery, &c. Clean, Reliable, Lasts a life-time. No experience needed. To show in operation means a sale. Guaranteed. Profits immense. Circulars free.

W. G. HARRISON & CO., Columbus, O.

AGRICULTURAL NOTES.

CALIFORNIA. Butte.

Honnet Graphic: Last week V. Gianelli of this place shipped five carloads of barley. One car was shipped to J. J. Smith of Oroville, one car to V. Giovanetti of the same place, and three cars to J. R. Garrett of Marysville.

Biggs Argus: The importance and magnitude of the fruit interests to this country can begin to be realized when it is known that the orchard men estimate that upwards of 200 carloads of green fruit will be shipped from Biggs this season, about 50 carloads of dried fruits, almonds, etc., and at least 100 carloads of nursery stock. This does not include the crop of Reed & Johnson, who will ship fully 100 carloads of green fruit and considerable nursery stock.

Biggs Argus: A. L. Preble, who will have about 4000 boxes of peaches to ship from his three-year-old orchard this season, left a box of the fine Alexander variety on our table this week. He has but six acres in peaches, which, for three-year-old trees, prove the value of his young orchard. Some of these trees this year have produced 20 boxes. Besides his peach orchard, Mr. Preble has 34 acres in other fruits—nuts, berries and vines—consisting mostly of pears, apricots, grapes and blackberries. This young orchard will bring in a neat income this year.

Biggs Argus: A. F. Stoudt and family, who arrived last winter from Dakota and took charge of the Daniel Streeter place, on Feather river, about five miles southeast of town, have proved themselves good farmers. Mr. Stoudt planted five acres of potatoes just after taking charge of the place, from which patch he has shipped one carload to Omaha, one carload to Marysville, and will have two carloads ready for shipment in a few days. A carload consists of about 180 sacks or 18,000 pounds. Four carloads equal 720 sacks or 72,000 pounds. Of the potatoes raised on the patch above mentioned, two have been weighed in our presence, the largest weighing 4½ pounds. How is that for potatoes?

Colusa.

Willows Journal: Mr. Balaam, of Farmersville, used to have a pet pig that ran under the fig trees near the house. When the fruit began to drop he ate figs and rested in the shade until he finally grew too fat to move about to gather the sweet morsels. By this time his owner became so much interested in the case as to carry him his regular figs three times daily. Gradually he grew so fat that his eyes closed entirely and he was blind and helpless. This story is well substantiated by reliable citizens of Farmersville. Where fig trees grow to such size and produce such enormous crops as they often do in California, this brings to mind the oft-repeated statement that an acre of figs will fatten more hogs than anything.

Fresno.

Enterprise: From the vineyard of Mr. Frank Vietor, near Fowler, we have received some wonderful samples of growth. All fruit is backward this season and grapes especially so, but three bunches of grapes from these six-year-old Muscat vines are respectively 13, 15 and 16 inches long. Though some of the green fruit has dropped, if the grapes remaining had matured the stem would have been solidly covered. From the same vineyard we have three large clusters from one stem less than three inches in length. The vineyard is of six and seven-year-old vines and will average all through fully two trays to the vine. All vineyards in this vicinity, so far as we are informed, are loaded with fruit, and we hear many encouraging things in regard to the promise of better prices.

Humboldt.

Home Journal: Cheering crop prospects are reported in the Blocksburg section. Peach trees there seem to have escaped the blight and are loaded with fruit. An unusually large yield of apples is also looked for.

Kings.

The packing of green apricots for shipment East is about over. Up to date 30 carloads have been sent out of Kings county this season. The drying-houses are busy, and the crop is turning out very well.

Hanford Journal: We saw a small orchard of the Rontier peach-apricot at Mr. Worswick's place, near Grangeville, a few days ago. This appears to be the coming apricot for this soil and climate. It is large, luscious and of beautiful color, and has the advantage of blooming a little later than other varieties, thus avoiding late frosts. We advise those apricot-growers who want to post up to see Mr. Worswick's little Rontier apricot-peach at once.

Kern.

Kern Echo: The indications of abundant crops in the Weed Patch country are being realized by the farmers of that section. Harvesting is going forward at a rapid pace, headers and harvesters doing the work. Within a mile of each other three combined harvesters are at work now, cutting and threshing the grain on about 100 acres per day. Owing to the low price of cereals, most of the grain will be shipped to Port Costa to be stored there until the market shows a more favorable tone.

Californian: A combined harvester is at work on the Miller & Lux ranch harvesting barley that will average between 30 and 40 bushels to the acre. They have about 5000 acres.

Echo: The second crop of strawberries is now coming to market, there are plenty of blackberries and dewberries, apricots are beginning to appear in quantity, early peaches, apples and

plums are ripe and cherries are in market. So one doesn't need to go hungry for fruit.

Californian: S. W. Wible has recently purchased for Miller & Lux a combined harvester with 16 feet sweep, which is now in full operation in the big grain fields around headquarters. It is hauled by 26 horses, over which Capt. Bell, the king driver of the Wild West, holds the reins. Manager Hill instructs the outfit where to go, with the result that from 30 to 40 acres are now being harvested daily, yielding a little over 20 sacks of barley to the acre. There are 5000 acres of barley to be harvested, from which there will be gathered at least 100,000 sacks.

Lassen.

Chico Enterprise: The late cold weather will cause nearly an entire failure in the grain crop this year throughout Lassen county. Fruit and other crops will be about the average.

Los Angeles.

Pomona Progress: Fruit-growers say that some orange groves in this valley have a heavy crop of young oranges on them, while others, especially those which bore large crops last year, have set but little fruit. The experience of past years has been that a young orange crop is very deceptive, and trees that appear to have but few oranges on them when the fruit is small are often found to have a fair crop when the fruit matures. The size of the coming orange crop can be better determined a few months hence.

Monterey.

Salinas Index: S. M. Shearer returned last week from a grain-inspecting trip through the valley. He says he never saw grain finer than it is this year on Three-Mile Flat and in that neighborhood. The Wiley brothers, on the Arroyo Seco, have 1500 acres hard to heat.

Napa.

Register: T. H. Lawson has charge of the blackberry farm of ex-Supervisor Trubody this season. He to-day advertises in our 50-cent column for pickers. From 28 acres he expects to gather 600 chests of 100 pounds each. The Trubody blackberries find a ready market in San Francisco and adjoining counties. It is too soon to say what price will rule.

Register: W. H. Evans' Brown's Valley orchard yielded about 2500 boxes of cherries this season. Fifteen hundred boxes of them were sent East. The prices paid averaged a little above those of a year ago. A carload forwarded to Minneapolis reached that point Wednesday, after being 11 days on the road. This large consumption of time is more than the shippers bargained for, as passenger-train service was expected, and passenger time is five days. The cherries must have been in pretty good order, however, as they sold at the rate of 70 cents per box. Mr. Evans brings to our office a box of Black Tartarians, picked when thoroughly ripe nine days ago and placed on ice. They are spotted with mold, and the question arises: "Is this the usual condition of cherry shipments when they have been iced that length of time?" Ventilation or the lack of it may have something to do with the mold gathering. The skin on the moldy cherry was in each case broken, and too snug packing is probably the fault.

Orange.

Santa Ana Blade: Although the sheep interests of Orange county are somewhat reduced to that of former years, when range was unlimited, yet the sheep and wool products even now cut no small figure in the commerce of the county. There are about 150,000 sheep now in Orange county, the largest owners being L. Moulton & Co. and J. Salaberie & Co. The annual clip of wool amounts to 600,000 pounds.

Anaheim Gazette: A very large acreage was planted to potatoes this year south and west of town, all of which is turning out a big crop. The spuds are now being dug and shipped in large quantities from the railroad depot, giving employment to a large number of men and teams. This one item of our county's agricultural products will form quite an item in carload exports this season, and it is understood that the growers are realizing satisfactory returns.

Santa Ana Blade: The work done by Mr. Oiler last fall in poisoning the squirrels on the San Joaquin ranch has proven of great value. At least one-fifth of the grain crop has in former years been taken care of by these rodents, which, if the same were true this season, would mean the loss of 125,000 sacks. The work done by the old squirrel poisoner, while not permanent, has proven a paying investment. There are not many squirrels to be found now on the ranch, still in a few years they will increase again.

Anaheim Cor. Los Angeles Times: The growing of sugar beets is more in the nature of an experiment with our farmers this year than anything else, yet from present indications it will prove a very successful and profitable one. The "experiment" also, it must be admitted, is being tried on a rather large scale, and some of the figures in relation to it are rather interesting. Something like 1500 acres have been planted to beets in this portion of the county. Ten tons to the acre is said to be a low estimate of the crop, but to haul this crop to the factory at Chico, the railroad company will have to put on a train of 15 cars a day for a period of 100 days; it will require an army of men to harvest the crop, and it will take scores of teams to haul the beets to the depot; lastly, it will bring to this section of the county over \$100,000, and perhaps \$150,000 in hard cash. Truly, this is encouraging for a new industry's inauguration.

Sacramento.

It is learned from a hop-raiser near Perkins that the dreaded fly is thought to have put in an appearance in some of the hop-fields there.

At least, a small fly is eating the leaves full of holes and retarding the growth of the hops. It is to be hoped that it is not the hop fly, which has not up till this time appeared.

San Bernardino.

Chino Champion: The beet crop on the Chino ranch never looked better than it does to-day. Great fields of grain stretching away in every direction betoken a bountiful crop. Most of the work is done until harvest begins, which will probably be about the 20th or 25th of July.

Chino Champion: It is expected that beet harvesting will commence about July 20, depending somewhat on the condition of the weather a week or two previous to that date. Heavy fogs may delay ripening, but if the weather continues clear the beets will probably be ready by that time.

San Diego.

The experiment which Mrs. Carrie A. Williams has been making in raising silkworms for nine consecutive months of the year has been progressing successfully. On its completion, she will report the result to the United States Department of Agriculture at Washington. The eggs laid in May are now hatching.

Santa Clara.

Tree and Vine: Prunes are promising better than we supposed after hearing a good many growers report that they would give only one-fourth of a crop. We rode one whole day and found only two orchards that had so small a crop as one-fourth. All about Campbell's, with the exception of two or three orchards, there is a good, fair crop. If nothing happens during this month, Santa Clara county will be good for an output of 25,000,000 pounds of first-class dried prunes, and the crop of the State will be 32,000,000 to 33,000,000 pounds.

Shasta.

Anderson Valley News: Mr. Pettygrove showed us a prune limb that was cut from a tree in the orchard of Mr. Damou just above town. The limb was about two feet long and there must have been over 100 prunes on it. The yield of prunes and pears will be large in this section.

News: Fred Johns, who was over in the Bald Hills country beyond Oro last week, showed us some wheat in the sheaf that was grown on the Benedict place, now leased by A. W. Baker. The heads were large and well filled, and prove that part of Shasta county a good wheat-raising section.

Anderson Valley News: Major Lyons and H. K. Pettygrove have been busy this week looking up fruit to ship to the World's Fair. They will send 40 or 50 boxes of apricots and early peaches in a few days. The fruit is large and of excellent flavor. Before the Fair is over Shasta county will convince the people in the East that as good fruits can be grown here as anywhere in the State.

Solano.

Dixon Tribune: Grain is now coming into the warehouses in a steady stream. The yield will, however, fall considerably below the usual average.

Dixon Tribune: J. D. Parish has long had the reputation of producing the earliest vegetables on the plains, and the present season is no exception. He had green corn on his table early last week, or before it appeared in the local markets. Corn of Mr. Parish's raising is sweeter and more palatable than the imported article, as we will cheerfully testify.

Sonoma.

Fruit-growers in the Geyserville neighborhood do not look for more than a half-crop of peaches and prunes. They say the pear crop will be almost a failure. The grapes promise well.

Sebastopol Times: A limb from a cherry tree on A. J. Thompson's ranch was left at this office by that gentleman Tuesday. The limb is eight feet long and was loaded with cherries as close as they could be packed.

Stanislaus.

Merced Herald: J. M. Canty, the rustling farmer down by the San Joaquin, this side of Grayson, is one of the citizens of Stanislaus who profited by the big rise in the price of hogs. During the last few months he has sold almost every hog on his place, realizing \$13,000 in the aggregate. A large percentage of the porkers brought him eight cents a pound live weight. J. J. Crossley, the Turlock hustler, has also made considerable money in the same line, selling about all of his own and all that he could purchase in this and Merced counties on terms affording a proper margin of profit. J. J. McDougald, the contractor, speculator and stock-raiser of San Joaquin county, says that hogs can be raised at a profit for two cents a pound live weight. Hogs will rule at substantially the present high rates for another year, if not for two or three years, a material shortage existing throughout the Union.

Tulare.

Times: George W. Francis got 2600 sacks of oats and barley from 400 acres. The two grains were mixed this year. His land is near the foothills where oats seem to thrive best.

The forty-third agricultural district (Tulare and Kings county) will hold its first annual fair and speed contest on October 3d, 4th, 5th, 6th and 7th, the week following the Fresno fair.

The proposition to vote bonds for \$25,000 in the Tulare irrigation district was defeated, there being seven votes short of the necessary two-thirds. It is probable another election will be held shortly, as the district must have expense money.

Tulare Citizen: None could doubt the value of the water of the Tulare irrigation dis-

trict to this city and surrounding country if they could only take a trip south and west, where no water can be had to irrigate the parched grain fields, and then view our fields of golden grain that give promise of so bountiful a yield.

Times: G. A. Botsford has two harvesters and three headers at work on his Kings county ranch, nine miles south of Hanford. He has nearly 3000 acres of wheat to harvest. In the last year he has built about twenty-four miles of ditch on the tract.

Times: I. H. Thomas is back from a visit of several days in Fresno. He drove over and through about 20,000 acres of vineyard while there and says he never saw as good a grape prospect before. The grapes are dropping a little, but there are plenty left.

Yolo.

Democrat: A representative of the Democrat met Mr. A. Shackleton, proprietor of the Victoria vineyard, near Millen Station, Thursday afternoon, and was informed that the present indications were for the largest crop for many years. The berries are the thick on the vines and are already one-third their normal size when ripe.

Capay Cor. Democrat: Hungry Hollow farmers have commenced harvesting and the wheat crop is turning out much better than was anticipated. Newt. Nickle's grain is yielding about thirteen sacks to the acre, and it is of a very superior quality. All the farmers with whom I have talked have the same story to tell of an agreeable surprise in the amount of the yield.

Democrat: J. H. Harlan says his crop on the home place is very fair and the quality is good, but on the Buckeye farm it is very light. He recently went out to that vicinity and saw harvesters running in fields where the yield was not more than four or five sacks to the acre. From all reports, gleaned from the most reliable sources, the Buckeye farmers will fare worse than those of any other section of the county.

Madison Cor. Yolo Democrat: P. Saling, who is farming extensively a few miles south of this place, complains of a very short crop. He says that in eighteen years' experience this is the shortest crop he ever harvested. He thinks that by long years of very hard work he has earned the right to retire from business and spend the remainder of his days in the enjoyment of leisure, but he dislikes that his last year at farming should be such a lamentable failure.

Yolo Mail: F. D. Carsley has remembered this office with a box of Moorpark apricots, which for heauty and flavor excel any samples of that delicious fruit we have seen this season. One of the largest measured 9½ and 8½ inches in its two circumferences. Mr. Carsley's orchard is six years old, located on the rich, alluvial soil of Cache creek, four miles northeast of Woodland. The trees have not been irrigated, yet the yield is uniformly heavy and the quality of the very first order.

Porterville Enterprise: At the meeting of the Horticultural Society last Saturday it was reported that scale had been found on deciduous trees, especially in old orchards. Some time back the society purchased a spray pump to be loaned out at 50 cents a day to members and \$1 to non-members. Before the pump was purchased there was always the cry, "If we only had a pump we could spray our trees." In six months the pump has only been called for once! We would warn our readers that our Horticultural Commissioner has the power, if an orchard is infested with scale, to have said orchard destroyed, and the Porterville Horticultural Society intends to see that this is done. If you find scale on your trees, get the pump and spray them thoroughly.

Mail: Jacob Cunningham, one of Yolo county's farmers who goes through the world with his eyes wide open, saw, a good many years ago, that leading the world's forlorn hope in the wheat industry wasn't the proper caper to be cut by a California farmer, so he began to hedge for the future. A little hole of 40 acres would never count much anyhow, so four years ago he planted out that area in Adriatic figs, almonds and prunes, with a sprinkling of other fruit. Mr. Cunningham told a Mail reporter the other day that he didn't think Yolo county could show a fig orchard that could compare with his. The trees would have borne much fruit this year had not Mr. Cunningham preferred to sacrifice the present for the future and pruned them severely last winter. Next year he expects to reap a harvest, not only from this portion but from the whole extent of his orchard. His place is located 1½ miles northwest of Blacks, and the splendid growth made by his trees shows how admirably the soil is adapted to fruit culture.

Yuba.

Wheatland Four Corners: A run through the hop yards east of town finds the vines in fine condition. Some sections are more forward than usual, and all, except the newly planted, is in fine condition. The new planting is backward, but in the end will pan out all right. The work on the yards is decreasing and the growers are at work on their homes. W. B. Roddan has in the course of erection a fine cooling room which replaces the one blown down last winter. The building is 62x160 feet. It is thoroughly braced, and is probably the strongest cooling room in the State. A double 30-foot kiln has been built adjoining the old kiln, and the cooling room will take hops from the four kiln floors. The foundation for Mr. Jasper's kiln and cooling room has been laid, but further work is delayed by the non-arrival of lumber. Mr. Wood is having an excavation made in the hill-side just south of his old kiln, where he will erect a double fire-proof kiln. The brick kiln from which the material will be

secured will be fired in a few days. On D. P. Durst's place carpenters are busy building a 30-foot addition to the cooling room, while masons are putting up another fire-proof kiln. When this season's improvements on the hop houses are completed the hop country surrounding Wheatland can boast of the best equipped curing houses on the coast.

WASHINGTON.

La Conner Phonograph: Captain Warner while here gave his experience with last year's crop of potatoes. Having planted quite a plot of the "Irish hulb," and fearing they had been touched with frost during the cold spell of several months ago, he offered the entire yield for \$125 to any one who would dig them up and carry them away. Finding no one willing to close in with the offer, the captain allowed them to remain in the ground until a few days ago, when he sold the whole crop, forty tons in all, to one purchaser for \$30 a ton, thus netting a profit of about \$800, over which the captain is feeling quite jubilant.

Reardan Messenger: Last year John W. Denney caused the death of the enormous total of 35,000 squirrels. These are the figures on the county records on which the bounty was paid, and is the champion record for Lincoln county. This does not include any which may have died where their scalps could not be recovered. Mr. Denney's success as a squirrel destroyer has caused much inquiry as to the method employed by him in dealing with the little pest. The *Messenger* has procured Mr. Denney's formula, which is as follows: He finds the most convenient receptacle for preparing the poisoned grain to be a five-gallon oil can, one side of which has been cut open. In this put somewhat more than a quart of water. Then add one ounce of strychnine and put over the fire to boil. There is no necessity for pulverizing the strychnine. Boil until the crystals are dissolved, then stir in half a cup of sugar. When all is dissolved add three gallons of oats, and stir until the mixture is all absorbed by the grain. Then stir in another half cup of sugar. This forms a sweet coating over the poison and disguises it. The poisoned grain should be prepared in the morning and put out at once, as it loses much of its efficiency if kept standing even for one day. Mr. Denney prefers oats to wheat as a vehicle for conveying the poison to the squirrels. He has tried various methods, but finds the one outlined above by far the most effective.

American Tools.

The manufacture of tools in the United States bids fair to surpass that of all other countries, including even England. The American implement is lighter, handier, and is usually made of better material than has been hitherto employed in Europe. The Americans have excellent iron and unequalled wood. (Hickory hammer handles!) The American tool manufacturers appear to have entirely abandoned European traditions, and to have struck out an entirely new path for themselves; hammers, augers, files, sharpening and cutting tools, axes, saws, spades, screws, nails, etc., even the handles of implements, appear to have received quite new forms. In the same way the genius of the American, extremely careful to save all unnecessary labor, uses cast iron far more than it is employed in Europe. A great many machines and parts of tools that we make of wrought iron are there obtained in excellent quality by casting. This has the important advantage that if a part of a machine is broken or worn another exactly similar can be procured by sending to the factory its catalogue number.

The American always endeavors, as far as possible, to economize labor. The blacksmith gets along without the man whom we consider absolutely necessary to hold the horse's leg. There is contained in every American an inventor, a mechanic or an architect. It is marvellous with what simple means they can succeed. As an example of the practical common sense of the Americans, we may instance the following: The mason, who with us considers the cutting hammer an indispensable implement, does not regard it a separate tool in America; there the trowel is made of hardened steel, and so shaped that it is used to cut and break bricks in brick-laying. When one thinks of the time that is lost in changing tools during the construction of a small house, he can see that this makes an important economy. The woodman, for another example, uses the axe far more than the saw, notwithstanding the danger which it involves. The Americans are as economical with labor, and for this reason the repairing of tools and implements plays a less important role than with us.—*Frankfurter Zeitung.*

How Straw Paper Is Made.

A recent visit of a newspaper man to the straw-paper mill at Chillicothe, Ill., results in the following description of how the paper is made, and as the method is very similar to that of making strawboard, the article will be interesting.

Through the courtesy of Mr. James Waterhouse, we started at the straw pile and were

conducted through the various processes to where the finished paper lay bundled for the market. The straw is conveyed on a long carrier from the straw pile to the cutter, which is run by a 25-horse power engine, and cut into small particles, then elevated to the upper story and dropped into two digesters, where it is cooked by the lime process.

These digesters are large iron tubs 24 feet long, 8 feet in diameter, and weigh 80 tons; it requires a carload of lime every week. The hot liquor cooks the straw to a pulp, after which it passes through pipes to a chest on the lower floor and is then pumped through an eight-inch pipe to the washing engine on the upper floor, then back down below to the half-finishing chest, whence it is again pumped up to the upper floor and passes through the coarse grinder and finishing engine, thence to the vat near the rollers, where the liquid is separated from the stock, which is gathered by a fine wire roller and adheres to the felt rollers, where it begins to assume shape. It then passes over a series of rollers at the rate of 96 to 120 feet per minute. It is then carried over 13 large drying rollers that are heated by steam, thence to two stacks of calendars of chilled steel, where the paper is finished and transferred to the reel stand and then passed to the cutter, where it is cut to any required size. It is then received by two boys, who carry it to the table where it is bundled, and the straw pile that you stood by six hours ago lies before you, finished goods all ready for the market.

The paper is manufactured by the Tompkins process. The mill is supplied with the latest improved machinery for making brown straw and colored express paper.

Some idea may be formed of the magnitude of this plant when you realize that the ponderous machinery for its operation weighs 1000 tons, and requires three engines of 140-horse power to operate it, and three immense boilers to generate the steam, and still the power is insufficient. The company will place another engine of 100-horse power in the near future. The steam pump in the valley below the mill raises 500 gallons of water per minute.—*Shears.*

Mrs. M. H. Ober,



PHELAN BLOCK,
816 Market St., S. F.
11 O'Farrell St., S. F.
Branch, 1236 San Pablo Ave.
Oakland.

All qualities Ypsilanti Union
Suits for ladies and children.
Headquarters for the Coast.

TIGHTS.

Knee and ankle, open and closed
seat, \$1.25 up. All qualities.
Fine Black Hosiery for ladies
and children.

A full line of Bathing Suits,
Cleopatra and Delsarte Girdles.
R. F. Sensible Waists for
Ladies and Children. All prices.
Bathing Suits of all qualities
and prices.

Only authorized Agent for
EQUIPOISE Waist and JEN-
NESS MILLER Goods.
Sample pieces and Catalogue
sent free.

HEALD'S

BUSINESS COLLEGE,

24 POST ST., S. F.

FOR SEVENTY-FIVE DOLLARS THIS
College instructs in Shorthand, Type Writing, Book
keeping, Telegraphy, Penmanship, Drawing, all the
English branches, and everything pertaining to business
for six full months. We have sixteen teachers, and give
individual instruction to all our pupils. Our school has
its graduates in every part of the State.

SEND FOR CIRCULAR.

C. S. HALEY, Secretary

R. F. HEALD, President

WE GUARANTEE

That one tablespoonful of

GOMBAULT'S CAUSTIC BALSAM

will produce more actual results than a whole bottle
of any liniment or spavin cure mixture ever made.
It is therefore the cheapest (as well as safest and
best) external applicant known for man or beast.

THE LAWRENCE WILLIAMS CO., CLEVELAND, OHIO.

The Judson Fruit Company,

308 and 310

WASHINGTON STREET
San Francisco, Cal.

— We are now better than ever prepared to
receive consignments of all kinds of perishable
products, such as Fruits, Vegetables, Eggs, etc. Our
facilities for cool, dry storage and packing for long-
distance shipping cannot be excelled. It is our con-
stant aim to make our consignors and our customers
stay with us.

A WORD ABOUT THE "RURAL."

TO RURAL SUBSCRIBERS:

The RURAL PRESS appeals to its readers to assist in the work of extending its circulation. If you have friends or neighbors who are not but who ought to be readers of the RURAL, please give us their names and we will send them sample copies of the paper with subscription blanks.

If any subscriber of the RURAL will send us three *new* names, accompanied by cash, for one year in advance (\$2.40 each), we will advance his own subscription one year on our books. Or if he will send us one *new* name with payment in advance for one year we will advance his subscription four months on our books.

To any present subscriber or member of his family who will undertake to act as local agent for the RURAL in the way of getting new names and collecting from old subscribers we will give liberal cash commissions. A young woman in one of the central counties of the State averages, by thus acting for us, a monthly cash income of \$15.00 without neglecting her domestic duties.

The paper is putting forth renewed efforts to answer the demand for a journal clean and pure in tone, independent and intelligent in its dealings with public questions, thorough and practical in its treatment of agricultural, horticultural and live-stock subjects and careful and accurate in its market reports. It has within the past year taken on a new editorial department—"From an Independent Standpoint"—which deals with public questions of political character without partisan bias. It is the aim of the writer of this department to tell the exact truth about public questions and public men, without regard to party faith or partisan effect. It seeks to give the reader straightforward statements of fact and the best results of a sober, non-partisan judgment.

The chief strength of the RURAL is the friendship which has grown up between its readers and itself. Confident in that friendship, it appeals to them to speak a good word for it whenever they can.

Address all communications to the RURAL PRESS, 220 Market Street, San Francisco.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG.

DEWEY & CO.'S



ESTABLISHED 1863.

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class Agency. We have able and trustworthy Associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 220 Market St. S. F.

Contagiousness of Consumption.

Dr. J. G. Hopkins of Thomasville, Ga., read a paper on this subject which is reported in part in the *Medical Record*. The speaker said he had joined the growing army which placed tuberculosis in the category of contagious diseases, and his experience with this disease during 19 years of investigation in Thomasville—which place is a resort for consumptives—bore him out in his opinion, and made a willing subject of the great and erudite Koch. He does not doubt but that all men, women and children, at some time or times, receive into their air passages the tubercle bacilli, but fortunately the great majority possessed the power of repelling them and throwing them off—they did not find that soil, so to speak, which is adapted to their growth. Indians in a state of nativity seemed impervious to the germs of consumption, but were now dying by thousands on the reservations. The whites and the blacks in prisons all over the world labored under similar conditions. A report from the Illinois State Prison, at Joliet, says that there are 1400 convicts within the walls, and fully one-third of them have consumption in a light or bad form. Nearly all deaths of persons in the penitentiary have been caused by consumption.

Dr. Hopkins emphasized the danger that lurks in sleeping-cars, in carpets, bedding, clothing and in the walls of apartments occupied by consumptives, which have not been properly renovated and rendered harmless by antiseptic measures. Consumptives should be forced to provide for the destruction of sputa. Whenever situated so as not to expectorate directly into a germicide or the fire, they should use some means of conveying the sputa to the germicide or the flames. If handkerchiefs or cloths are used, they should not be sent to the laundry, as human happiness and life are jeopardized through the probability of inoculation through abrasions upon the hands. These bacilli should never be allowed to dry up and impregnate the air, as is now done through ignorance of possible result. Numerous experiments by leading medical authorities have proved beyond doubt that consumption is an inoculable disease, and so rapidly is the throng of converts growing that the speaker would not be surprised if even in his day resorts now soliciting the patronage of the consumptive will be quarantining against him.

Electricity and Cholera.

In view of the danger of a fresh outbreak of the fatal epidemic during the year, it is to be expected, says *Electricity*, that disinfectants not only will rise enormously in price, but that the demand will exceed the production, and it will be of interest to point out a simple method for the preparation of liquids containing chlorine, the active agent of the most efficient of disinfectants, chlorite of lime. By passing an electric current through an aqueous solution of soluble chloride, both the chloride and the water are decomposed. At the positive pole a very unstable chlorate is formed, which has very powerful oxidizing properties, while at the negative pole another oxide is formed, capable of precipitating most organic substances.

We thus obtain by electrolysis a liquid which has the following properties: (1) It completely destroys the organic substances formed by putrefaction, as well as the noxious gases generated, such as sulphuretted hydrogen, ammonium sulphate, marsh gas, etc., and it also destroys all bacilli and other living ferments; (2) it precipitates albuminous substances of all kinds, and other suspicious ingredients contained in water; in other words, it clarifies the water. This method has already been used for technical purposes, such as bleaching paper-pulp and starch, and might be used with advantage for the bleaching of our linen, which receives such barbarous treatment on the part of the laundress. Why should this method not also be used for the disinfection of refuse, water-closets and contaminated water? It would certainly be of the greatest value in case of another outbreak of cholera, and especially in sea-ports, provided it were properly developed and rendered applicable on a large scale. The source of chlorine in a seaport is inexhaustible; it is simply sea-water. It does not signify in the least from whence the chlorine, the most powerful of all disinfecting agents, is derived; we have in sea-water an inexhaustible supply of the raw material, and in electrolysis an excellent method for the production of the active agent.

WELL MACH'Y All Kinds, Water, Gas, Oil, Mining, Ditching, Pumping, Wind and Steam Heating Boilers, &c. **WIN** pay you to send 25c. for Encyclopedia, of 1500 Engravings. The American Well Works, Aurora, Ill. Also, Chicago, Ill.; Dallas, Tex.; Sydney, N. & W.

SPECIAL ANNOUNCEMENT.

We have made arrangements with Dr. B. J. Kendall Co., publishers of "A Treatise on the Horse and his Diseases," which will enable all our subscribers to obtain a copy of that valuable work free by sending their address (enclosing a two-cent stamp for mailing same) to Dr. B. J. KENDALL Co., ENOSBURGH FALLS, VT. This book is now recognized as standard authority upon all diseases of the horse, as its phenomenal sale attests, over four million copies having been sold in the past ten years, a sale never before reached by any publication in the same period of time. We feel confident that our patrons will appreciate the work, and be glad to avail themselves of this opportunity of obtaining a valuable book.

It is necessary that you mention this paper in sending for the "Treatise." This offer will remain open for only a short time.

Three and One-Half Days to the World's Fair.

We take pleasure in advising the readers of the PACIFIC RURAL PRESS that the UNION PACIFIC is the most direct and quickest line from San Francisco and all points in California to the WORLD'S FAIR. It is the ONLY LINE running Pullman's latest improved vestibuled Drawing-Room Sleepers and Dining Cars from San Francisco to Chicago without change, and only one change of cars to New York or Boston.

Select Tourist Excursions via the UNION PACIFIC leave San Francisco every Thursday for Chicago, New York and Boston in charge of experienced managers, who give their personal attention to the comfort of ladies and children traveling alone.

Steamship Tickets to and from all points in Europe. For tickets to the World's Fair and all points east and for Sleeping-Car accommodations call on or address D. W. Hitchcock, General Agent Union Pacific System, No. 1 Montgomery street, San Francisco.

Our Agents.

J. C. HOAG—San Francisco.
R. G. BAILEY—San Francisco.
F. D. HOLMAN—California.
GEO. WILSON—Sacramento, Cal.
SAMUEL B. CLIFF—Creston, Cal.
A. C. GODFREY—Oregon.
E. H. SCHAEFFLE—El Dorado and Amador Co's.
C. E. ROBERTSON—Humboldt Co.
D. A. MACDONALD—Siskiyou and Del Norte.

Hay Pressing.

If you are interested in pressing hay write Truman, Hooker & Co., San Francisco. They will save you money.

\$500,000

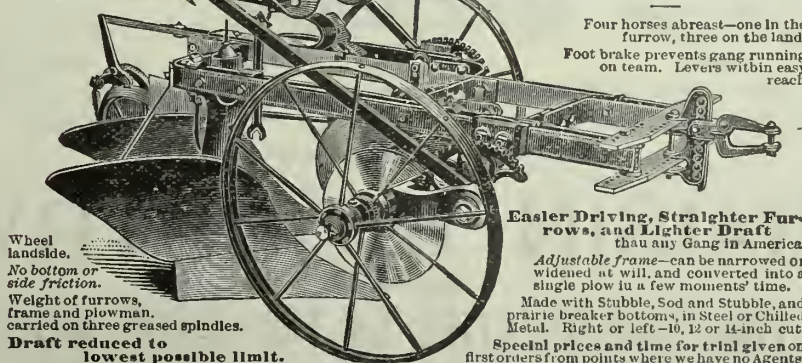
TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California street, San Francisco.

THE DAIRYMAN who is doing business for Profit must use the **IMPERIAL RUSSIAN CREAM SEPARATOR**. This machine is Perfection. The Best and the Cheapest of all. No Engine and No Engineer required. Simple and Safe. If you do Not use it you are Losing Money with every pound of milk. Capacity of different sizes from 500 to 2500 gallons per hour. Duplicate parts of Sharpless Separators kept on hand. Balancing Bowls and general repairs of Separators a Specialty. Send for Catalogue to A. J. VAN DRAKE, Pacific Coast Agent, 203 Fremont St., S. F.

TONQUELESS. SELF-GUIDING. NO POLE except on the road.

NO SORE NECKS.

One Plowman instead of Two



Wheel landside, No bottom or side friction. Weight of furrows, frame and plowman, carried on three greased spindles.

Draft reduced to lowest possible limit.

ECONOMIST PLOW CO., So. Bend, Ind., or Stanton, Thompson & Co., Sacramento.

Our book—"Fun on the Farm"—sent free to all.

SOLID COMFORT THE WONDER ON WHEELS. Seven Acres a Day instead of Two.

Four horses abreast—one in the furrow, three on the land. Foot brake prevents gang running on team. Levers within easy reach.

Easier Driving, Straighter Furrows, and Lighter Draft than any Gang in America.

Adjustable frame—can be narrowed or widened at will, and converted into a single plow in a few moments' time.

Made with Stubble, Sod and Stubble, and prairie breaker bottoms, in Steel or Chilled Metal. Right or left—10, 12 or 14-inch cut.

Special prices and time for trial given on first orders from points where we have no Agents.

GRANGERS' BUSINESS ASSOCIATION, SHIPPING AND COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.

Full Cargoes of Wheat furnished Shippers at short notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

A. M. BELT, Assistant Manager.

Educational.**Bowens Academy,**

University Ave., Berkeley.

BOARDING AND DAY SCHOOL For Boys and Young Men.

Special university preparation, depending not on time but on progress in studies.

T. S. BOWENS, M. A., Head Master.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,

Surveying, Architecture, Drawing and Assaying, 728 MARKET ST., SAN FRANCISCO, CAL. Open All Year.

A. VAN DER NAILLEN, President. Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50 ESTABLISHED 1864. Send for circular.

ACTUAL BUSINESS PRACTICE.

PACIFIC Business College, 320 POST ST. SAN FRANCISCO. LIFE SCHOLARSHIPS, \$75.

Bookkeeping, Penmanship, Shorthand, Typewriting, English Branches, etc. Graduates aided in getting positions. Send for circulars. T. A. ROBINSON, Pres.



PACIFIC RURAL PRESS is the Largest Illustrative and Leading Agricultural and Horticultural Weekly of the West. Established 1870. Trial Subscriptions, 50c for 3 mos. or \$2.40 a year (till further notice). DEWEY PUBLISHING CO., 220 Market Street, San Francisco.

Commission Merchants.**DALTON BROS., Commission Merchants,**

—AND DEALERS IN—

CALIFORNIA AND OREGON PRODUCE, Green and Dried Fruits,

Grain, Wool, Hides, Beans and Potatoes. Advances made on Consignments.

308 & 310 Davis St., San Francisco.

[P. O. Box 1936.]

Consignments Solicited.

P. STEINHAGEN & CO.

404 & 406 DAVIS ST. S.F.

ALLISON, GRAY & CO.

501, 503, 505, 507 & 509 Front St., SAN FRANCISCO.

GENERAL COMMISSION MERCHANTS

GREEN and DRIED FRUITS, POULTRY, EGGS, GAME, GRAIN, PRODUCE AND WOOL.

MOORE, FERGUSON & CO.

WOOL, GRAIN, FLOUR

—AND—

General Commission Merchants, 810 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

[ESTABLISHED 1854.]

GEORGE MORROW & CO., HAY and GRAIN

COMMISSION MERCHANTS,

89 Clay Street and 28 Commercial Street

SAN FRANCISCO, CAL.

SHIPPING ORDERS A SPECIALTY.

C. H. EVANS & CO.,

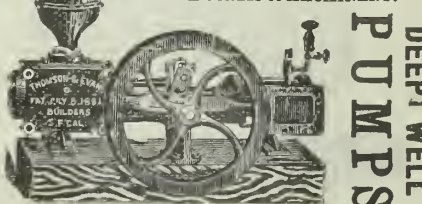
(Successors to THOMSON & EVANS.)

110 and 112 Beale Street, S. F.

MACHINE WORKS,

Steam Pumps Steam Engines

And All Kinds of MACHINERY.

**Treatise on the Horse and His Diseases.**

By B. J. KENDALL, M. D.



35 Fine Engravings showing the positions and actions of sick horses. Gives the cause, symptoms and best treatment of diseases. Has a table giving the doses, effects and antidotes of all the principal medicines used for the horse, and a few pages on the action and uses of medicines. Rules for telling the age of a horse, with a fine engraving showing the appearance of the teeth at each year. It is printed on fine paper and has nearly 100 pages, 7x5 inches. Price, only 25 cents, or five for \$1, on receipt of which we will send by mail to any address DEWEY PUBLISHING CO., 220 Market Street, San Francisco.

DEWEY & CO. PATENT SOLICITORS. 220 MARKET ST. S.F. ELEVATOR 12 FRONT ST. S.F.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

JOHN LYNCH, Petaluma. Breeder of Thoroughbred Shorthorns. Young Stock for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER Saxe & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

O. BLOM, St. Helena. Brown Leghorns a specialty.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for illustrated & Descriptive Catalogue, free.

JOHN McFARLING, Calistoga, Cal. Importer and Breeder of Choice Poultry. Send for Circular. Thoroughbred Berkshire Pigs.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

FOR SALE at low prices—Three extra fine young thoroughbred Dishfaced Berkshire Boars. T. Chittenden, Chittenden, Cal.

O. H. DWINELLE, Fulton, Sonoma Co., Cal. Shropshire and Crossbred Shropshire-Merino Rams for sale.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

R. H. ORANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

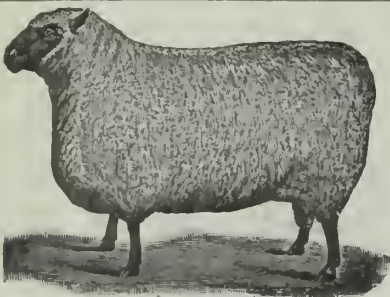
SWINE.

P. H. MURPHY, Perkins, Sac. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, Low Prices.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.



OXFORD DOWN SHEEP FOR THE PACIFIC COAST.

W. A. SHAFOR, Middletown, Ohio,
Largest American Importer of
O. D. Sheep.

Is prepared to quote prices on the best stock of Oxford Down Sheep to be had in England. Parties wanting first-class stock should write for particulars and induce their neighbors to join them. Import will arrive in June. Write at once.

EGGS! EGGS! EGGS!

S. C. BROWN LEGHORNS.
S. C. WHITE LEGHORNS.
EGGS \$2.50 per setting; \$4 for two settings; \$5 for three settings. White Leghorn pen headed by "Volante," score 85; Brown Leghorn pen headed by "Imperial," score 93. Send for circular. Satisfaction guaranteed to all.

FRANK A. BRUSH,
Care Santa Rosa National Bank, SANTA ROSA, CAL.



THE
HALSTED INCUBATOR
COMPANY,
1319 Myrtle Street, Oakland, Cal.
Send Stamp for Circular.

ONLY 25 YEARS OLD AND A GIANT!

THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,
SOLE PROPRIETORS.....STOCKTON, CAL.

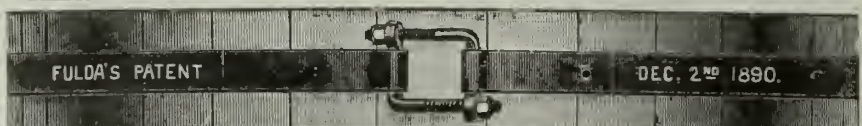
.....BEST MODERN STRAINS OF.....

POLAND-CHINA

.....PIGS FOR SALE.....

Sired by FIRST CLASS IMPORTED MALES. My Brood Sows, imported from the East, are the admiration of everybody, being fine individuals and, like the Boars, rich in such blood as Tecumseh, the most famous hog that ever lived, King Tecumseh, his greatest son, Tom Corwin 2d, whose owner refused \$1000 for him, Cora Schellenberger, whose produce sold for \$3300 before she died, and other prize winners at Eastern State Fairs. Inspection invited and correspondence solicited. Parties giving timely notice will be met at station. Ranch one mile from station.

H. J. PHILPOTT, Niles, Cal.



FULDA'S PATENT BAND AND HOOP COUPLING.

The Best, Simplest and Cheapest Coupling for Tank Hoops.
A sufficient lap of hoop renders it unnecessary to rivet the hoop. It will fit the circle of any tank, regardless of size. Made in sizes to fit any width of iron.
Prices, \$1.00 to \$1.50 per Pair. For sale to the trade. Liberal discount in quantities.

FULDA BROTHERS,
30 TO 40 SPEAR ST., SAN FRANCISCO,
MANUFACTURERS OF MINING AND WATER TANKS.
Send for Catalogue.

MEXICAN PHOSPHATE AND SULPHUR CO. SEASON OF 1893.

NITROGENOUS SUPERPHOSPHATE

AS AN EFFECTIVE FERTILIZER IT STANDS UNRIVALED.

.....Send for Circulars.....

H. M. NEWHALL & CO., Agents,

809-811 Sansome Street.....San Francisco, Cal.



THE JONES 5-TON WAGON SCALE.

Price \$66, Delivered Anywhere in the United States.

These Scales have STEEL BEARINGS, Not Wood—BEAR THIS IN MIND.
From 25 to 50 per cent cheaper than any other Scales of like quality. All sizes and kinds of Scales always in stock.

Truman, Hooker & Co., San Francisco.

Send for Price Lists
OF GUNS
And all Articles used
by Hunters and
Anglers.



GUNS SENT ON
TRIAL.

OLD GUNS TAKEN
IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.

THE RAISIN INDUSTRY.

A PRACTICAL TREATISE ON THE RAISIN GRAPES,
THEIR HISTORY, CULTURE AND CURING.

By GUSTAV EISEN.

This is the Standard Work on the Raisin Industry in California. It has been approved by Prof. Hilgard, Prof. Wickson, Mr. Chas. A. Wetmore and a multitude of Practical Raisin Growers.

Sold only by the DEWEY PUBLISHING CO. or its Agents at the uniform price of \$3.00, postage prepaid. Orders should be addressed:

THE DEWEY PUBLISHING CO.,

220 Market St., San Francisco.

DEWEY & CO. { 220 MARKET ST., S. F. } PATENT AGENTS.
Elevator, 12 Front.

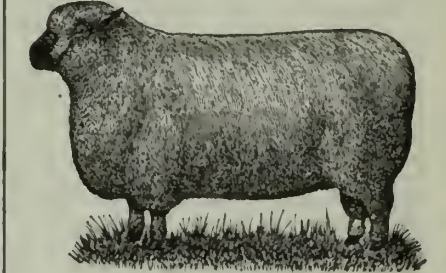
MECHAM & FRITSON,
Importers & Breeders of Red Polled Cattle.

We have 200 head of Full Bloods and Crossbreds on Devons, Bulls and Heifers for sale. Address communications regarding Cattle to MECHAM & FRITSON, Petaluma, Cal.



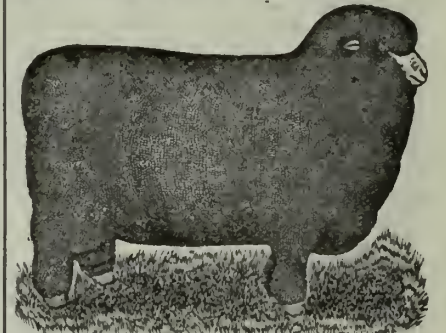
MECHAM & HINKLE,
Importers & Breeders of Shropshire Sheep.

The flock was imported or bred direct from imported stock. The Shropshire excels all mutton breeds for a cross on the merino—giving more wool and mutton than that from any other breed. Pure and Crossbred Rams and Ewes for sale. Direct inquiries regarding Shropshires to MECHAM & HINKLE, Petaluma, Cal.



H. MECHAM,

Breeder of American Merino Sheep Without Horns. The only flock in the United States. When we bought our sheep East 24 years ago, among them was a ram without horns. He grew to be a fine large sheep, shearing at 2 years old, a 12-month's fleeces, 35 lbs. of long white wool.



I have bred from him and his get ever since and have never made an out-cross and never used the same ram but one year on the same flock. My rams at two years old weigh from 160 to 180 lbs., have a strong constitution, without wrinkles, and will shear on an average about 25 lbs., a 12-month's fleeces, of long white wool. Rams and Ewes for sale. P. O. Address Story Point, Sonoma Co., Cal. R. R. Station, Petaluma.

Short-Horn BULLS

Calves, Yearlings and 2-year-olds
FOR SALE.

ROBERT ASHBURNER,
Baden Station, San Mateo County, Cal.
Only three-fourths mile from the terminus of
the S. F. and San Mateo Electric Road.

Dr. A. E. BUZARD, VETERINARY SURGEON.

MEMBER OF THE ROYAL COLLEGE OF VETERINARY Surgeons, London, England. Late Veterinary Surgeon in the United States Army. Veterinary Contributor to the "Pacific Rural Press." The diseases of all Domestic Animals treated on Scientific Principles. Special attention given to Chronic Lameness and Surgical Operations. 406 BRODERICK ST., SAN FRANCISCO. Calls to the country promptly attended to. Telephone No. 4667.

COYOTES

Nothing Succeeds Like Success.
A limited number taught to trap Coyotes and Silver-gray Foxes. Send \$25 and a guarantee that you will keep it a secret at least ten years. Only one taught in same locality. Satisfaction guaranteed or money refunded.

O. E. BECKWITH,
Kelseyville.....California.

A BARGAIN!
Two 3-year-old imported Shire Mares in foal. Also imported English Coach Stallion. Address W. W. RUSHMORE, Importer and Breeder of Draft and Coach Stallions. P. O. Box 80, Stable, Broadway and 82d St., Oakland, Cal.

The Kansas City Veterinary College
Incorporated by the State.
For catalogue address J. H. WATLES, D. V. S.
310 East Twelfth Street.

S. H. MARKET REPORT

Market Review.

SAN FRANCISCO, July 5, 1893.

The Fourth of July holidays, extending from Saturday until to-day (Wednesday) have very seriously interfered with the course of trade during the week, and our review of the markets is necessarily partial and very much limited. No transactions have occurred on the produce exchange since last Friday, and the wholesale and jobbing houses have been practically closed since Saturday. Trade this morning still retained its holiday character, and will doubtless retain it until the close of the week. Receipts of produce from the interior were very light to-day, and prices, in some lines at least, were advanced. This is hardly a fair indication of the course of the market, however.

The wheat market generally remains in about the same condition as has recently characterized its movement, or, rather lack of movement. In Chicago, this morning at the opening, July wheat was lower than last Friday. Liverpool markets also opened lower.

The Liverpool Corn Trade News prints estimates of the world's crops for 1893, which bears out our former statement of a material shortage in the production of this year. The figures are:

	1893.	1892.
U. S. A.	430,000,000	516,000,000
Hungary	102,000,000	141,000,000
Italy	100,000,000	112,000,000
India	247,000,000	217,000,000
Total	872,000,000	986,000,000

As an offset to this, the River Plate (Argentine Republic) has turned out a very much larger yield than last year (16,000,000 bushels), and there is a moderate excess in Australasia and Chili. France, Germany, and the United Kingdom will produce much less than usual, leaving Russia, Spain, and Turkey as unknown quantities. These deficits will perhaps balance the Southern Hemisphere surplus, leaving an actual shortage in the world's production of about 116,000,000 bushels. It should be taken into account, however, that there is a large surplus stock in the United States, carried over from 1892 (perhaps 60,000,000 or 70,000,000 bushels) which must be disposed of. But, taking into consideration our shortage of this year, the United States will probably not have more than a normal quantity for export. Taking the situation as a whole, and assuming that financial conditions will before long show improvement, we think it can be confidently relied on that there will be an important recovery in the values of wheat before the coming cereal year is very far along; but with so many disturbing conditions, there seems to be no immediate prospect of recovery.

Crops of the United States.

Monday morning (July 3d) the New York World printed a detailed report of the condition on July 1st of the crops in the Western and Northwestern States, the Pacific slope, Canada and Manitoba. The report was obtained by telegraph on Saturday from the World's correspondents in nearly 700 cities, towns and villages scattered over the great wheat and corn-growing districts. The reports cover fully the States of Ohio, Indiana, Illinois, Kentucky, Tennessee, Missouri, Texas, Kansas, Nebraska, Iowa, Michigan, Wisconsin, Minnesota, North and South Dakota. Of 535,949,000 bushels of wheat produced in 1892 (Government report), these States produced over 390,000,000 bushels. They produced practically all the corn crop.

The World has obtained good general reports from the Pacific slope, which last year produced about 60,000,000 bushels of wheat, and from Canada, Manitoba, Northwest Territories and British Columbia.

All these reports show, first, that the wheat crop will be much below last year's. Second, that the corn crop will be enormous, and, if weather conditions continue good, will probably be the largest ever raised. Third, that the acreage of oats, barley, rye and similar grains has increased, and crops will be large. Fourth, that the hay crop is everywhere about the average. Fifth, that the fruit crop is generally poor, and in many cases a total failure. Sixth, that the general condition of the agricultural section is excellent, the outlook is promising, and farmers cheerful and hopeful.

The partial failure of the wheat crop is due chiefly to unfavorable weather last winter. The heaviest damage is in Kansas, where in nearly 30 counties the crop is a total failure. The State's yield, it is alleged, is but 40 per cent of an average. This means a reduction of over 40,000,000 bushels. Illinois and Missouri wheat also suffered heavily from the same cause. Spring wheat has been greatly damaged in North Dakota and some other sections by drought. Another element in the reduction of the wheat crops is the decreased acreage due to farmers abandoning its culture on account of low prices and putting in barley, oats and other grains instead.

Little was done on the Produce Exchange to-day. Prices took a lower range, but quotations are almost wholly nominal.

Barley showed some improvement to-day. More or less spot barley is wanted for immediate shipment, and prices have strengthened a little under the inquiry. Just as soon as this export demand is satisfied, the probabilities are that the market will lapse again into former quietude, for a time at least.

Fruits.

The market displayed no little activity this morning, following the holiday dullness. Peaches con-

tinued to sell well, and apricots are in good demand. Figs and berries are plentiful. Cherries have advanced somewhat, being less abundant.

The first carload of apricots to the East this season has gone forward, being sent to Kansas City from Hanford. New bleached peaches are offered at 8c. Prunes are offered for delivery in August and September at 5½c. Apricots, August delivery, are offered at 10c per pound.

Vegetables.

Potatoes were very scarce this morning, and the market assumed a very firm tone. New Burbanks brought as much as \$1.50 per cental. Some Eastern potatoes are coming in, but they do not seem to have seriously affected the market. Green corn is becoming more abundant, and prices have declined. Squash and cucumbers were weaker, with a lower tendency. Green okra and egg plant are not in demand. Tomatoes are becoming more plentiful.

Six Cents for Prunes.

An Eastern correspondent of the Santa Clara Fruit Exchange, whose name is familiar to most orchardists in California, squarely states the situation as follows: "In regard to new-crop fruit, the California trade in general have settled upon a price of six cents f. o. b. California, for the four sizes prunes, and so far as we can understand, no lower price has been made by any one who has a right to sell—that is, any one who raises prunes or who has bought them for drying, and we believe that if the price were maintained at that figure the trade would take them in considerable quantity, but unfortunately some speculators have taken hold of the matter and have offered fruit in this market at 5½ cents f. o. b. for the four sizes. As far as we can learn, about 15 cars have been placed at this price. The object of the seller is quite apparent. While there is nothing in the present situation to justify selling at such a price, he expects that the large crop and general depression in business will enable him to bear the market so that he can scalp a profit out under this price."

European Crops.

Beerholms for June 16 contains a report of European crop conditions, which is in substance as follows:

In United Kingdom wheat on good lands is in good condition, but on all else is unfavorable. In Scotland wheat is better than in England.

FRANCE.—Reports Uneven. Drought is uninterrupted, and complaints from farmers are far more acute. The wheat plant is thin and sheaves will be few.

AUSTRIA-HUNGARY.—In Hungary there is serious damage to crops in the more important districts, because of drought. In Austria, reports are of better conditions.

GERMANY.—Prospects not improved.

Provisions.

There is no change in the local quotations for pork products during the week. Concerning the market generally the Cincinnati Price Current says:

"While there has been quite a decline in prices of hogs, as compared with several weeks ago, there is still an attractive margin of profit in feeding operations."

Poultry.

Three carloads of eastern poultry came in to-day from the East, but they have not depressed the market as much as might have been expected. Receipts from California are now so light, that it seems necessary to draw on the East to meet local demands. Choice stock sells well, and occasionally at an advance over quotations.

California Products in New York.

NEW YORK, July 2.—The situation in most California spot goods continues depressed. There is disappointment all around. The Exposition to date has failed to bring the expected demand that might clear up or lighten surplus holdings. Then came the money troubles which checked many deals which might have otherwise gone through. Fresh fruits only seem assured of a summer activity and these will evidently have to bend to the cheapened views of consumers prompted by the assurance of good Eastern crops. One of the most perplexing features of the dullness is the absolute lack of inclination for future dealing. None of our former operators seem yet ready to commit themselves to any line of treaty. In fact, this style of traffic has not been so inanimate for a number of years.

Canned Fruits.—There is a renewed pressure to sell California Canned Fruits and the overtures of holders are met with discouraging low bids: \$1.50 being offered for mixed full lines extras and \$1.25 for standards.

Unpeeled Peaches.—No demand.

Prunes.—Few remain in stock; tone for the future weak; 800 boxes of seventies and eighties sold at 8½c; French four sizes offered at 7c, landed clear; no buyers at 6½c.

Raisins.—No new features; prices unchanged.

Cherries.—The attractive quality of cherries helped the demand. The Earl Fruit Company's ranges were: Royal Anne cherries, box 55¢ @ 75¢; Black Tartarian 40¢ @ 52¢; Biggareau, 75¢ @ 82¢; others, 55¢ @ 72¢.

Apricots.—80¢ @ 92¢; a few Triumphs, \$3.30.

Peaches.—Alexander Peaches, 80¢ @ 92¢; Garlands, \$1.30 @ \$1.50; Clymen Plums, 95¢ @ 92¢. E. L. Goodell's sales.—Apricots, per box, 75¢ @ 81¢ 40; Cherries, 55¢ @ 61¢; Alexander Peaches, \$1.35 @ 1.50. Scoebel & Day.—Apricots, per box, 90¢ @ 92¢; Alexander Peaches, \$1.10 @ 1.20; Oregon Cherries, 65¢ @ 72¢; Biggareau, 80¢ @ 81¢ 45; Royal Anne, 80¢ @ 81¢ 40; Republican, \$1.40; Cherry Plums, 80¢ @ 81¢ 30; Clymen Plums, \$1.25 @ 1.45.

Porter Brothers' sales.—Royal Anne Cherries, 75¢ @ 82¢ 50; Biggareau, 20¢ @ 21¢ 10; mixed, 40¢ @ 42¢; Apricots, 40¢ @ 41¢ 75; Alexander Peaches, 55¢ @ 57¢ 35.

Wool.—The market simply drags along. Boston had a somewhat improved trade with certain mills which are yet running steadily, but the volume of the new clip's sale is much below what was looked for by this time. Supplies are forming at the sea board, but not heavily; more of it is on consignment and the advances thereon are made moderate. Country markets are neglected. Beyond a fair demand for coarse Wools, Philadelphia is quiet, prices easy and London reports a good market, but mentions the absence of American competition, that was so noted last season. Sales at New York, 258,000 pounds of domestic and 149,000 of foreign. Sales at Boston were 1,003,900 pounds of domestic, including 25,000 spring California at 17¢ @ 18¢. Territory ranges from 11¢ @ 18¢; also one of \$4.50 Australia.

Hops.—Trade light, the range of 19¢ @ 22¢ for State and Coast barely supported; exports for the week, 2-311.

Sales of California Fruit.

CHICAGO, June 30.—The Earl Fruit Company sold California Fruit at auction to-day as follows: Two car-

loads Bartlett Pears, \$4.25; Tragedy Prunes, \$4.25 Royal Apricots, \$1.25 @ 1.50; Red May Peaches, \$1.25 @ 1.50; Alexander, \$1.15 @ 1.25; Cherries, Biggareau, \$1.05; Tartarian, \$1.15 @ 1.20; Royal Anne, \$1.30 @ 1.35. New York, May 30.—The Earl Fruit Company sold California Fruit to-day as follows: Three carloads Royal Apricots, \$1.35 @ 1.50; Peaches, \$1.20 @ 1.40; Cherries, Royal Anne, \$1.50; Tartarian, 90¢ @ \$1; Biggareau, \$1 @ 1.15.

New York, June 30.—Porter Brothers' Company sold at auction to-day eight carloads of California fruit. Clymen Plums, \$2.65 @ 3.12; Tragedy Prunes, \$4.25; Claude Plums, \$1.55; Brill Plums, \$2.65; Royal Apricots, 60¢ @ \$1.50; Alexander Peaches, 45¢ @ \$1.60; Cherry Plums, \$1.10; Tartarian Cherries, in bad order 25¢ to 75¢; Royal Anne, 55¢ to \$1.55; black, 90¢ to \$1.

CHICAGO, June 30.—Porter Brothers Company sold to-day at auction six carloads of California fruit at the following prices: Royal Anne Cherries, \$1.25 @ 2.20; black Biggareau Cherries, \$1.45; black Oregon Cherries, \$1.25 @ 1.45; Tartarian Cherries, \$1.20 @ 1.45; Royal Apricots, 70¢ @ \$1.30; Alexander Peaches, 80¢ @ \$1.50; Clymen Plums, \$2.50; Brill Plums, \$1.85; Konig Claude Plums, \$2.05 @ 2.50.

MINNEAPOLIS, June 30.—Porter Brothers Company sold to-day at auction one carload of California fruit, as follows: Apricots, 75¢ @ \$1; Peaches, 75¢ @ \$1.10; Cherry Plums, \$1.20.

OMAHA, (Neb.), June 30.—Porter Brothers Company sold to-day two carloads of California fruit: Apricots, \$1.01 @ 1.25; Peaches, \$1 @ 1.25; Cherries arrived very ripe 50¢ @ \$1.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per cwt. for the past week:

	June.	July.	Aug.	Sept.	Oct.	Nov.
Thursday	55.07½d	55.07½d	55.08½d	55.09½d	55.10½d	55.11½d
Friday	55.07½d	55.07½d	55.08½d	55.09½d	55.10½d	55.11½d
Saturday	55.07½d	55.07½d	55.08½d	55.09½d	55.10½d	55.11½d
Monday	55.07½d	55.07½d	55.08½d	55.09½d	55.10½d	55.11½d
Tuesday	55.07½d	55.07½d	55.08½d	55.09½d	55.10½d	55.11½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	D.	Market for P. S.
Thursday	29.34d	30.64d	29.34d	Inactive
Friday	29.34d	30.64d	29.34d	Inactive
Saturday	29.34d	30.64d	29.34d	Inactive
Monday	29.34d	30.64d	29.34d	Inactive
Tuesday	29.34d	30.64d	29.34d	Inactive

To-day's cablegram is as follows: LIVERPOOL, July 5.—Wheat—Quiet but steady. Californian spot lots, 5s 11½d; off coast, 29s; just shipped, 30s; nearly due, 28s 3½d; cargoes off coast, quiet but steady; on passage weaker; Mark Lane wheat, very quiet; wheat in Paris, steady.

Eastern Markets.

The following shows the closing prices per bushel of wheat for the past week at

New York.

Day.	June.	July.	Dec.
Thursday	70	72½	81½
Friday	70	72½	81½
Saturday	70	72½	81½
Monday	70	72½	81½
Tuesday	70	72½	81½

The following is to-day's telegram—per bushel: NEW YORK, July 5.—July, 70½; September, 75½; December, 80½.

Chicago.

Day.	June.	Sept.	Dec.
Thursday	62½	68½	73½
Friday	62½	68½	73½
Saturday	62½	68½	73½
Monday	62½	68½	73½
Tuesday	62½	68½	73½

The following is to-day's telegram—per bushel: CHICAGO, July 5.—July, 64½; September, 65½; December, 73½.

Local Markets.

WHEAT.

	May.	Dec.
Thursday, highest	1 13½	1 30½
"lowest	1 13½	1 29½
Friday, highest	1 13½	1 30½
"lowest	1 13½	1 29½
Saturday, highest	1 13½	1 30½
"lowest	1 13½	1 29½
Monday, highest	1 13½	1 30½
"lowest	1 13½	1 29½
Tuesday, highest	1 13½	1 30½
"lowest	1 13½	1 29½

The following are to-day's recorded sales on Call: Wheat—Regular Session—December, 2300 tons, \$1.30; 800, \$1.30; 100, \$1.3. Seller 1893, new—200 tons, \$1.18½ per cwt. Afternoon Session—December, 300 tons, \$1.30; 200, \$1.30; 300, \$1.30; 20, \$1.29½. Seller 1893, new—200 tons, \$1.18½; 100, \$1.19 per cwt.

BARLEY.

	New.	Dec.
Thursday, highest	79½	89
"lowest	79½	88
Friday, highest	81½	91
"lowest	81½	89½
Saturday, highest	81½	91
"lowest	81½	89½
Monday, highest	81½	91
"lowest	81½	89½
Tuesday, highest	81½	91
"lowest	81½	89½

The following are to-day's recorded sales on Call: Barley—Regular Session—December, 100 tons, 91½c; 100, 91½c; 300, 91½c; 100, 91½c per cwt. Seller 1893, new—100 tons, 82c per cwt. Afternoon Session—Seller 1893, new—100 tons, 82c; 100, 82c; 200, 83c; 400, 83c; 100, 83c per cwt. December—300 tons, 92c per cwt.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. JULY 5, 1893.

Strawberries, chest Longworth..... 5 00 @ 8 00 Sharples..... 3 50 @ 5 00 Goose-h rries, lb 2 @ 3 Raspberries..... 3 00 @ 4 50

Blackberries..... 3 00 @ 5 00 Cherries, box—Black..... 40 @ 55 Royal Ann..... 50 @ 65 White..... 30 @ 50 Limes, Mex..... 75 @ 1 00 Lemons..... 1 50 @ 3 00 Do Santa Bar..... 4 00 @ 5 00 Do Sicily choice 4 50 @ 5 50 Oranges, pr bx—Navel, River de 2 50 @ 3 00 Seedling, River de 1 25 @ 1 50 Do Fresno..... 1 25 @ 1 50 Green Apples, bx 25 @ 50 Red Apples, bx 1 00 @ 1 25 Currants, chest 4 00 @ 5 50 Apricots, box—Royal..... 35 @ 60 Plums..... 25 @ 50 Pears, bskt..... 15 @ 40 Peaches, bskt..... 50 @ 1 00

Beets, sk..... @ 1 25 Carrots, sk..... 85 @ 1 25 Onions, dry, lb..... 15 @ — Parsnips, cwt..... 1 50 @ 2 00 Peppers, dry, lb 5 @ — Peas, common..... 75 @ 1 50 Peas, sweet, sk..... 50 @ 1 50 Turnips, cwt..... @ 1 00 Cabbage, 100 lbs 80 @ 1 15 Garlic, 2 lb..... @ — Cauliflower..... 50 @ 85 Celery..... 50 @ 60 Tomatoes, box..... 25 @ 1 25 Do Fresno..... 2 @ 4 Rhubarb, bx..... 30 @ 75 Asparagus, box..... 50 @ 1 25 Cucumbers, doz 25 @ 90 Artichokes, doz 50 @ 60 Eggplant, lb..... 20 @ 25 Summer squash..... 25 @ 70 Green corn, dr..... 10 @ 20

Live Stock.

BEEF. Stall fed..... 6½ @ — Extra..... 6½ @ — First quality..... 5½ @ 6 Second quality..... 4½ @ 5 Third quality..... 4 @ 4½ Bulls and thin Cows..... 2 @ 4 VEAL. Range, heavy..... 4 @ 6 Do light..... 5 @ 7 Dairy..... 5 @ 7 MUTTON. Wethers..... 6 @ — Ewes..... 5 @ — Light, 2 lb, cwt..... 6½ @ — Medium..... 7 @ — Heavy..... 7 @ — Soft..... 6 @ — Feeders..... 6½ @ — Stock Hogs..... 5½ @ — Dressed..... 9½ @ 9½

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. JULY 5, 1893.

BEANS AND PEAS. Bayo, cwt..... 2 75 @ 2 80 Butter..... 2 75 @ 3 00 Fed..... 2 50 @ 2 70 Red..... 2 75 @ 3 00 Pink..... 2 80 @ 2 90 Small White..... 2 60 @ 2 70 Large White..... 2 60 @ 2 70 Lima..... 2 90 @ 3 00

BUTTER. Cal., poor to fair, lb..... 15 @ — Do good to choice 16 @ 17 Do Giltedged..... 19 @ 20 Do Creamery..... 20 @ 21 Do do Giltedged..... 20 @ — Cal. Pickled..... 21 @ 22 Cal. Keg..... 19 @ 21

CHEESE. Cal. choice cream..... 8 @ 9 Do fair to good..... 8 @ 9 Do Giltedged..... 9 @ 9 Do Skim..... 5 @ 5½ Young America..... 11 @ 11

EGGS. Store..... 17 @ 19 Do fresh..... 25 @ 26 Eastern..... 18 @ 19

Outside prices for selected large eggs and inside prices for mixed sizes—small prices are hard to sell. FEED. Bran, ton..... 15 50 @ 17 00 Feedmeal..... 23 50 @ 24 50 Grd Barley..... 19 00 @ 19 50 Middlings..... 20 50 @ 22 00 Oil Cake Meal..... @ 35 00

HAY. Compressed..... 7 00 @ 11 00 Wheat, per ton..... 9 00 @ — Do choice..... @ 12 00 Wheat and oats 8 00 @ 11 50 Wild Oats..... 8 00 @ — Cultivated do..... 7 00 @ 10 00 Barley..... 7 00 @ 9 00 Alfalfa..... 8 00 @ 11 00 Clover..... 8 00 @ 9 00

GRAIN, ETC. Barley, feed, cwt..... @ — Do good..... @ — Do choice..... 82½ @ — Do brewing..... 90 @ 1 62½ Do Chevalier..... 90 @ — Do do Giltedged..... 1 15 @ — Buckwheat..... 1 75 @ 2 00 Corn, white..... 1 10 @ 1 15 Yellow, large..... 97½ @ 1 02½ Do small..... 1 02½ @ 1 05 Oats, milling..... 1 50 @ 1 60 Feed, choice..... 1 40 @ 1 50 Do good..... 1 37½ @ — Do fair..... 1 30 @ — Do common..... 1 25 @ — Surprise..... 1 55 @ — Black feed..... 1 15 @ 1 25 Gray..... 1 25 @ 1 30 Rye..... 1 07½ @ 1 10

Wheat, milling Giltedged..... 1 20 @ 1 25 Shipping, choice 1 17½ @ 1 20 Off Grades..... 1 05 @ 1 12½ Sonora..... 1 10 @ 1 20

WOOL. California, year's fleece 9 @ 10c Do 6 to 8 months..... 9 @ 12c Do 8 to 10 months..... 9 @ 12c Do 10 to 12 months..... 9 @ 12c Do Northern..... 12 @ 14c Do, extra Humboldt..... 14 @ 15c Do Mendocino..... 14 @ 15c Nevada, choice, light..... 12 @ 14c Do heavy..... 10 @ 12c Oregon, East'n, choice..... 12 @ 15c Do, Eastern, poor..... 9 @ 10c Do, Valley..... 14 @ 15c

Standard Cane Grain, Spot..... 5 @ 6½ June & July delivery 6½ @ — Potatoes, garden, lb..... 14 @ 15 Wool, 3½ lb..... 30½ @ — Wool, 4 lb..... 32½ @ —

HOPS. 1892, fair..... 14 @ — Good..... 16 @ — Choice..... 17 @ —

FLOUR. Extra, city mills 4 10 @ — Do country mls 4 10 @ — Superfine..... 2 90 @ 3 00

NUTS—JOBBER. Walnuts, hard shell, Cal. lb..... 8 @ 9 Do soft shell..... 12 @ 13 Do paper shell..... 15 @ 16 Almonds, fresh, lb..... 15 @ 16 Paper shell..... 15 @ 16 Brazil shell..... 7 @ 8 Brazil..... 10 @ — Pecans, small..... 8 @ 10 Do large..... 10 @ 12 Peanuts..... 35 @ 54 Filberts..... 10 @ 13 Hickory..... 7 @ 8 Chestnuts..... 8 @ 10

ONIONS. Red..... 55 @ 65 Silver..... 90 @ 1 10

POTATOES. New, cwt. Early Rose..... 75 @ 1 10 Peerless..... 1 00 @ 1 10 Burbank..... 1 00 @ 1 50 Garnet..... 1 00 @ 1 10

POULTRY. Hens, doz..... 6 00 @ 7 00 Roosters, old..... 5 50 @ 6 00 Do young..... 9 00 @ 10 00 Broilers, small..... 2 50 @ 3 00 Do large..... 3 50 @ 4 50 Fryers..... 5 00 @ 6 00 Young Ducks..... 4 00 @ 5 00 Old Ducks..... 3 50 @ 5 00 Geese, pair..... 1 25 @ 1 50 Turkeys, gobler..... 14 @ 16 Turkeys, hens..... 14 @ 16 All kinds of poultry, if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.

Manhattan Egg Food (Red Ball Brand) in 100-lb. Cans..... @ 11 50

PROVISIONS. Cal. bacon..... @ 13 heavy, per lb. @ 13 Medium..... @ 13 Light..... 14½ @ 18 Lard..... 9½ @ 13 Ham sm'd k'd beef..... 10 @ 11 Hams, Cal..... @ 14½ Do Eastern..... @ 15½

SEEDS. Alfalfa..... 9 @ 10 Clover, Red..... 15 @ — White..... 30 @ — Flaxseed..... 25 @ 3 Hemp..... 4 @ — Do brown..... 5 @ 5½

HONEY. White comb..... @ — 2-lb frame..... @ — Do do 1-lb frame..... @ 13 Amber do..... 5½ @ 6 Dark do..... 5 @ — Beeswax, lb..... 22 @ 23

HORSE COLLARS

PATRONS OF HUSBANDRY.

From Worthy Master Davis.

The hay crop is substantially all harvested and though of fair quality is not of over-abundant yield.

The wheat market is awfully dull. Just think of selling good wheat for \$1.17 per cental! How can the farmer and his family prosper on such reward for honest toil?

If you can't pay for what you buy, now is not the time to buy. Keep out of debt, and pay no interest. But look well to the claims of the tax collector. Taxes must be paid, business or no business.

Nevada—the so-called sagebrush State—has won the first prize at the World's Fair, for the best and most attractive butter. Everybody knows that Nevada beef is sweet, juicy and healthy. Then, to these stores of wealth add her wonderful silver mines and our sister State of Nevada comes well to the front as a wealth-producing State. Perhaps silver may be demonitized, but golden butter and juicy steaks will always command the gold of the rich, and the silver of the poor, so that Nevada may yet be considered fully "in it," so far as material prosperity is concerned.

Farmers who have had new potatoes for sale, up to this time have found ready sale and paying prices for them. It pays to be the first to market, whether you be buyer or seller.

In the death of Senator Leland Stanford the opportunity is offered Gov. H. H. Markham to show his friendship to the farmers of the State. Now is the Governor's opportunity to select from the hundreds of farmers in California, one who could, and would, faithfully represent the taxpayers of the Golden State in the higher council chamber of the nation. Will the largest body of heavy taxpayers in this State get this consideration? What would California be were agriculture, with its kindred callings to cease? In behalf of the many thousands who are engaged in agriculture, we ask that Governor Markham consider the farmers and their interests before naming a successor to the late Senator Leland Stanford.

Some time ago Pomona Grange of Sonoma county appointed a committee of three and appropriated a certain sum of money for the purpose of reviving some of the dormant granges in its jurisdiction. Up to date the committee have not found time from personal business to do any work for the order. It is to be hoped the committee will at an early date make a vigorous and united effort to resuscitate some dormant granges in Sonoma county. Bodega, Forestville, Healdsburg, Cloverdale and Sonoma each offer a fruitful field for the efforts of the committee.

The harvest of grains and fruits is upon us, and there can be little grange work expected during the next two months. However, it would be most welcome news to hear that several of the newly appointed deputies were about to organize or reorganize a few granges. Nothing short of premeditated, intelligent work will accomplish the result, and that will certainly bring the desired result. Deputies, won't you please inform the master what you are going to do, how you are going about it, and when and where the new grange will be instituted?

Congress is to meet in extraordinary session at the national capital on the 7th day of August. Let us hope the wise men of the nation will find ways and means to help the industrial interests of this great, honest and progressive people. We need some help and some encouragement from the powers that be. The hour of theory has passed—the facts confront us. If Congressional action will help the situation, millions will rejoice that Congress has been convened. Let the farmers watch. What helps the farmer helps the nation. We shall see.

Don't let any one think the "cyclone of hard times" is fully past. Though the banks may have fully fortified themselves against all possible "runs," there is a probability that hundreds of thousands of failures are soon to follow. There are too many people who want to do, and do, two dollars of business on one dollar of their own capital. These are the fellows who are going to hear the sheriff's summons; these are the "business men" who will be the first to find they cannot pay dollar for dollar; these are the ones who are soonest to go to the wall. Look out! Go slow and keep near the middle of the highway.

Prepare your work for the coming session of the State Grange! Be ready to submit it the first day of the session, and have it placed before the proper committee at once. Get it reported back as speedily as is consistent with that due consideration which all im-

portant business demands, and then ask the Grange to give its approval and endorsement. Don't wait till the session is half finished before you are ready to present your report, resolution or amendment. Be, as you want the train to be when you are waiting, "on time!"

One or more constitutional amendments will soon be submitted, as required by law, to the several subordinate granges of the State. These amendments should be made a subject of special consideration by each grange, so that the master and his wife, or the other legal representatives of the Subordinate, may know what to do when the subject comes up for final action in the State Grange. Always remembers that it is well to make haste slowly in making changes in the fundamental law or the order. Changes ought to be made when the greatest good to the greatest number will be subserved by such action.

An "Average" Meeting of Yuba City Grange.

TO THE EDITOR:—Yuba City Grange had a most interesting and instructive meeting on July 1st. There was a good attendance, nearly every seat being occupied notwithstanding the unusual heat which was sweeping over the valley for two or three days. The summer so far has been most agreeable, being scarcely more than warm enough for comfort and the ripening of crops, yet the delay will insure to quality in both cereals and fruits.

The grange transacted considerable routine business besides giving instructions to newly admitted members.

The question of "Free Parcel Delivery" by the Postal Department was only briefly discussed and held over to the next meeting.

The *Gleaner*, our recently instituted Grange journal, was read, and, like its former issues proved very interesting. There were articles on various topics in which the agriculturists are chiefly interested, such as good roads, fertilization, household and political economy and such like. The paper sparkled with wit, wisdom and humor throughout, and the local hits were as well enjoyed by the hit, as by the hitters. This however is a feature that cannot be too carefully handled in order to produce unalloyed pleasure. The effort was a pronounced success, and the entire paper would be a valuable feature in any literary journal. Another is promised for the August meeting with A. H. Suggett and Maud Green as editors.

The subject of a piano for use of the Grange was brought up and on motion a committee was appointed to solicit subscriptions for the purpose, and B. F. Walton was authorized to make the purchase when in his judgment the subscription had advanced to a safe position. Several members at once offered five dollars each toward the enterprise, and I venture the prediction that by the next meeting we will be regaled by sweet piano music under the manipulation of Miss Eda Walton, our efficient organist.

We need a hall, but the financial stress now, and the gloomy future are not propitious for indulging in luxuries. The matter was to have been discussed in May and again later, but it was always convenient to be deferred. At the recent session it was again brought up and on motion a committee of seven was appointed to present plans and specifications for such a hall as each member of the committee saw proper to offer with an approximate cost of the structure. This I venture to say will stir the measure as it has not been before, and from the personelle of the committee it is safe to say several plans will be submitted.

The labors of the day rounded up by the distribution of three gallons of ice cream to the merry grangers, who, though sorry for the absentees, yet relished the same with unfeigned gusto.

Now, Mr. Editor, the above is written in reply to the oft-repeated question, "What do you do in the Grange?"

It is not all that can be said, but it will be seen that, as a rural people, we can always find topics that may prove interesting. It is a school in which we can all learn something to our advantage. When I hear this one or that one find fault with the grange because we don't accomplish more, I always regret that they are not members of the order, to the mutual advantage of all the tillers of the soil.

Let it not be forgotten that this is the most successful agricultural organization in existence; that it has not corrected all the evils of the universe, goes without saying; that it is seeking to educate and elevate the rural masses, stands admitted.

We have, therefore, no apology to offer for the existence of the order. It, at least, teaches us to look for something higher and nobler than mere drudgery, makes the un-

avoidable lighter through co-operation, and fits us to appreciate something better when it appears.

GEORGE OHLEYER.

Yuba City, Cal., July 3, 1893.

Field Day at Grass Valley.

TO THE EDITOR:—According to the agreement entered into by the undersigned with Grass Valley Grange, No. 256, to write the RURAL PRESS of our doings once a month, I herewith submit the following: The past month has been a busy one with us. We have initiated four members—three sisters and one brother—held a picnic on June 3d (Children's Day) in accordance with the instructions from headquarters; had a good time, considering that short notice was given in advertising. On June 17th we had our Flora's Day; celebrated it by holding an all-day's meeting in our hall. Bro. Frisbie, of Yuba City, district deputy, was with us, coming up on evening of the 16th. In the forenoon we decorated our hall and at 10:30 o'clock took our candidates through the third and fourth degrees, with some assistance from the visiting brother; then spread our tables, opened our doors to the multitude and gave our friends all a good dinner. Nearly 100 partook with us. Bro. Frisbie gave us a nice grange speech, which was listened to with much pleasure by a room full. The officers of Indian Springs Alliance were present and were called upon by our W. M. to make some remarks. The president, A. S. Winn, the lecturer, D. D. Thresher, and D. J. Lynch each made a short speech. At about 4 o'clock our visitor was taken to the famous Idaho quartz mine, situated about one mile from Grass Valley. Our hall was then put in order for the evening, when the following program was carried out: Instrumental music, "Last Rose of Summer," on piano and two violins, for the opening; next, "Martha," an operatic selection by Green's Band of 16 pieces; a declamation, "Columbia," song, "The Farmer He Must Feed Them All," song, "The Plowman," song, "Stay on the Farm." Our masterpiece, though, was our living picture of "Flora and her maids," which consisted first of a large picture frame made of six-inch boards twined with ivy and flowers, a sheaf of wheat standing up prominently in the center of top; a background and foreground was arranged of flowers and evergreens, while in this frame were posed five little girls, the largest one impersonating Flora, namely, Miss Ethel Alderman. One little one was just in the act of placing a wreath on her head, being perched up back of her, while the others were putting flowers on her shoulder or kneeling beside her arranging them on her dress. Every one pronounced it "lovely," and we had the curtain drawn on this at intervals during the evening, giving the little ones time to rest between. Our organist, Mrs. S. J. Alderman, must be given the credit of this "inspiration." Strawberries and cream, with cake, ice cream and cake were served during the evening at the small price of 25 cents a saucer to all who wished to buy, the object being to raise money for the Grange Temple fund. We were to some expense in advertising in our three local papers, so came out just about even all around. Now we are planning a dinner for the Fourth of July in our hall, by which means we hope to make some money. We think we advertised ourselves pretty well by our Flora's Day, so we ought to have good patronage on that day when we offer a meal for sale. All is not settled yet, as we have some opposition to the idea. Was

pleased to see our other Grass Valley letter printed word for word and we read it in the grange. Hope we are not trying your patience too much this time; if we are we beg your pardon and will close for fear we will get to talking again.

MRS. R. S. TWITCHELL,
Lecturer of Grass Valley Grange.
Grass Valley, June 27, 1893.

From North Butte.

TO THE EDITOR:—North Butte Grange met in regular session Saturday, the 6th. The attendance was not large, as the harvest has arrived and each farmer is busy gathering in the fruits of his labor.

One of our members proposed, for a discussion at our next meeting, the subject, how to make farming profitable. A committee will debate this subject, and we are hoping to get some new and practical points; not but that we are now successful farmers, but that we are willing to learn new things and new ways. In my next letter I want to be able to give a full account of the discussion.

In last week's PRESS Bro. Ohleyer had quite an interesting letter concerning his recent trip to northern Sutter, and in it he spoke of his visit to March Grange. The social event for which they were then preparing is now an event of the past, but one to be remembered, for it was a grand success.

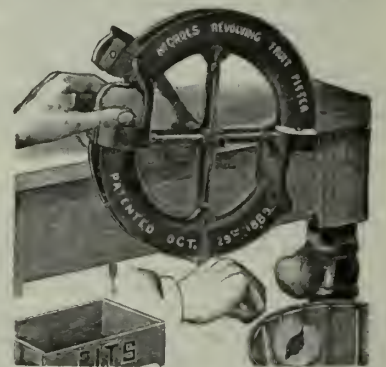
The weather, although a little warm, is all that could be wished for. Crops in this vicinity are fair. Here I may state that the worthy master of our order has one of the finest wheat fields in Butte county, showing that he is a thorough and most successful farmer.

E. M. B.
July 3, 1893.

Note.

At its last meeting, Eden Grange of Haywards adopted resolutions of respect to the memory of Bro. Orrin Dennis, recently deceased.

AUTOMATIC REVOLVING FRUIT PITTE!



For Peaches, Plums, Prunes, Apricots, Etc.

A SIMPLE, PRACTICAL MACHINE.
The fruit is simply placed into the two cups as the machine revolves and the pitting is done automatically. QUICK, EFFECTUAL WORK AND LOTS OF IT. Well made, very simple and durable. Will save its cost every day used. Sent cheaply by express. Order at least a sample. Price complete only \$5. Address

G. G. WICKSON & CO.,
3 and 5 Front St., San Francisco.
221 So. Broadway, Los Angeles, Cal.
141 Front St., Portland, Or.

HERCULES.

STEEL AND IRON.

The Best Windmill for Deep or Shallow Wells.

CENTRAL ACTION.

DOUBLE BEARINGS.

Warranted to run with less oil than any other windmill.

AUTOMATIC OIL BEARINGS.

THIRTY DAYS' TRIAL, IF DESIRED.

Deep Well Pumps, All Brass Cylinder Pumps.

PRICES ARE LOW—Save money by DEALING DIRECT WITH THE MANUFACTURER.

Improved Davis, San Joaquin and Hercules Windmills, Pumps, Etc.

Patent Non-Shrinkable Redwood Tanks.

Write for Prices.

R. F. WILSON, WORKS, COR. MAIN & OTTER STS., STOCKTON, CAL.



Co-operation in Sonoma County.

The movement at Santa Rosa for co-operation in fruit marketing, referred to in last week's RURAL, has taken definite form in an organization to be known as the Sonoma County Fruit Growers' Association. This organization was effected at a meeting held in Santa Rosa on Saturday last. For an account of that meeting we are indebted to Mr. E. D. Sweetser, editor of the *Sonoma Farmer*, who has kindly sent the RURAL his advance proofs, as follows:

The permanent organization of the Sonoma County Fruit Growers' Association was effected Saturday, July 1st, after the adjournment of the horticultural society. The meeting was called to order by Jonathan Roberts, chairman of the temporary organization. E. D. Sweetser, secretary pro tem, read the minutes of the previous meeting, and in behalf of the committee on by-laws, composed by Messrs. Gilman, Hart, Cook, Davis and himself, read letters received from A. Holman, editor of the RURAL PRESS; B. F. Walton, of the Yuba City association; Edward F. Adams, vice-president of the Santa Clara Fruit Exchange, San Jose; R. W. Hersey, manager of West Side Fruit-Growers' Association, of Santa Clara, all showing the advantages to be derived from co-operation. The writers clearly pointed out the grave importance of the details, and invitations were kindly extended for a personal inspection of their methods. Statistics from the Campbell Fruit-Growers' Union were also read. The facts derived from these sources all showed greatly improved net prices for the fruit-grower by co-operation. The by-laws were drafted after those of the Sutter Fruit Association, of Yuba City, with president, vice-president, secretary, treasurer, and a managing board of five members, including president and secretary. The members are to co-operate in handling their fruit, three days' notice in writing to be given to the secretary before withdrawing from the association; majority vote to change the by-laws; membership fee of \$1, etc.

The committee estimates an advance in price of their fruit through co-operating together, sufficient to pay all expenses and give handsome returns to members. The by-laws were discussed to some length, Mr. Davis objecting that they were too broad, and they were left in the hands of the committee. A move was made for the formation of a permanent organization by E. D. Sweetser, and ably seconded by Messrs. Jonathan Roberts, L. J. Gilman, E. E. Miller, E. Hart, C. H. Cook, L. F. Chinn, T. J. True, L. E. Ricksecker, and others. H. Gregory was called to the chair, and Jonathan Roberts was unanimously elected president of the association. The rest of the officers were elected one after the other, without any opposition, as follows: L. J. Gilman, vice-president; E. D. Sweetser, secretary; W. D. Davis, treasurer; and Messrs. Jonathan Roberts, L. J. Gilman, E. D. Sweetser, E. Hart and E. E. Miller, board of managers. The by-laws were then accepted, with the understanding that they should be subject to change at the suggestion of the managing board. It is the aim to have the association placed on broad lines, and the affairs will be handled by the board until a proper manager is found. A meeting of the board was set for Wednesday, July 5th, at 12 M. sharp, at the office of the *Sonoma County Farmer*. The secretary will be in his office daily between 12 and 1, where the fruit-growers may get information and learn of progress. A regular meeting of the association will be held in Horticultural hall at 2 P. M., Saturday, July 8th.

California Crops.

(Summary of Report of Observer James A. Barwick for Week Ending July 1, 1893.)

Siskiyou County (Butte Creek Valley)—Grain and grass six weeks late. Harvesting will not begin before August. Crops are looking well and a good yield is expected.

Humboldt County—Observer Weather Bureau at Eureka says: "The weather is favorable for grain. Wheat and oats heading out well and of excellent quality. Berries, both cultivated and wild, are ripening fast and will yield a large crop. Grasshoppers are making their appearance in the hills, but as yet are doing no damage."

Shasta County (Tamarack)—Feed good, stock fat and crops up to average. Gardens looking well. A fair but not a full crop of peaches will be gathered. Apples scarce, but small fruits in abundance.

Glenn County (Willows)—Wheat turning out better than was expected; the heads are well filled and the grains plump.

Colusa County (Maxwell)—Grain is arriving at the warehouse at the rate of 100 tons per day. The yield of wheat is in excess of estimates made before the com-

mencement of harvest. The quality is above the average. Wheat is weighing fully 60 pounds to the bushel.

Sutter County (Kirkville)—Crops on the plains light. Farmers on the river have suffered much, but will have half a crop. Prospect excellent for average crop of potatoes, corn and beans.

Butte County (Oroville)—Mr. McClellan lately visited Durham, Dayton, Nelson and Briggs and examined with some care the grain in those sections. He says he was surprised to note the latter so much better than the farmers had expected.

Yuba County (Wheatland)—Weather favorable for grain and fruit. Harvesting progressing and the yield will be all that could be expected. Hops doing well.

Placer County (Penryn)—The last of the Alexander peaches have been picked in this vicinity and the weather still favorable for all fruits.

Sacramento County (Folsom)—The Orangethale crop of apricots is good. Damage to this fruit in other portions of the State does not prevail here.

Solano County (Rio Vista)—Haying commenced and crop turning out heavier than usual. (Denver)—Barley harvesting is well along, showing the berry to be shrunken badly, but turning out from 6 to 10 sacks to the acre.

Sonoma County (Geyserville)—The dry winds causing great loss to peach-growers on account of dropping off of the fruit. (Fulton)—Hay crop as good as ever known.

Santa Clara County (Mountain View)—There will be more grain in this vicinity than last year and much of it will be first-class.

San Joaquin County (Lodi)—The warm weather of the past week has been good for watermelons and corn, and has hastened the ripening of wheat. The harvest will begin in earnest after the 4th.

Tulare County (Visalia)—The cool weather since the close of the rainy season has been worth many thousand dollars to the farmers of Tulare county. The absence of hot weather has permitted the wheat and barley heads to fill quite well. While the crops on unirrigated lands are light, they are much better than was expected a month ago.

Ventura County (Hueneme)—Threshing commenced and yield good. Honey is of excellent quality, and ought to command a good price.

Orange County (Orange)—English wal-

nuts promise about an average crop. Peaches not a heavy crop, except in some favored localities; the earlier varieties are now ripening.

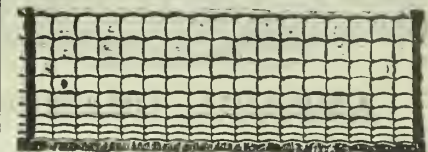
To the World's Fair!

WEEKLY EXCURSIONS!

Are you going? If so, call on or write to the undersigned before arranging for your trip. The "SANTA FE ROUTE" is the only line under one management from California to Chicago! Palace and Tourist Sleepers through to Chicago every day without change! Excursions every Tuesday. W. A. BISSELL, G. P. A., 650 Market Street, Chronicle Bldg., San Francisco, Cal.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos., \$1 10 mos., \$2; 15 mos., \$3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.



All Men Equal before

the law and "the Page"

A millionaire writes—"Perfect in every particular." An extensive breeder—"We shall build no other." A laboring man—"It keeps out my neighbor's hens." A lady—"Circulars do it, of do it justice." A ranchman—"The cheapest, reliable hog fence." A. R. R. President—"The best fence we have ever used."

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.



THE CALIFORNIA STATE FAIR

Of 1893 will be held at SACRAMENTO,

SEPTEMBER 4th to 16th :: :: :: TWO WEEKS.

\$20,000--CASH PREMIUMS--\$20,000

FOR CALIFORNIA PRODUCTIONS.

FARMERS AND HORTICULTURISTS!

As well as MECHANICS AND ARTISANS!

Should make preparation to exhibit at THE ANNUAL FAIR as the opportunity is specially given to show CALIFORNIA'S CAPABILITIES.

INVITE INVESTMENT of capital by showing the products of your section.

INQUIRIES AS TO LOCALITIES are being constantly made. We reply by sending reports of exhibits, which speak for themselves.

OBJECT LESSONS are valuable, and when written upon and their description heralded, they become a standing advertisement.

SHOW WHAT YOUR COUNTY can produce, and capital will flow in the direction thereof.

LANDS HAVE BEEN IMPROVED by the hundreds of acres in tree and vine planting through capital attracted by exhibits made at the State Fair.

MECHANICAL PLANTS HAVE BEEN ENLARGED by means of extra capital attracted by exhibits made at the State Fairs.

THE STATE FAIR is the stimulating agent of progression.

THE STATE FAIR is the medium that brings the two electrical currents—labor and capital—together each year.

THE STATE FAIR aids all classes. It is the recreation ground of the farmer, the school of information for the breeder, the point of observation for the mechanic, and the period of investigation for capital.

FAILURE TO EXHIBIT is an acknowledgment of weakness.

KEEP YOUR PRODUCTIONS before the people, and the people will always keep your locality in view.

THE USUAL EXTRA ATTRACTIONS for entertainment of visitors at the State Fair of 1893 will be furnished in keeping with the occasion, that exhibitors may benefit thereby.

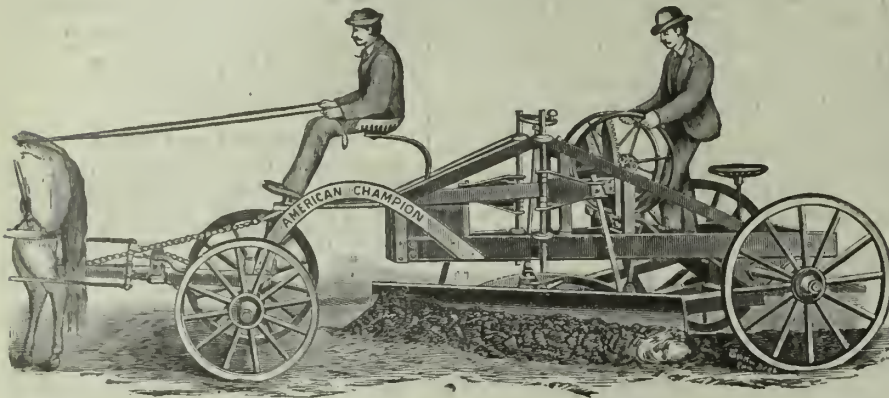
Information furnished upon application to the Secretary, at Sacramento.

JOHN BOGGS, President.

EDWIN F. SMITH, Secretary.

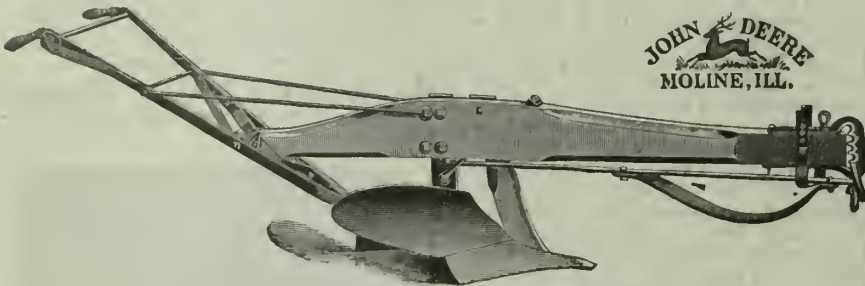
ROAD-MAKING MACHINERY

OF ALL DESCRIPTIONS.



AMERICA CHAMPION ROAD MACHINE.

REVERSIBLE BLADE WITH PITCH ADJUSTMENT. ROTARY OPERATING WHEELS.
COUNTERPOISE MECHANISM.
SHIFTING HIND AXLE, WHICH ADDS ONE-THIRD TO THE CAPACITY OF THE MACHINE.



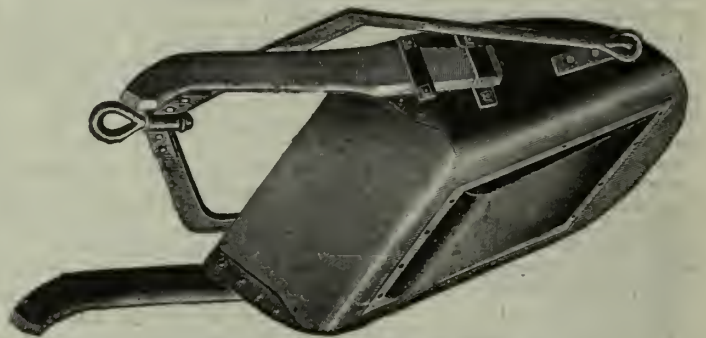
CALIFORNIA GRADER.

DEERE IMPLEMENT COMPANY, SAN FRANCISCO.

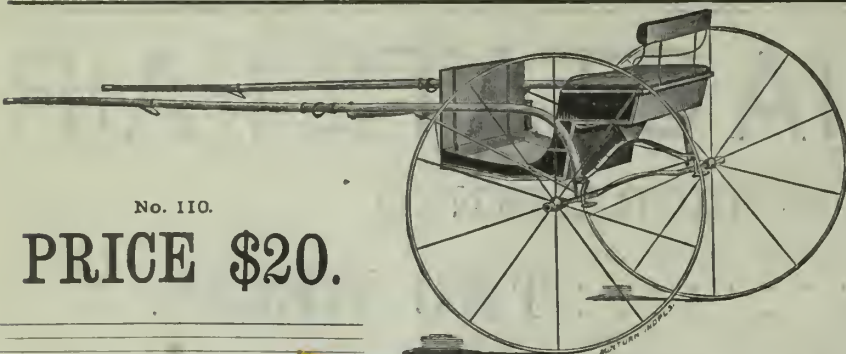
WRITE US FOR DESCRIPTIVE CATALOGUE.



WHEEL SCRAPERS.
THREE SIZES.



VICTOR SCRAPERS.
THREE SIZES.



No. 110.

PRICE \$20.

50% **SAVED.**



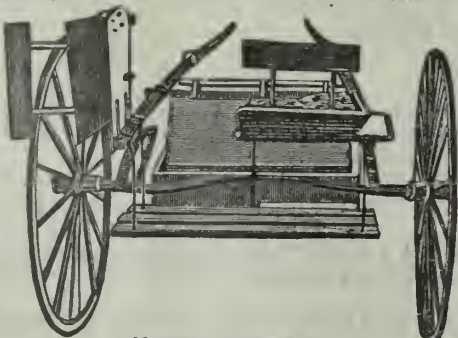
No. 60. Price \$80.



No. 201. Price \$195.

HARNESS, \$7
HARNESS, \$10
SURRIES, \$155

WRITE FOR
CATALOGUE
OR CALL.



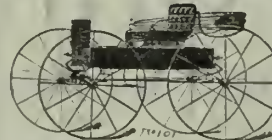
No. 25 1/2. Price \$30.

HARNESS, \$7
HARNESS, \$10
SURRIES, \$155

WRITE FOR
CATALOGUE
OR CALL.

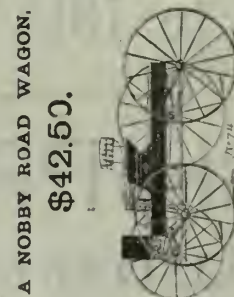
SEND US YOUR ORDERS.

WE QUOTE PRICES BELOW.



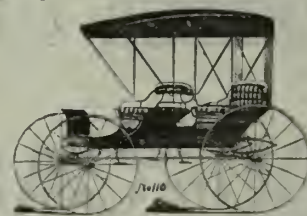
\$75

\$75

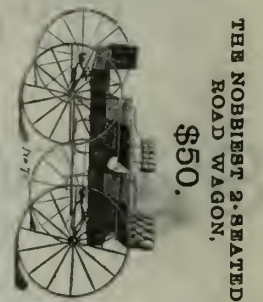


A NOBBY ROAD WAGON.

\$42.50.



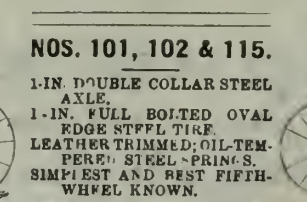
14-INCH AXLE, LEATHER TRIMMED,
FARMERS' CARRIAGE,
\$125.



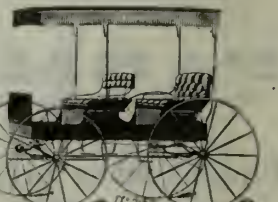
THE NOBBIEST 2-SEATED
ROAD WAGON.
\$50.



WITH LAMPS, \$100.



NOS. 101, 102 & 115.
1-IN. DOUBLE COLLAR STEEL
AXLE.
1-IN. FULL BOLTED OVAL
EDGE STEEL TIRE.
LEATHER TRIMMED; OIL-TEMPERED
STEEL SPRINGS.
SIMPLEST AND BEST FIFTH-
WHEEL KNOWN.



A BEAUTY, \$65.



MITCHELL FARM
WAGONS, \$100.

COMPLETE WITH CALI-
FORNIA STAKE RACK
BED, ROLLER BRAKE,
NECK YOKE, DOUBLE-
TREES & STAY CHAINS.

CARTS
FROM
\$15 to \$35



THESE PRICES
ARE FOR CASH, F. O. B.
NO CHARGE FOR ORATING
OR CARTAGE.

ALLISON, NEFF & CO.,

CALIFORNIA WAGON & CARRIAGE CO.,

36 1/2 to 44 1/2 FREMONT STREET,

SAN FRANCISCO, CAL.

S. E. COR. MARKET AND MAIN STREETS.....SAN FRANCISCO, CAL.

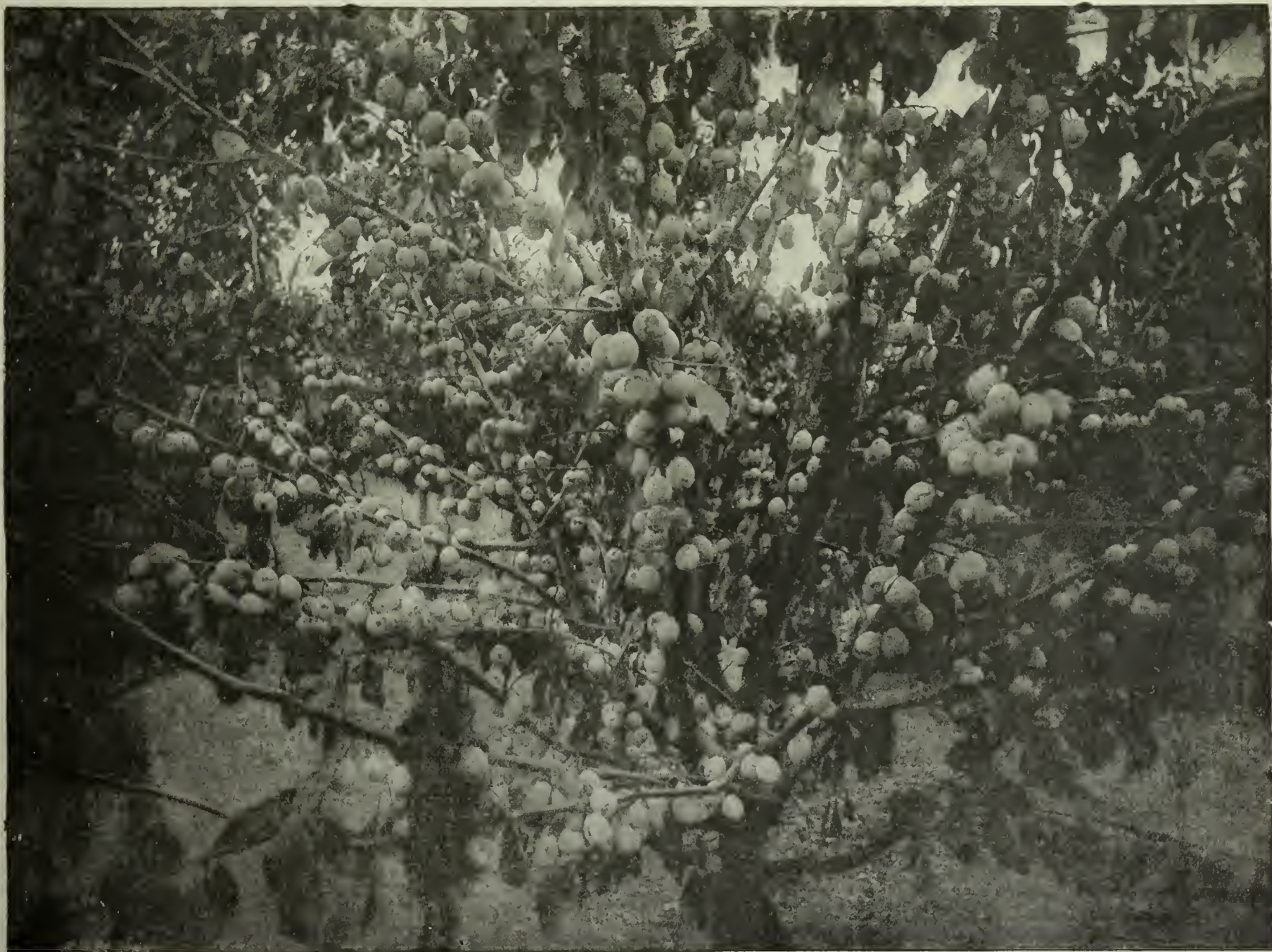


The California Prune Tree.

A glance into the interior of a fruit tree about these days will generally give the beholder much satisfaction. It is just the time when the many-hued, juice-filled globes appear in greatest confusion and give the richest promise. To our distant readers who cannot for themselves push aside the leaves and feast their eyes upon the actual, we

names, and the result is that it has no characteristic or defensible name which is in common use. The term California French prune is a contradiction; the term *petite* was evidently given to it by some early Franco-Californian, comparing the fruit with the *gros* prune, which is not a prune at all. It seems likely that at some future time the fruit will simply be known as the "California prune," and this will really be no wrong, for though we

other fruit in the whole list succeeds on so many soils and in so many regions. It even thrives in places where thought of growing any of the plum family had been abandoned. It is very prolific and has made the credible record of nearly 1200 pounds of fruit in a year. But this is, of course, the rare exception; one quarter of that amount is a good yield for a tree of good bearing age. We are indebted for this engraving, and the one upon a



A CALIFORNIA PRUNE TREE IN ITS SIXTH SUMMER.

offer the view of the fruit-bearing interior of a California prune tree which appears upon this page. It is a six-year-old prune tree bearing quite as heavy a crop as such a tree should carry. The picture gives the beholder such an idea of richness as form can convey, but one must add color to get adequate conception of the beauty and richness of a prune tree at fruit ripening.

The variety is the California French prune or *Petite* prune—two names which, if we mistake not, cannot be found in any reputable book outside of California. The fruit in its early years has had a severe local struggle with

are indebted to the French for the variety, we grow and cure such a different article that it little resembles the French, and for common uses in this country seems more acceptable. There is also a reason why this variety should bear the name California prune, and that is its large preponderance over all other plum varieties in this State. We grow others, but they are but exceptions to the rule which is the *prune d'Agen*. We presume it will ere long abandon all titles but California.

One very remarkable thing about this variety, is its exceedingly wide range of adaptations. We doubt if any

subsequent page of this issue, to the State Board of Horticulture, by whose authority they were reproduced directly from photographs, and, therefore, present actual scenes and things.

THE STATEMENT IS PRINTED, and we assume it to be correct, though we have seen no official announcement to that effect, that Nevada has taken the grand prize for butter at the World's Columbian Exposition.

A SALE OF APRICOTS is reported in Tulare county at \$37.50 per ton, the buyer picking the fruit.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half Inch (1 square).....	1.00	2.50	6.50	22.00
One Inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager

San Francisco, July 15, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—A California Prune Tree in Its Sixth Summer, 41.
Prune Drying—Grounds of Ten Thousand Trays, 44.
EDITORIALS.—The California Prune Tree, 41. The Week; Fruit Drying in California; Fruit Merchants' Club in Chicago; Miscellaneous, 42.
From an Independent Standpoint; Miscellaneous, 43.
MISCELLANEOUS.—Plan for an Out-of-Door Cooler; Honey in Ventura County, 43. Cleanings, 56. California Crops, 63.
FRUIT DRYING IN CALIFORNIA.—45-50.
HORTICULTURE.—State Horticultural Society, 50. Dried Fruit and Green, 51.
THE FIELD.—Pioneer Wheat Growing in the Upper San Joaquin, 51.
THE APIARY.—How to Produce Comb and Extracted Honey, 51.
THE HOME CIRCLE.—52.
YOUNG FOLKS' COLUMN.—53.
PATRONS OF HUSBANDRY.—From Worthy Master Davis; Yosemite and Surroundings, 54.
AGRICULTURAL NOTES.—58.
MARKET REPORTS.—61-2.

BUSINESS ANNOUNCEMENTS.

(NEW THIS ISSUE.)

	PAGE.
Gas or Gasoline Engines—Union Gas Engine Co.....	64
Fruit-Growers' Machinery—G. G. Wickson & Co.....	62
Fruit-Graders and Wire Work—D. D. Wass.....	64
Peach-Pitting Machines—American Cling-Stone Pitting Co.....	64
Agricultural Implements—T. A. Lauder, Sacramento.....	56
Fruit Trucks—San Jose Agricultural Works, San Jose.....	63
Fruit-Graders—W. C. Hamilton, San Jose.....	63
Water Tanks—W. E. Hampton.....	55
Prune-Dipping Machines—L. Cunningham, Saratoga.....	55
Gas Engines—Adam Schilling & Sons.....	63
Fruit-Pitting Machines—Baker & Hamilton.....	64
Prune-Dippers—W. C. Anderson, San Jose.....	55
Fruit Papers—S. P. Taylor Paper Co.....	63
Washing Machines—E. W. Melvin, San Jose.....	63
Hats—Herman the Hatter.....	55
Runing Saws—Pacific Saw Mfg. Co.....	55
Postponed Sale Notice—Grangers' Business Association.....	61
Prune Machines—J. B. Burrell, San Jose.....	63
Real Estate—John F. Byxbee.....	63
Bulls For Sale—H. B. King, Hollister.....	63
Berkshire Hogs—J. E. Alsford, Woodside.....	60

See Advertising Columns.

The Week.

We are fairly in the midst of California's season of sunshine. This week the RURAL affords many points for those who desire to estimate the industrial value of sunshine. We do not mean sunshine filtered through centuries of plant life and condensed in the coal mine, or in any other of its indirect advantages and benefits. We refer to the blazing sun pouring its heat upon the vast acreage of fruit, not on trees but on trays. We often receive inquiries from distant parts as to what is the best evaporator used in California, and we have always wished we could say—the sun, the glowing glorious orb of day, which will have no limit to its drying capacity until every square inch of open ground is covered with a ripe fruit. But we cannot conscientiously give this answer to most distant enquirers because their sun heat, through beamed atmosphere, or obstructed by clouds, is not adequate to the open air curing of fruit. To the Californian, however, there is little need for evaporators, and how he can use the sun to the best advantage in the preparation of peerless products, is the weight of our song in this issue of the RURAL.

THE GRAIN-GROWERS OF CALIFORNIA will be gratified to learn that the State Prison Directors have decided to sell jute bags on credit, providing the Attorney-General shall agree that such action is legal. The terms of sale shall be ten per cent cash, the remainder in a promissory note for ninety days, endorsed by two responsible property-holders. Newspaper statements are just now being published that the supply of grain bags is very short, but it will doubtless be found that there is ample on hand to meet all requirements. The trouble has heretofore not been scarcity of sacks, but scarcity of cash. The resolution of the Prison Directors is as follows:

WHEREAS, Owing to the stringency of the money market many of the farmers of this State are unable to procure bags for their grain crops, cash payments being required for the same, thus causing great loss; and

WHEREAS, It is the desire of the State Board of Prison Directors to afford the farmers in the present condition of affairs such relief as may be in their power to give; and

WHEREAS, There seems to be a doubt as to the authority of the board to sell bags except for cash, it is hereby

Resolved, That this board requests the Attorney-General of the State to furnish an opinion whether, under the law governing the sale of bags made at San Quentin Prison, this board is permitted to sell such bags to farmers on time, and, if so, the

Warden of San Quentin Prison is hereby directed to do so, requiring in settlement of the balance of the bills, after deducting the 10 per cent required by law in cash, promissory notes, payable in ninety days, without interest, to the order of the Warden of San Quentin. The notes to be indorsed in each instance by two responsible property-owners, whose responsibility must be satisfactory to a majority of the members of this board.

Fruit Drying in California.

Our leading space this week is given to the dried fruit industry. It is great in itself and great in its beneficent service as the surety of success in other lines of fruit production. We do not include the whole of the dried fruit industry in our present review, for we purposely exclude the vast and growing raisin and dried grape departments. They constitute a specialty which must be taken up at another time. Nor do we include the lesser lines of dried tree-fruits, for we planned to cover only those fruits which have been largely planted with the drying tray in view and not fruits the drying of which is merely incidental and for the purpose of saving waste. Thus the apple and pear are not included by our contributors. We chose those fruits which are produced in largest amounts and upon the proper handling of which the measure of success of many of our readers directly depends. Such fruits are the apricot, the peach and the prune. Even of the handling of these few fruits our treatment this week is not complete, though unquestionably the best ever presented in a single issue of a California publication. It must be reserved for future issues of the RURAL, and to the general discussion, which we trust this week's publication will provoke, to cover points which the present full showing does not reach.

We have spoken of the dried fruit interest as great in itself. The following are the shipments of dried fruits and raisins by railway from California during the years specified:

	1890.	1891.	1892.
Dried fruits.....	64,595,181	65,090,220	58,735,930
Raisins.....	41,120,350	44,954,350	53,113,320

These figures were compiled with great care for the State Board of Trade by Gen. N. P. Chipman, and may be regarded as trustworthy. They are, of course, not the gross product of the State in these lines, for they do not include home consumption nor the amounts going out by sea, but these are comparatively small at present. The figures which represent but the surplus which leaves the State by rail do, however, give some idea of the vastness of this branch of our industry. It should be remembered that this product has advanced from almost nothing to its present dimensions during the last decade, for the total production of dried fruit in 1883 was estimated at a little more than 2,000,000 pounds, or less than a twenty-fifth of the present export surplus. It clearly appears then how important a factor of our prosperity is the dried fruit product at present, and by recalling the fact that the greater area of these fruits is set with young trees which have not reached full production, the future greatness of the business cannot be denied.

With such an interest present and prospective, it is of the utmost importance that all work of production and preparation should be done well and cheaply. But is it the consideration which chiefly induces us to take up the subject at this time? If the reader will carefully study the articles by our contributors in this issue, he will be impressed with the great attention to detail which characterizes the methods of the best producers. Drying fruit as a commercial enterprise in California, is nothing like the fruit drying of the old times. It is time that fruit drying in all progressive regions of the United States has undergone great transformations and reached an extent, an exactness of operation and a uniform excellence of product, which was not dreamed of a score of years ago, but California has learned very little from the experience of other regions. Our conditions and materials are so different, that our producers have been forced to devise their own contrivances, and elaborate their own processes. That this has been successfully done is seen in the mastery of the markets which our fruits have secured. As this has been the manner and degree of our success, it is exceedingly important that as much as possible of the great coming increase should approach the highest standard of excellence, or else it will be impossible to put an increased product upon the markets of the country without lowering the price not only of the poor fruit, but, to a certain extent, of the good also. Study, experience and the knowledge of the practices of our best producers, are necessary to keep the product of new orchards to a high standard of quality.

Next to the importance of a good product, is the ability to reach such condition cheaply. The articles of several of our writers this week will be seen to bear directly upon cheap handling of the fruit, and the introduction of system and economy of effort in all preparations for drying as well as in the process itself. Let the new producer ponder these things. He may improve notably upon all existing

methods, but to do even this, knowledge of present high achievement is necessary. Much knowledge of this character will be found in our columns this week. May it be generally serviceable toward the end in view: the extension of our dried fruit product upon lines which guarantee safety and success.

Fruit Merchants' Club in Chicago.

Two years ago, when the announcement was made that there had been some arrangement among the Chicago fruit receivers or auctioneers by which only members of a merchants' club should be allowed to enter the auction-rooms during the sales of California fruit or to bid upon the same, we apprehended trouble. We anticipated the conflict which might arise between the inside dealers and those on the outside who desired a fair chance to get the fruit at auction prices. We held that making the auction-rooms accessible only to members of a certain merchants' organization was radically opposed to the California growers' interests which evidently are that no barriers whatever should be set about the free sale of the fruit. In order to dispose of the vast fruit product of California it is essential that its distribution should be as open and free as possible.

Not much has been heard of late of the Chicago merchants' combination, but now there seems to be a collision between the "ins" and the "outs," and some Chicago fruit auctioneers will not consent to receive bids from the club members alone but insist upon holding an open auction to which all responsible bidders are welcome. It is too soon yet to judge fully of the issue, for there may be local considerations which at this distance we cannot perceive, but upon the face of it it does not appear that the position of those Chicago merchants who combine to regulate and govern auctions of California fruits is justified in any way. The idea seems at enmity with the plans and needs of the fruit producers. Mr. Washington Porter of Chicago is reported by telegraph to have given the following statement in an interview:

"There is an organization in Chicago," said he in explanation, "known as the Fruit-Buyers' Association. It is composed of fully 90 per cent of all the legitimate fruit dealers in the city. The organization was formed some years ago and its objects are both social and business. The association owns a clubhouse of its own, in which fruitmen from all parts of the country are entertained when they visit Chicago. This is its social feature.

"Its objects, in a business way, are those of the Board of Trade or Stock Exchange. When fruits are shipped to Chicago from California they are sent to some one of the big receiving houses. In order that the highest price may be obtained for the loads, they are placed on sale by these receivers in auction houses.

"Here all the members of the association, as well as any fruitmen from the outside cities, are given a chance to bid on and buy the fruit daily. For a time the auction was open to the public, and it was patronized by fruitmen of all sorts, from the legitimate dealer who owned a store, for which he paid a good rental, to the Greek, Italian or Hebrew who drove a spavined horse about the city and hawked his wares from door to door. The first named endeavored to keep the fruit market steady and maintain a price which would permit of a profit not only to the grower in California but to himself as well. The second, the Greek, Hebrew or Italian peddler, had but one interest at heart, namely, to get his fruit for as near nothing as possible and to retail it on a margin so close that the legitimate dealer could not compete and remain in business.

"When the Fruit-Buyers' Association refused to permit unscrupulous street hawkers to break down prices and interfere with their legitimate trade, they were compelled to withdraw their support from all auction houses which failed to comply with their rule. The association is willing to patronize any auction house which looks to its interests, but it is not reasonable to suppose that its members will deal with a concern which helps to operate against its business interests."

This statement is of course from a member of the merchants' association, and represents that side of the controversy. The other side is not silent, but declares that the association is simply a ring to enclose the fruit and prevent outside dealers and auctioneers to have any chance at it.

Our present impression is that the merchants' association is endeavoring to continue a regime with California fruit which is fatal to the growth and profitability of the fruit growers industry. Our readers will well remember Mr. Porter's record on this matter. He has always claimed that the eastern people should only be given what California fruit they could pay round prices for. He has always worked for what seemed to be a sort of a gilt-edged trade. He has always operated upon the plan of cornering and restricting instead of distributing and spreading abroad. We fear his present preaching is but a part of the same old sermon.

Of course California fruit-growers are not going to be imposed upon by the schemes of men of no financial responsibility. They have had too much experience with that sort of traders, but there will scarcely that California fruit must go into every profitable avenue of consumption, and that all the people who will take it at a fair, not necessarily a high price, shall have it. The interest is too large to be long balked by any dealer or set of dealers if there should ever be men with such dispositions. Of this we shall learn more later.

From an Independent Standpoint.

In the duty of naming a successor to Senator Stanford, Governor Markham has the opportunity to do the State a great service; and, on the other hand, the chance of doing the State a great damage. The times are critical with California and she needs for the vacant place at Washington the best ability, the best character and the best energy that can be found. The requirements of the position are large, and a large man is wanted to answer them; and, it may be added, the State will not be satisfied with any other kind of representation. What is wanted—to repeat what we said last winter, before the election of a Senator by the Legislature—is a man whose public and private character are alike without reproach; who is in the healthful maturity of physical and mental powers; whose knowledge of the State is a result of personal observation and acquaintance with all parts of it; who is qualified by the breadth and solidity of his general knowledge to deal with questions of national policy; who has no relations and no record of past relations identifying him with the interests of the Southern Pacific Railroad Company; a man to whom the public may look for intelligent and frank expressions of judgment upon public questions as they arise—in short, a loyal Californian of clean character and connections, respectable career, personal energy and business habits. No man who fails to fill the measure of these specifications is qualified to represent California, or will be acceptable to the people.

Men of the right sort are not uncommon; they are to be found in every county and in every local business group; but they are not to be found in what has appointed itself a *political class*. But if the Governor will look beyond this class—if he will go among the people—he will find not one man but many able to represent the State with ability and dignity. The Governor should seek, not spectacular and magnetic qualities, not wealth or social grace, but strong common sense, personal force and business capacity. It is not lofty eloquence nor social ostentation that wins success in Washington so much as business-like effort intelligently and persistently applied.

The names prominently mentioned in connection with the senatorial appointment are those of Irwin C. Stump, Morris M. Estee, General Johnson, A. P. Williams, M. H. DeYoung, Major Bonebrake, Wm. H. Mills, Samuel Shortridge and Isaac Trumbo. Mr. Stump was chairman of the Republican State Committee during the campaign in which Gov. Markham was elected. He is the manager of the Hearst estate, and the right-hand man of Haggin & Tevis in their extensive business. Mr. Estee is a well-known lawyer and politician. It will be remembered that he was chairman of the National Convention which nominated Harrison for the Presidency. Mr. Williams is a wholesale liquor dealer of San Francisco. He filled out by appointment the unexpired term of Senator John F. Miller some years ago. M. DeYoung is the well-known capitalist and proprietor of the *San Francisco Chronicle*. Gen. Johnson lives in Los Angeles, and is the law partner and intimate personal friend of Gov. Markham. Mr. Mills is the head of the land department of the Southern Pacific Railroad Company. There is no reason to believe that Mr. Mills is a candidate in the sense of being a seeker for the place. The proposition of his name is made by the *Fruit Grower* of this city. Major Bonebrake is a prominent politician of Los Angeles. Mr. Shortridge and Col. Trumbo are active politicians of San Francisco. There is a general presumption, based on traditions of "political geography," that the appointment will be given to the middle or northern part of the State, since southern California has already a Senator in Mr. White; but this is a presumption merely. The Governor would be entirely justified in appointing a man from any part of the State, since it is the man rather than the place of his residence that is important.

In our judgment it would be a mistake to appoint any man connected with large capitalistic or corporate interests. We do not mean to imply that such a man as the *Fruit Grower's* candidate, Mr. Mills, for example, has not the requisite integrity to subordinate private to public interests. But a man trained in the promotion and protection of corporate interests, be he lawyer, agent, writer or other, becomes in time warped, so to speak, in favor of such interests. From long association he comes to believe honestly in the capitalistic theories of things. He is not to be blamed perhaps since it is human nature, the same sort of human nature that makes a merchant promote public policies favorable to trade, and the farmer support measures favorable to the interests of agriculture. The very integrity of a man who through the operation of this principle, has acquired the capitalistic and corporate view of things, would make him in a position like that of U. S. Senator, dangerous to the public welfare. We trust—and we hope not to be understood as implying criticism of or discredit to anybody—that Gov. Markham

will appoint to succeed Senator Stanford, no man whose relationships past or present are such as identify him with the interests of the corporations.

The world's yearly average production of silver from 1875 and up to the last report was \$116,000,000. The world's yearly average production of gold during the same period was \$108,000,000. The approximation of these figures, showing as they do that the two metals are being produced in amounts practically equivalent, is a very striking fact. It supports in a positive way the claim made by those of us who are bi-metallists, that, in spite of the turmoil and clamor about the relative values of gold and silver, there is substantial equality in the proportions of their production. The chief reason why silver is just now less valuable than gold is because it has been degraded from its true rank as a medium of exchange. Other circumstances have had something to do with it, but this is the main fact. Nature seems to have created these two metals and regulated the quantities and ratios of their production for the money function.

Silver has been deposed from its money character through the greed of capital. The creditor part of the world's business organization has decreed the single gold standard because that standard—as a sole measure of value—gives to capital a prodigious advantage in exchanges. For example, as the value of the standard increases, (and it is not and cannot be denied that gold is steadily appreciating in value) a dollar or a thousand dollars will buy an increasing proportion of commodities—and that means more for the capitalist and less for the producer, more for the creditor and less for the debtor. Back of the single gold standard is the capitalist nation, England. The world owes her a thousand millions of money, and since the "borrower is ever servant unto the lender," England rules the world in matters of commerce and finance.

To restore silver to its true position—to give it again the money character which the wisdom of forty centuries gave it—it is necessary to persuade or compel England to change her policy. There is no bi-metallist of any standing who does not admit that there is only one way in which bi-metallism—that is, the free coinage of gold and silver at a given ratio—can be successfully established, and that is by an international agreement fixing the ratio of exchange between the two metals to which at least the two principal commercial countries of the world—America and Britain—shall be parties. If we attempt to do it alone, as those who call themselves "champions of silver" propose, we shall fail; we shall put our country on a cheap money basis; we shall confuse exchanges and bankrupt those least able to stand up under the demands of a financial crisis. The real champion of silver is the true friend who wants to see it restored to where it formerly stood—side by side and relatively the equal of gold—and who will not consent to its use as "cheap money," shifting in value from day to day in accord with the fluctuations of the bullion market. The real champion of silver is the bi-metallist who proposes its use concurrently with gold, and who has knowledge and sense enough to know that its fight must be waged in the world of commerce. The American Congress must make the fight, but it must make it abroad and not at home.

The duties of the United States Minister to Austria are not very serious, but such as they are, they have been promptly performed during the past four years by Col. Frederick Grant. Because Col. Grant was an efficient Minister and because he is his father's son, Mr. Cleveland wanted him to continue on at Vienna and delicately intimated that fact to him, whereupon the young man replied that "while he felt due appreciation of the honor done him by the request, he could not remain in Vienna as the representative of an adverse administration." Apparently it is Col. Grant's idea that he has, during his term as Minister, been representing not the United States of America but the Republican party. The notion that he could not serve his country in such ways as may be necessary at Vienna, because the President happens to be a Democrat, is monstrously absurd. Suppose McClellan had beaten Lincoln in 1864, would Col. Grant's father have been justified in throwing up his commission and going home, because there was an adverse administration? We do not mean to imply that it was Colonel Grant's duty to remain at Vienna against his will, but we do say that if he had no better reason for leaving than because there is an "adverse administration," he is a very shallow man and the very degenerate son of his valiant sire. It needs to be comprehended in these United States and must be comprehended if the greatness of our youth is to expand into greatness of age, that this country is bigger than any party is or can be and that the responsibilities and duties of the citizen outweigh a thousand times any possible obligations of the partisan.

The death of Associate Justice Blatchford, of New

York, which occurred a few days back, makes a vacancy on the bench of the U. S. Supreme Court, which Mr. Cleveland will have to fill. Among the names suggested, are those Hon. E. J. Phelps of Vermont, Hon. E. H. Lacombe of New York, Hon. J. C. Carter of New York, Hon. Frederick R. Couderd of New York, Hon. Carlos French of Connecticut, Secretary Gresham, Secretary Carlisle, and last but not least, Hon. Benj. Harrison of Indiana. This last suggestion is a most happy one; and if Mr. Cleveland should in fact appoint ex-President Harrison, he would do a very excellent and admirable thing. The place would perfectly suit Mr. Harrison, and the giving and the acceptance of it would be an event of vast moment in our political history. Mr. Cleveland has the opportunity to put aside an old tradition and to make a precedent, and to do the country infinite service in the act.

Plan for an Out-of-Door Cooler.

TO THE EDITOR:—I have found the following plan a success for an out-of-door cooler, for anyone that can secure cheaply a couple of hundred brick.

Build a small brick house of them, say two by three feet, two feet high, right on the ground. To form the roof lay some slats across resting on the walls, and roof with a layer of the brick. Use no mortar of any kind between the bricks but leave these spaces open. The more spaces the better. Leave a hole on one side large enough to use as a door to be closed with a piece of board. The house should be built in a shady place, mine is under the edge of the porch, and where the wind can strike it. Arrange for the drip from the pump to run to the roof and percolate all over the walls or throw a bucket of water over it four or five times a day. It depends for its successful operation on being kept wet in a circulation of air. The bricks absorb a great deal of water.

R. M. SEELY.

Madera, June 30, 1893.

Honey in Ventura County.

TO THE EDITOR:—The extracting season is over and the process of canning and cleaning up is going on in all the apiaries. The quality of the honey is exceptionally good this year, and, though some have done well, others report not more than half a crop. I believe Ventura county has done better than the other southern counties, as we continually hear from private sources complaints of a short crop. As far as can be learned the beemen are holding their honey for six cents here.

C. Ventura Co., July 5, 1893.

IT DOES NOT PAY to sell drying fruit green. The experience of the past teaches that the best returns have been yielded to those who cure their own fruit or through a co-operative, community, or other drier. There is no argument better than the money argument, and the best cash returns are as a rule with those growers who are in no great hurry to get the money for their green fruit. We are convinced that it is the part of wisdom this year, as it has been in others, for growers to cure as much fruit as possible, thus placing it in form where it is not necessary to dispose of it at a given time, regardless of the condition of the market. The experience of the majority of our California growers confirms our statement.

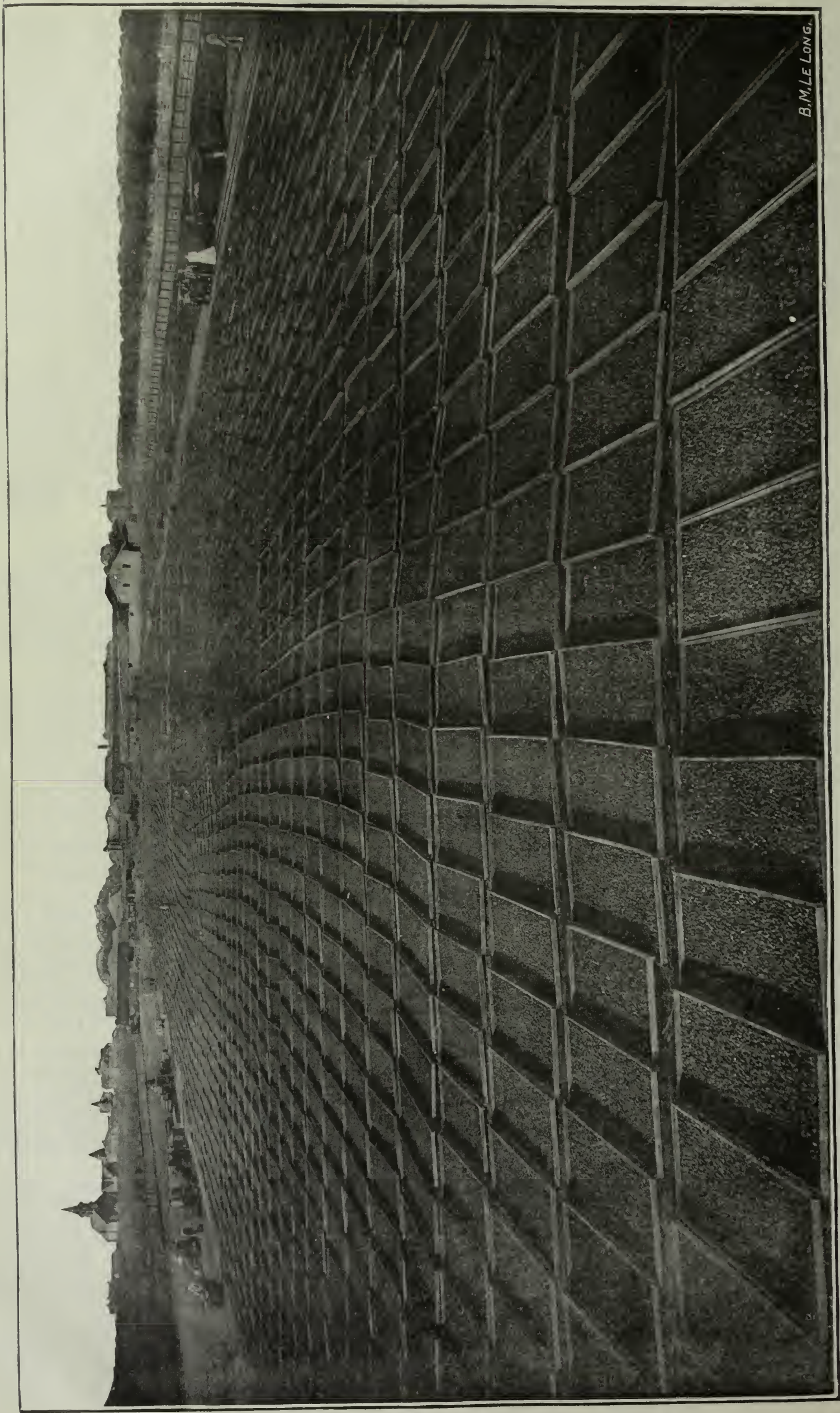
THE EDITOR OF THE FLORIDA *Farm and Fruit Grower* writes to the *RURAL PRESS* with reference to a statement of the *Minneapolis Produce Bulletin*, reproduced in these columns, that Mr. E. L. Goodsell, the New York fruit merchant, had made invidious comparison between California and Florida oranges before a meeting of orange growers in the latter State. The account of the *Produce Bulletin* is declared to be incorrect and distorted. Mr. Goodsell, it is said, on the contrary praised the California packing.

THE FOLLOWING WARM COMMENDATION of the *RURAL PRESS* is from that excellent weekly, the *Chino Champion*:

"The *Pacific Rural Press* has completed its 45th volume. It still stands at the head of all rural publications in the West, always leading in the agricultural and horticultural news of the day and discussing with the greatest ability questions of importance to the rural population. Above all things, the *Rural Press* is perfectly independent, fearless and impartial in its discussions of public affairs. 'From an Independent Standpoint.' This is something that should be appreciated in these days of mercenary journalism."

A PAPER WAS READ at a meeting of raisin-growers, at Fresno, Saturday, purporting to be an agreement between the growers, packers, and the association, in effect as follows: The growers are to pay the packers 40 cents per box for layers and \$7.50 per ton for loose raisins, 5 per cent commission and 2½ per cent brokerage and 25 cents per ton to the association to be collected by the packer, the packer to be liable to the association at the rate of \$1.50 a car for all raisins packed.

THE CALIFORNIA STATE FAIR for 1893 will open at Sacramento, September 4th, closing the 16th. Twenty thousand dollars in cash premiums are offered for California productions. Californians engaged in any line of industry, should send at once for premium lists, and prepare to make their exhibits.



B. M. LE LONG.

PRUNE DRYING GROUNDS OF TEN THOUSAND TRAYS.

FRUIT DRYING IN CALIFORNIA.

DRYING APRICOTS.

Mr. Towner Describes His Process At Length. Don't Sulphur Too Much.

TO THE EDITOR:—Was there ever a season wherein wind and rain so conspired together to beat flower and fruit from the trees? Hence half crops everywhere, though the season of blossoming promised never so well. There is something almost pathetic in the way the enthusiastic fruit-grower will keep daily watch over his trees, knowing himself at the mercy of the elements. He has done the best he can, and now chance must have its "finger in the pie" to make or mar; yet it is lucky for him if he has done his best, if he knows what best is, as to system of pruning—above all, keeping the trees thoroughly cleaned out of all dead wood and spurs. It is all the difference of no crop and half a crop such a year as this; and we all know that "half a loaf is better than none." But if the crop be small he should exert all the more care in perfecting every detail of management, making expense of drying as small as possible and no fruit left to go to waste. Here is where the small fruit-grower, who dries in his own orchard, has a perceptible advantage.

I have estimated year after year that as I can at least make 2½ cents per pound *net* profit per annum from my apricots and am offered only one cent a pound (I am estimating on the green 'cot), it pays me to dry. I and my family can make good wages, and I can afford to hire all the help I need.

I consider, also, that apricots dried on the spot are much superior to those picked and carted to a factory or dry-house elsewhere. The reason is obvious. The fruit is put to drying when fresher. But, more than this, it can be dried *when riper*. This means a great deal. Nothing that can be done to fruit, as far as making it look nice is concerned, can make that which is picked under-ripe and then dried, equal that which is picked dead-ripe and then dried. To the very moment of full ripeness, nature is elaborating a richness, a sweetness, a delicacy of flavor, that nothing else can imitate. But it takes the experienced, initiated taste to detect such differences, so let it be understood that all my talk on drying apricots is for those who dry in the orchard.

Fruit from the Trees—When picking-time comes I have the ground in my orchard under the trees as smooth and free from clods as I conveniently can. Then, as the fruit ripens, I have my pickers gently jar the trees and immediately pick up the fallen fruit carefully, which is as quickly as possible taken to the cutters. And right here I will say that I do not believe in any cutting or pitting machine for the apricot, that ever has or ever will be invented. In order to use a machine you must have your fruit too hard—a double waste in weight and quantity. No fruit need to go to waste by the process of picking I have mentioned, unless it be the very little green which may jar off, and not near so much as would be rubbed off were the pickers to climb about in the trees. (And this green fruit my wife makes into jelly.)

Ready for the Cutters—Towards evening, however, there must be fruit left over night for the cutters to begin on in the early morning. This fruit I have picked by hand, as it will keep better. We have generally paid cutters—they "lay" and cut both, of course—15 cents per 75-pound box. This is more than some pay; but I have better help at this price.

The Tray—The ideal tray, to my mind, on which to dry apricots is 2x3 feet and made of shakes, smooth side up, with inch stuff for *sides* and half-inch for *ends*, and cross-piece underneath. This is an important point to me, trivial as it sounds, for I look ahead to save wear and tear. Some make inch stuff for ends and half-inch for sides. But this way the sides are apt to spring when weighted and piled high, and hence many will pry off in one season's use. Not so the other way, according to my experience, for, you see, with inch sides, springing is not only prevented but the end piece, which must be lapped on, can have two nails in it; and in the stay or cross-piece underneath, a larger nail can be used. A mechanical eye can see by this that the parts of the tray are tied together as it were, and must necessarily be stiffer in handling and more durable. I generally allow 50 trays per ton of green fruit, calculating it takes from four to five days to dry the fruit. Stretchers for carrying the loaded trays must be strongly made, of size to hold two piles of trays, and any style otherwise to suit your fancy. The number of stretchers is according to size of orchard or crop and methods of handling and sulphuring. As to amount of fruit to be laid on each tray, one must know enough of the matter, by doing it himself, to be able to watch the cutters carefully and that he lays the fruit well, skin side down and pretty well crowded on the trays. And the fruit must be cut evenly in two—a clean cut—leaving no shred of attachment, or the halves will not dry in good shape. Very soft fruit must be deftly shaped a little when laid down.

How to Sulphur—And now to sulphuring and the sulphur-box: I shall not say a word on the much-discussed question of sulphuring or not sulphuring, only this: While one has to sulphur to compete with the market as it is now, I can never bring my conscience, or rather, I may say I know too much chemistry, to use the amount of sulphur some do or to leave my fruit so long in the sulphur bath. By experimenting I have to my satisfaction found the golden mean on this point. I use a light, stoutly-made portable sulphur-box—one that I can set down over my trays wherever I pile them. I make a frame and cover it with a certain tough but pliable paper I purchase at the paint stores. This, for myself, I make large enough to hold two piles of my 2x3 trays, 15 in a pile, *i. e.*, 30 trays, and leave room at one end for the pan I burn

my sulphur in, *i. e.*, 6 feet long, 3 feet high, 3½ feet wide, inside measure.

As to quantity of sulphur for a box of such a size, I use one coffee-cupful best California sulphur, leaving the fruit in the gas one hour; and as to quantity of sulphur and rules therefor, let me remark in passing that one must use enough to fill the given space with the sulphurous acid gas—that is, gauge your quantity of sulphur by the cubic contents of your box, not by the number of trays. My method of burning my sulphur is very simple. I take a newspaper, crumple it very compactly so as to make pockets all over it, lay it in my pan (an oil can split in two) sprinkle my sulphur in these pockets, crowding it down, set the pan by my piles of trays, and, before I let the box slide over them, set this paper afire. It is simple but efficient. I generally allow five pounds of sulphur for a ton of green fruit. Each time I sulphur I have my trays piled right by the place where they are to be spread on the drying-ground. When their hour is up, off comes the box to go over the next pile, and then the sulphured trays are spread out to the sun.

The Sulphur-box—One word as to the sulphur-box: It is a curious fact that one can get the box too tight. There must be a little ventilation in the upper part, so that the gas can replace the air, or else the bleaching of the upper trays will be incomplete; also have your pan of sulphur on that end of the box which is toward the wind. Be sure and have the paper in the pan so compact that it will not flash in the burning, and see that it is well going before letting the box down over the trays.

In the Sun—Do not expose the cut fruit to the sun till after the sulphur bath. I do not cover my fruit at night while it is drying, neither do I think it necessary to look my fruit over to select out that which is dry. If some dries before the rest I let my trays stand till all the fruit is dry; then I leave them out over night to gather moisture to soften them. Early the next morning I examine the fruit. If moistened just right—that is, pliable, but not sticky—stack the trays immediately, covering the top tray with an overturned empty tray. If the fruit be too moist, let it lie in the sun till it is just right; then stack, and have them put into the sweat-boxes the same day.

Boxing—Here comes the "scraper," with his 2x4 piece of steel (cabinet-maker's wood-scraper) and scrapes the 'cots into the boxes. There they stand for 24 hours or more—to sweat even—that is, lose all chippiness, get the uniform waxiness which, with its translucence, makes the dried apricot such an attractive fruit to look at and very palatable also uncooked.

But remember, *all* on the tray must have been thoroughly dried before this moistening and sweating process or the curing is not well done and the fruit will ball in the packing, mold and spoil. In the sweat-boxes, and till sacked, the fruit must be kept tightly covered from the moths. With average drying weather the apricot will sun-dry in four days. Excessively hot weather scalds the fruit. Breezy, moderate weather is best. Pray that no neighbor keeps bees while you are drying your apricots. If they do, insist on your rights, for it is against the law.

Sacking—For sacking, use a stationary box, fashioned to act as a funnel and raised about 36 inches from the floor. There are hooks about it on which to hang the bags. Dump the fruit through the wooden funnel in not too big quantities at a time, for the bags must be jumped and bounced and crowded with your hands now and then to make it pack solid. Well shaken, they will average 85 pounds to the bag, regulation size.

I use soft-laid twine, No. 6, and a big darning needle for sewing up the sacks. This twine sells generally at 35 cents per pound, and one-half pound is ample to sew 100 sacks. Sacks cost from 8½ to 10 cents apiece. When I have them made at home they cost 7½ cents per sack.

The Best Apricot—Of all apricots to dry I think the Early Moorpark is the most satisfactory. It dries a little quicker than any other apricot I have handled. It is the most prolific of all apricots, but being a *red* apricot it does not make so showy a dried fruit as the Large Early and is not so large as the latter.

Before I close I must again remark the advantage of drying fruit close to the orchard. You can thus dry it dead ripe. It is the *ripe* fruit that makes the dried fruit sweet and rich and waxy; but the ripe, juicy fruit, if cut and exposed to the sun to dry, unsulphured, would turn black. This is the chief reason why I believe in a little sulphur judiciously applied.

My orchard dries five pounds of green fruit to one of dry. Six to one is the general average, I am told. I think the difference is in the way I manage my trees and ground. I never irrigate my apricots. Some seasons, when I think too much rain has fallen for the good of the trees, I purposely allow the soil to dry out to a certain extent.

Once, when I had to sell my apricots green, being unable to handle them that year, they were shipped to a Riverside dry-house. Those who loaded the cars invariably exclaimed over my boxes that they were heavier for the quantity than any other fruit they handled. But the fruit individually was not lacking in size. Most was extra large. I have always found it paid me to look out for all these little details in raising fruit.

Santa Ana, July 1, 1893.

ARTHUR I. TOWNER.

DO NOT PICK TOO GREEN.

Much Depends on the Judgment of the Operator—Retaining Fruit Syrup.

TO THE EDITOR:—As the time for apricot-drying is at hand, I do not think it will be out of place for me to give my views on the subject and to urge that California fruit-growers give more careful attention to the important industry of fruit-drying, more appropriately termed "curing." California is noted for its great records in many lines of

industry, and the fruit-grower should make even a greater record in fruit-curing. I speak of the apricot especially. If there is any fruit which can be so cured as to be pleasing both to the eye and taste, it is the apricot. In brief I will give some of the important methods for curing the apricot in the Sacramento valley.

Do Not Pick Too Green—First, I believe in letting the fruit get thoroughly ripe. When brought to the dry yard, the fruit should be graded for size, making at least two grades, before cutting. Then cut the apricots entirely open, placing the halves on trays so they touch each other. By all means do not stand them on edge in order to save space.

Then place the trays in the sulphur house, subjecting the fruit to a sulphur bath for at least 40 minutes. Sixty minutes is better. After this treatment, lay the fruit out in the sun, letting it dry until it has the appearance and texture of soft leather. At this point great judgment must be used as to the dryness and moisture of the fruit. The proper method cannot be adequately described by pen or pencil. Everything depends on the operator, who must always take fruit up from trays during the middle of the day, as the moth miller is never around in the heat of the day making deposit of her eggs. Wormy fruit is thus avoided to a great extent. In the valley, when we take fruit from the trays we pile it in bulk on the floor in what we call the sweat room, made tight and dark.

In the Sweat Room—In a few days the fruit will begin a sweat or process of equalizing. While in this condition, shovel them over at least once, and, if found very moist, shovel them again in a day or two. Thus we have, in a few days, a cured fruit, equal to any evaporated article ever produced, of fine flavor, color and texture.

Value of This Method—By the above method of curing, I claim we retain more of the fruit syrup, which adds much to the quality and value of our fruit, as well as to its weight. Hence we are sure of a reward for our labor. Fruit of fine appearance, with good qualities, will find a market, not only in America, but throughout the world, at remunerative prices.

When we in this State resolve to *cure* our fruits, instead of drying them into bones, taking life and flavor away, the demand for California *cured* fruit will continue to grow in favor, and, in the near future, California *cured* apricots will be placed on the shelves of our merchants as a staple article of food. "We must improve" is, or should be, the motto of all California fruit-growers.

Yuba City, July 3, 1893.

IMPORTANCE OF SYSTEM.

Mr. Hobart Favors the Large Early Apricot. Use of Sulphur.

TO THE EDITOR:—I will comply with your request, keep my promise, and give you my way or method of drying apricots. I am not find of detail, still I know I have within me an element, call it what you will, which comes in a measure from early training, that will not allow of any ignoring on my part of the many little things that go to make up the whole; and I will say that it is the marshalling of the details in regular order and system that generally ensures success in any business. This will apply to fruit-drying. My experience in apricot-drying has been with fruit of my own raising, never having seen any apricots until they were grown on my own place. They were of the Early Golden variety, good bearers, tendency to overbear, fruit not large, when thoroughly ripe and dried surpassed in sweetness any of the kinds I now grow. The Large Early I have more of now than any other kind, and for delicacy of flavor, either canned or dried, I think they are ahead of all others. This assertion is, I know, open to discussion; let that come some other time. Having the apricots, and from appearances just now the fact is apparent that arrangements should be made to handle them (dry them) quite soon.

Trays—It is supposed trays have already been provided, those in use last year washed and made clean. For drying in an evaporator a different tray is used from that required for sun work. As most of the drying is done in the open air I will only describe the kind of tray I use outside. The size is three by three, made of six sawed shakes held together with heavy picket laths of the right length; they cost me 16 cents each. They would of course come at less price where lumber is cheaper. Shakes cut, laid down on my place, \$17 per thousand. Cost of labor not over two cents a tray.

Sulphur Boxes—Having provided the trays, sulphur boxes are needed. They are of course made of a size to receive the trays, and of matched lumber, leaving space enough between tray and frame of box to admit of free circulation of sulphur fumes. I do not make them to hold more than 20 trays.

Drying Ground—The drying ground, cleared and made clean as possible, and as I never lay my trays on the ground I provide material on which to lay the tray, generally fence boards 1x4 or 1x6. I lay a track, made of 2x3, from my cutting house to the drying ground. I have a car arranged with racks to receive the trays of fruit when sulphured and then run out to drying ground and spread out.

The Work of Drying—Now being prepared for work, and apricots ready, I call in my crew. I have heretofore employed Chinamen to pick my fruit. Shall try white help this year and make a note at end of season. A majority of my pickers have been young girls, residents of the valley. I find them more docile and less inclined to kick over the traces than the young man; still I seldom have trouble with the male gender, for it is well understood that business is the order of the day, that the owner of the place is about and will not tolerate any foolishness.

Having apricots and crew, we will commence operations. I would say, I have never paid by the box other than when cutting after hours. I hire by the day and board my help; paying by the day gives me, I think, more control over my crew than by the box. I may be mistaken. My location is a point in the case which I cannot explain here. I provide a short-handled knife made for the business.

I have a few of the so-called pitting machines. They are far from perfect and generally discarded after a short trial. I am in hopes a good pitter will be forthcoming before long. I question, however, if anything in the machine line will be made to successfully handle a fully-ripe apricot.

With apricot and knife in hand, what next? A receptacle for the cut fruit, which is a large milk-pan—no wood. These pans are washed once a day, and oftener if necessary. If the tinning comes off, a coat of shellac varnish is given them. I require the fruit to be cut entirely around—no pulling apart and leaving rough edges. I provide boxes for the pits; when full, carried and dumped on ground set apart for them. We have at noon a general sweep-up, at night a general clean-up; once or twice a week a washing down of decks.

The cutter having filled his pan, sets it on a table, and that ends his part of the job. He or she takes an empty pan and continues to cut as before. Now come the spreaders—generally experts in this line of the business. They also cut, changing off with each other for rest, as constant spreading becomes very tiresome. My table, on which most of the spreading is done, runs on a track and can be moved back and forth on the line of the track. A good spreader will place on a tray five, if not ten per cent, more fruit and in better shape than one not up to the business. Eye, hand and motion are in accord, and no time or surface is lost. Spreaders place the trays in the sulphur-boxes and the sulphuring is done by a few experts among the spreaders. I say experts, made so by long experience, who have a sort of intuition as to how much sulphur to place under a given number of trays and how long required to effect its object. I shall this season place on each sulphur-box a clock dial and movable hands, and when a box is closed and sulphur ignited, the hands will be set to the time. This will do away with all guessing as to length of time box has been closed. My sulphur-boxes are made with chimneys to open and close, so that inhalation of sulphur fumes is avoided.

I will not comment on the effect sulphur has on the dried fruit. The buyers say bleach. We do it. I have yet to detect any trace of sulphur on any of my dried fruit.

At the proper time the trays are removed from the sulphur-box, placed on car and run out to drying ground. Generally, on the afternoon of third day, the dried fruit can be bunched—that is, three or four trays placed on one tray. This is often done when trays are needed. On the fourth day the fruit is dry enough to put into bins and occasionally turned over to give it uniformity. When in right condition, put in good muslin sacks, put away under cover, and there it remains until ready to be overhauled, changed from original to new sack, sewed up and sent to buyer.

All fruit should be graded; it facilitates the drying as well as the selling of the fruit. JOSEPH HOBART.
Nordhoff, Cal.

MR. BONINE'S METHODS.

The Whole Story of Apricot-Drying From Beginning to End.

TO THE EDITOR:—My experience is limited to my small fruit ranch of 50 acres, and ten years a horticulturist. I grow fruit because I love to. I love to watch trees grow. How they respond to good care and good treatment! From the time the first tiny bud bursts in spring until the crop is harvested, what an unfoldment! Who can tell what is wrapped up in those tiny buds, leaves, flowers, wondrous fruits? Tons, carloads, train-loads, to be sent to our hungry neighbors in more ungenerous climes, or maybe no fruit, and the grower must do all the year's work over again and hope for next year's crop. I feel sorry for that man who follows a business and cannot throw heart and soul into it.

The Apricot Tree.—I head my trees low, start them to branch knee high; as soon as they grow ten inches I nip them and get two growths the first season, and so on every year until they come into bearing, and then I prune but once a year. Of all trees excepting the orange it is my favorite, and is next to the orange in beauty if properly pruned. I have tested many varieties. The Royal is the most regular bearer here. The lovely Moorpark is untrustworthy.

Thinning.—We invariably go over our orchard whether the crop is light or heavy and thin our fruit, thinning by hand, the only proper way. I know people who throw stones up, and others who use pitchforks and thrash the trees. I have been told, "Oh! I never thin; the big ones will crowd the little ones off."

Picking.—I have a carpenter make my step-ladders; just underneath each step I run a quarter-inch iron rod, a washer on one end and a nut and washer on the other. When a step wears out, I saw it in two, unscrew my nut and slip in a new step and screw up my nut again. This is better than to have both ends riveted. Of course I keep my ladders painted. I use chip baskets holding about 30 pounds for picking baskets—they are 11 inches high and 15 inches diameter—and use duck to cover the outside of the bottom of the basket, running it up about three inches and sewing it to the basket with tie yarn. I use my old overalls for this purpose. When the picking is done, they are scrubbed, dried in the sun and put away in a room. I take a 2½-inch harness snap and break out the tongue, and bolt it, running the bolt through the eye, to the top of the top step of the ladder. The hook protrudes over the edge of the middle an inch, opposite the steps. I tie a small ring to the center of the basket-handle, and the picker slips the ring into the hook, and the weight is in the center of the ladder, and the picker has both hands to use. I never hire a Chinaman. I get the most intelligent people I can, not the cheapest. In picking, we go over our trees three or four times; the last time, and only the last, there being only a few scattering ones on the trees, we lay down sheets and shake. We use two sheets 10x20 feet to each tree. We like this much better than a single sheet split to the center.

The men carry sticks, and odd ones that will not shake they push off.

Cutting.—I have women and girls cut and lay the fruit. Some hold the knife perfectly still and roll the fruit on the blade; others move both knife and fruit. The best knife for cutting I have yet seen is the small pocket pruning knife. The blade is somewhat concave or circular and fits to the fruit. Many devices have been made to cut fruit by machinery, but as yet I have seen nothing so neat as cutting by hand. The difficulties are, the fruit must be sorted before being cut, and handled again in spreading. In time we may have some good cutting machines, but soft fruit will have to be cut by hand.

The Trays.—We prefer cutting the fruit and laying at once, perfectly flat, cut side up. Some crowd and lay on edge; this is bad, for it does not hold its round, pretty shape, and, if quite ripe, the juice runs out and the fruit does not dry as quickly. My invariable advice has been, buy plenty of trays; then if you can sell to the canners or shippers to good advantage do so, if not, you can dry and not be at their mercy. We use 3000 2x3-foot trays, sugar pine, end pieces 1½ inches, side 1 inch, and bottom shakes (four pieces) each 6 inches wide and ½-inch thick; they should be so, but when you get them they will be ¾-inch wide. I ordered a lot of shakes from Sacramento; they cost me \$80, and the railroad company charged \$40 freight. It won't be so when the Government owns the railroads. If one is doing a large business, 3x6-foot or 8-foot trays will be most suitable, but we dry only the fruit grown on the ranch and prefer 2x3-foot trays, because one man serves the cutters with fruit and trays, and can pick up two 2x3s easily, while 3x6s require two men to lift each tray. My trays are put together with wire nails. It is false economy to buy a lot of redwood shakes and tack your trays together slightly. I have seen a lot of trays in use, several thousand continually requiring one man on repairs.

The Drying Ground.—As soon as the fruit is cut we place it on cars, and when we have 50 trays we run them into our sulphur-box. The fruit should go into the sulphur as soon as possible after it is cut, and into the sun as soon as sulphured. This, combined with having your fruit ripe, is the secret of beautiful, bright fruit. We let our fruit get ripe but not mushy, and sulphur for two hours; this keeps our fruit a good bright color. We use the best sublimed sulphur, finding the cheap sulphur unsatisfactory, as it leaves a large residuum that looks like crushed rock. We know of parties who sulphur for four hours, and leave the last batch in the boxes all night; they said that they did it because the buyers wanted light fruit. We consider this too much of a good thing. Three or six pills may be a very good thing in a place, but a box in the same place might be an evil.

Sulphuring.—I cut the side out of a five-gallon coal-oil can, sink it in the earth in my sulphur-box, and for a cover I use a board larger than the can, putting grain sacks over it, and a strap on the top for a handle. As soon as we open the sulphur-box, after using, we cover our can and then draw out our carload of fruit with an iron poker hooked underneath, and let the air drive off the fumes. We advise the use of cars by all means. Permanent slides in a box are exceedingly bad, because you need your fruit out as soon as sulphured, and to be ready to shove another car in. Inhaling strong fumes of sulphur is exceedingly trying on one's lungs. We chalk a clock-face on our box, with a pine stick for hour hand, and set the time when the fruit goes in.

We dry our fruit on the ground in a stubble field from which barley-hay has been cut, laying the trays flat. A better way is to have platforms knee-high, slanting a little south, upon which to place the trays; but this entails considerable expense. I made a test of fruit on a galvanized-iron-wire tray a foot from the ground, and fruit on a solid board tray on the ground. The fruit on the wire tray dried in one day's time less than the board tray. I have discarded a few wire trays, the sulphur oxidizing the iron or zinc, causing the fruit to be marked.

When Cured.—We leave our fruit in the sun until dried—not bone dry, like some of the buyers from back East want it, so that they can turn their hose on it in their sorting lofts, but dry enough so that the fruit is leathery and pliable. If you dry it as dry as bricks in a kiln you drive something out of it that you can never get back.

When the fruit is ready to take up (we do this after dinner), we dump a number of trays on one, using a short, broad wooden paddle to scrape any that may stick, and when the tray is full we cover with an empty tray and stack the empties up in shapely piles so that when the men come to haul the trays in, two men can catch up a great pile at a lift and thus save time.

Our prevailing wind is from the southwest, so we begin laying trays on the extreme southern end of our dry-ground and fill north, thus keeping the dust, if any, north of the trays. As soon as our dried fruit is gathered in trays, we haul it to our rooms where we keep our dried fruit and dump it on a pile. The floors of these rooms have been scrubbed, using concentrated lye, and wire netting tacked over the ventilators. These rooms are never opened at night; if they were, the fruit moth would fly in and deposit eggs.

Marketing.—I never sell my fruit early; I wait until apricots are ripe and generally until they are dried. Once I would have done better to have sold early, but only once. I sell for cash; several operations with commission houses (with one exception) were altogether in the commission man's favor.

I make my fruit-boxes out of five-gallon coal-oil boxes, nailing up top and taking off the side for my top, nailing securely with 8d. cut nails, cut hand holes in ends, and nail an inch-square strip on each top end, so, should there be any fruit higher than the level of the box, it will not get crushed. Some fruitmen have large cracks in the lower corners of their boxes, and sometimes fruit will push through and smash and muss up your wagon. I like boxes without cracks.

Our pits we use for fuel in our cook stove, mixing with

wood. Care must be taken in using them, as the oil in the seed makes an intense fire, and you may burn out your stove. Use a few at a time. We also use them in our arch in heating concentrated lye when dipping prunes. Some we sell to nurserymen. Last year we sold them at \$8 and \$10 per ton. I leave my fruit in piles until sold, then bag it and ship. I sell without sorting.

I should have stated that it costs twice as much to pick from ladders as it does from the ground, and twice as much to pick for a cannery as to pick for a drier.

It takes one day longer to dry fruit in new trays than in old worn trays—the new white wood reflects the heat; the old dark ones absorb it.

Asphaltum paper is not good for trays. A friend sent me two or three to try; the fruit bellied them down in the center, and, when the boys got them to the dry ground, part of the fruit had gone through.

Some of my sulphur boxes are made of pine boards tongued and grooved. Last summer I made one of P & B building paper sold by the Paraffine Paint Co. The inside framework was of 1x4 lumber, over which the paper was laid and tacked with laths covering the seams on the outside. This was made long and just high enough to lift trays easily, was raised and lowered by a windlass, and was quite satisfactory.

I planted some apricot trees last winter 30 feet apart in the only true way to plant trees, *i. e.*, equilateral triangles. This is farther than I used to plant. If I change my views again, it will be to place them still farther apart.

E. A. BONINE.

Lamanda Park, Los Angeles Co., Cal.

THE TIME TO GRADE

Grade Fruit Before Spreading, or Assort on the Tray—Shade As a Factor.

TO THE EDITOR:—As growers are, one by one, giving up the old idea of turning the refuse that could not be disposed of otherwise into dried fruit, and planting with that market in view, they are slowly beginning to realize the importance of putting their product in the shape most attractive to the consumer as well as choosing such varieties as will not only yield best percentage, but most desirable quality of the cured product.

A large share have not yet realized that as soon as fruit is just dry enough to keep safely, it has more weight and more of every other valuable quality than when the curing goes on until it is like sun-bleached hay. It seems as though the majority of dealers in California products had been pursuing a policy of present gain and death to the trade. The dried fruit business is no exception when they demand that the fruit shall be bone dry to rattle like marbles and delivered to them in sacks so that they can grade, repack, moisten and realize a profit sometimes large, but a profit that ought not to be between producer and consumer. Now, to dry uniformly and just enough, it is either necessary to grade fruit before spreading or assort when on the tray.

With several of the grades a carload of peaches, plums, apricots or nectarines can be run through in a few hours at a nominal expense. When a peach three inches in diameter lies side by side with one half that size, we all know that the one will rattle when the other is half dry. You either dry the small one to death waiting for the other to cure or have mouldy fruit by taking up the whole tray in time to save the small fruit from injury.

Again, in prunes, they find it necessary to grade before dipping as the smaller the fruit the longer it must remain in the dip to cut the skins, so that they will dry. Again, in selling fruit, it is a rule of general application that in case three sizes are made instead of one, the first is likely to bring a fancy price; the second quite as much as the whole would if mixed; and, whatever you get for the third, is clear gain over what you would have received had the whole been mixed. When business is new there are always buyers who will not discriminate in quality; but this rule will hold in any good market where goods are rated on a fair basis. Again, pitting machinery is steadily coming into general use and destined to be greatly improved in the near future. All such machinery will work much better upon fruit of uniform size, and the common thumb-and-finger machine works better on that kind, too. Grading is likely to pay at least once in cost of pitting, several times in loss by shrinkage, and again in quality of product.

Finish Curing in the Shade.—It has been noticed that those who pride themselves on the flexible and uniformly cured fruit, in which the jelly is nicely retained, are particular to stack the trays toward the close of the drying process; also to finish by stirring in the curing room when passing through the sweat.

We very seldom have nights so dry but that fruit is just a little better when kept covered, especially when newly cured, and it is essential to successful curing that conditions should be such that it will dry rapidly when first spread. Hence it is a practice with the best fruit dryers to avoid spreading fruit late in the day. They prefer to keep it in the sulphur box over night and spread the first thing in the morning.

FRANK S. CHAPIN.

HE HELPED HIMSELF.

One Grower Tells How to Provide Economical Appliances.

TO THE EDITOR:—As I am much interested in reading all that anyone else writes regarding drying fruit, I thought it only fair to add my mite to your Dried Fruit Edition.

Trays.—Last year I bought shakes from a box factory and made trays 2x3 feet, which I like very much. The sides are ¾x1½ inches by 3 feet long; the ends ¾x1 inch by 22 inches; the bottoms of boards ¾ inches thick, 9 inches wide, 2 feet long. So four make a tray. Cleats are used under the ends of the bottom boards ¾x¾ inches by 3 feet. Nails are used long enough to go through the

cleats and bottom boards and reach well into the sides. The lumber is of pine, and all the inside surfaces are dressed. I had the end pieces lower than the sides so that when piled there would be an inch space for free circulation of air and sulphur, and for convenience of getting hold of them. I find this size better than larger where there are women and girls to do any of the handling.

Curing Boxes.—Not having a good house for curing the dried fruit, I made some boxes about 10 inches deep, 3 feet wide and 6 feet long. I put them at convenient points on drying ground, and just as soon as fruit is dry enough to handle without mussing badly, I dump it into these boxes. I let it cure a day or two and then put more on top of it, stirring it up with a shovel in the meantime if necessary. These boxes affect a saving of trays, and the fruit cures more evenly than if left on trays too long. I find each year that I can put my fruit into bulk a little less dry than I thought prudent the year before, and so am gaining weight.

Getting Fruit to Drying Ground.—I took the wheels, axles and the front iron foot or support of an ordinary hand-cart and attached them to a frame, made of scantling, 6 feet long, 2 feet wide. On this cart we can take with two persons about 600 pounds of fruit on the trays into the sulphur box, and from thence to the ground. The first year I had no track; the next year I made a track of fence boards. We find it a big improvement over carrying out fruit by hand. If the ground is free from stones and made smooth, a track is hardly necessary; but my drying ground is a stony knoll, and the little pebbles will jolt the cart enough to turn the cut fruit topsy-turvy.

Fruit Should be Ripe Before Cutting.—It makes best fruit and weighs heaviest. I sulphur quite heavily, but I find that my fruit grown well up on the mountain side is more highly colored than that grown in the valley, and I can't bleach it out so white; but have had several persons state it was of excellent flavor. Last year I tested 3240 pounds of green apricots. They made 623 pounds of dry fruit which sold for \$73.20 net. Counting cost of cutting at 20 cents per hundred pounds of green fruit and the other work of drying at one-half cent per pound for the dry fruit, makes a total cost of \$9.60; deducting from selling price, leaves \$63.60, or a trifle over \$39 per ton. I had been offered \$27 per ton by a dryer in Napa.

These figures are not as exact as I hope to have the present season, and amounts are small, but they are close enough for me to figure on in future years with larger crops, and are very strong in favor of doing my own drying, as the distance from town makes hauling green fruit expensive, and I keep money in my own and neighbors' children's hands.

I have not attempted to write fully, but to speak of a few points where I have done a little differently from others whose work I have seen.

I am well aware that on large farms there are in use fruit trucks or cars to run on well laid tracks; also that in many places larger trays are used where there is plenty of help to handle them, but on a small farm, where the farmer and his family do most of the work, the small trays are an advantage, for oftentimes it is convenient to have the little fellows to haul in the empty trays. W. F. MOYER.

Napa, July 3, 1893.

DRYING THE PEACH.

Mr. McKevitt Tells What Are the Three Requisites in This Branch.

TO THE EDITOR:—The foundation of the fruit business is drying, and to make a success of this important branch, three things are requisite:

1. Good fruit.
2. Good drying facilities.
3. Close attention to details.

It is just as important to thin fruit for drying as it is for sale to canners or for shipping, and pays just as well in proportion. It is an axiom among all intelligent growers that it is much less a strain upon the tree to produce a crop of fine fruit than of small ones, the great effort and drain upon the tree being in the maturing of the seed or pit, rather than in the pulpy covering of the pit, which is the valuable part to us. It is much easier to handle a crop of fine fruit than poor fruit. It can be done with less help, less expense and less mental wear and tear. When such a product is ready for sale, either green or dried, the increased price it will always command, to say nothing of the readiness with which sales can be effected, are facts so well known as to prove conclusively that it pays to thin.

When to Gather.—Fruit should be gathered for drying when it is fully ripe. It is not necessary that it should be soft, but it is better to be soft than too green. It may be picked by hand or may be shaken from the tree, but as cheapness of handling is every day becoming more the true factor of profit in our business, the latter method is recommended. To do this successfully the grower must wait until his trees are plentifully sprinkled over with ripe fruit. Then, if the method of the writer is followed, four men will take two strong pieces of canvas, each 10 feet wide by 20 feet long, and spread them under the tree to be operated upon, the edges of the canvas lapping, so that a square of 20 feet is carpeted. These men by means of long poles with a fork or hook at the end, now fasten to the branches of the tree, and by vigorous pulling and shaking, cause all the ripe fruit to fall, that which is too green remaining on the tree. When the shaking is completed, each man seizes the end of his respective piece of canvas, the fruit is rolled to the center, and from there into the picking boxes which have previously been placed close at hand.

How to Cut.—The fruit having been put into the boxes, is hauled to the cutting shed, going as soon as possible to the cutters. It may be objected that shaking bruises and damages the fruit, but experience teaches that if it is cut and sulphured soon after, it is impossible to detect any difference. The great point is to shake the fruit only as fast as the cutters can handle it. The fruit is cut just as it comes,

without sorting as to size; but should any very green peaches be found they are put aside to be cut later. Each specimen should be cut clear around, and not broken, or the pit "squeezed" out, as is the custom with many workmen. The cut should be made lengthwise following edge of the pit, so as to show greatest size of the fruit. As fast as cut the pieces should be laid flat on the trays, cut surface up, with the edges of the fruit barely touching. It is bad practice to cut a lot of fruit and spread it afterward, as this makes second handling necessary and gives it a "mussy" appearance. Prices for cutting range here from 20 to 25 cents per 100 pounds for apricots, 15 to 20 cents for freestone peaches, and 25 cents for clingstone peaches. Cutters get their own trays, and place them, when filled, in the sulphur box or on the car.

Sulphuring.—When the box is full, a charge of sulphur (about one pound to 50 cubic feet of air space) is ignited under the fruit; the door is closed and the time recorded on a wooden dial like a clock face, by means of a movable finger or pointer. One hour is allowed for bleaching, time sufficient to produce a bright article, and not long enough to injure in any way the flavor of the product. Fruit should be subjected to the sulphur fumes at the earliest possible moment after being cut, and the sulphur box should be sufficiently tight to prevent the escape of the gas.

Drying in the Sun.—In the Vacaville district it requires, in June, July and August, from three days to a week to dry in the sun. When the fruit is sufficiently dry (so dry that a handful may be gathered up from the tray, and having been pressed together, separate when allowed to fall), trays should immediately be stacked, and the fruit taken off as soon as possible. When one has but little fruit, stacking is not necessary; but with large lots, especially if short of help, stacking lengthens the drying process, prevents over-drying and gives opportunity to do more pressing work.

Assorting for Size.—Fruit should be assorted for brightness on the trays, the dark pieces being put by themselves. Assorting for size may be done later and faster by means of wire screens made for the purpose.

In the Fruit House.—After the fruit has been taken from the trays, it should be hauled to the fruit house, or, in its absence, to some convenient place, and dumped into a heap upon the floor. It then should be covered up with a good, closely-knit canvas. The canvas is a great protection from moths and prevents discoloration, besides keeping off the dust. If the fruit has been put into the heap rather "soft" or "green," it will be necessary to turn it by shoveling, once or twice, as its condition seems to require. Leaving it here for ten days or two weeks, it will have gone through a "sweat," which should put it all into a fine, pliable condition, and fit it for sacking or boxing, as may be desired. F. B. McKEVITT.

Vacaville, Cal., July 1, 1893.

FOR THE PRIMARY CLASS.

Mr. Righter Tells About Prune Practice in Detail—Time to Gather.

TO THE EDITOR:—I accept your invitation to give the primary class in fruit drying a few hints as to the practices in prune drying which I have found most satisfactory.

Trays, Size.—Profit by the experience of others and make no tray less than 3x8 feet. It costs as much to handle a 3x6-foot tray as a 3x8-foot tray, while about one-third more fruit can be handled by using the larger tray; thus, using a 3x6-foot tray results in a great and unnecessary loss.

Material Used.—So near as I can learn, the preference is decidedly and wisely in favor of Oregon pine for sides, ends and lath and 6-inch sawed redwood shakes. The objections to white fir, termed "white wood" by some, are that "it warps badly" and "is short-lived." Split redwood shakes also have the fault of warping more than sawed redwood. With the exception of the lath, first-class redwood makes a very good tray—perhaps as good as any. The tray frame should be 1x3 inches. The redwood shakes should be seasoned before using for the tray, or the fruit may be stained where it comes in contact with them.

How Trays Are Made.—Make a rough table 5x9 feet, and as high as convenience in nailing may require. On this construct a tray-holding frame in this manner: Fasten firmly to the table's top two side-pieces, 2x3 inches and 7 feet 10 inches long. The inner sides of these pieces should be parallel with the side edges of the table and respectively 11 3/4 inches from those edges, their ends being respectively 7 inches from the ends of the table. The distance between these pieces is 36 1/4 inches. Place two 3-foot end-pieces, 2x3 inches, the inner sides of each being respectively 5 1/2 inches from and parallel with the ends of the table, and the ends of the end-pieces on a line with the inner sides of the side-pieces and 1 1/2 inches from the ends of those pieces. This completes the outer portion of the tray-holding frame, the dimensions of which are 36 1/4 inches by 8 feet 1/4 inch, being 1/4 of an inch larger on both the sides and ends than a 3x8-foot tray. Put the tray-frame into this incomplete tray-holding frame and nail it together with eight 2 3/4-inch wire nails. The inner portion of this tray-holding frame may be made of 2x2-inch material. Place the two side-pieces, 7 feet 10 inches long, within 1/2 of an inch of the inner sides of the tray-frame, and the end-pieces the same distance from the ends. Make the end-pieces each 15 inches long, leaving 4 inches unoccupied in the middle of the tray-holding frame.

Fill this four-inch space through the center of the tray-holding frame with a piece of timber 2 1/2 inches thick, 4 inches wide and 7 feet 9 3/4 inches long, covering its entire upper surface with a strip of sheet iron one-eighth of an inch thick. The tray-holding frame is then complete. The space to be occupied by the tray-frame is 1 1/4 inches wide. It is well to have it that width, as some of the sides and ends of trays are more than an inch thick, besides, if the space were less the work of putting them in and taking them out could not be done so quickly.

Make a mark in the center of the outside ends of the

tray-holding frame; this will show just where to place the central lath and thus prevent loss of time that would otherwise occur. The unoccupied space along the sides and ends of the table is intended for holding nails. Partition this space into four apartments, each the full length of tray-holding frame, to be occupied by nails of as many lengths. The ends will each need one space for nails, which should be as near the ends of the central lath as possible, as it is to contain the nails used in the ends of that lath. Use 7/8-inch clout nails in the central lath, except the ends of it; use wire nails there and all other places. I think 2 3/4-inch nails for the tray frame; two sizes, 1 1/2 and 2 inches, for shakes and side lath, are large enough. Six nails are required for each six-inch shake—two at each end and two in the middle.

After the tray frame has been nailed together with 2 3/4-inch nails, put on the 16 shakes required to cover the bottom. Fasten these in their places by putting one 1 1/2-inch nail at each end of every shake, an inch or so from the same edge. These nails are large enough, since they are prevented from coming out by the lath being placed over them.

Use 2-inch nails, or a little longer, in putting on the side lath. Drive these nails through the side lath, so as to pass through the shakes about the same distance from the edge as did the 1 1/2-inch nails and directly opposite them. Next nail the central lath with 1 1/2-inch nails at each end, taking these nails from a receptacle made as near as possible to the place the nails are to be used.

All the other nails used in the central lath should be seven-eighths inch clout nails, driven at a slight or very acute angle. If so driven they will clinch themselves on striking the strip of sheet iron. That is the object of the sheet iron. If not so driven the point may stop when it strikes this iron strip and fail to clinch, thus causing a waste of time and nails besides rendering the sheet iron strip worse than useless.

When to Gather Fruit.—Fruit should not be gathered until it is ripe enough to fall of its own weight, or, at most, from the effect of a slight jar. If gathered in this condition, fruit being of first-class quality and properly handled subsequently, a first-class dried fruit will be the result.

Grading.—Grade the fruit before drying if the objects sought are the greatest quantity and best quality. It is a custom with some driers to grade the fruit into two or four grades before drying, and after drying regrade it into six or seven grades. Grade the fruit before drying it, into six or seven grades, the number the trade wants. If this work is properly done, no grading after the fruit is cured will, in my opinion, equal it. A second grading is, therefore, a wholly unnecessary loss. Then grading the fruit before drying it costs less than grading it after it is dried.

Fruit of nearly the same size, condition and quality is placed together when put on the trays, and kept so until sold. Each grade can be cured as much as required, and no more. Then a portion of the prunes on the same tray will not be fit to "take up" before another portion has reached the half-way point. They will come up as they went down—all together—and none of them need be "bone dry." I think it is certainly true that overdried fruit has not only lost too much in weight, but also too much in quality. The best quality of fruit must not be "bone dry." Thus, retaining a due proportion of the weight is also adding to the quality, and hence to the price. Curing fruit too much is therefore a three-edged nonsense—cuts three ways—lops off quality, quantity and price.

As previously stated, I am unable to see how co-operative fruit-drying can be satisfactorily conducted without a grader. By its aid, each stockholder gets credit for the exact grades of fruit that he delivers. The grader is no "respector of persons," and hence promptly and accurately decides whether or not "I raise the best fruit in the valley." During the whole of last season's work the decision of this just judge was not questioned by any of our stockholders. It is deaf to all entreaty, and blind to all save unerring justice. It treats the millionaire's as well as the poorest producer's fruit without fear or favor. We used the Jones grader last year and found no fault with it.

Dipping.—There are several kinds of dipping machines. We use the Cunningham without any cause of complaint.

The strength of the lye experience will soon enable you to determine. Begin with about one pound to thirty gallons of water, changing the quantity as often as the changing conditions of the fruit may require. The ripeness and quality of the prunes, strength and temperature of the lye water, as well as the time the prunes are kept in it, are each and all important factors to be considered in dipping prunes. Better have an experienced man at the outstart, if convenient; if not, you will soon get the business fully in hand.

Doing the work properly is not skinning the prunes. They are "properly cut," so nearly as I know, when the skin of the fruit shows many zigzag hair-like "cuts." These will be very prominent early in the season and will serve as a guide so long as one is needed. Later on, if anyone should presume to give you a "pointer," you would give him such a old-settler of a look as would cause his advice to "stop short never to go again" in your presence.

Our dipping machine runs by steam, and can, in a moment, be made to move fast, slow, or otherwise, as the fruit may require, by shifting a belt from a pulley of one size to one of another. The fruit is poured into a hopper, and rolls from thence, dropping through steamed-heated scalding-hot lye water, on a zinc draper which discharges it into the fresh rinsing water on another similar draper, and that delivers the fruit on the trays. To lessen the labor of handling the fruit, rollers are placed under the trays end along their sides. The weight of the fruit and tray is carried by the rollers under the trays, the side rollers only guide the trays and prevent their rubbing. The labor of handling the trays is thus reduced to the minimum. The fruit spreads itself, filling the tray while passing under the discharge. This is caused by the tray being at a sufficient angle while receiving the fruit to cause the fruit to roll from one side of the tray to the other. A continuous line of trays is passing

under the discharge while the dipping machine is in operation.

When Properly Cured.—When are prunes properly cured and hence fit to "be taken up?" This question has never been answered in my presence. A certain custom-house official will run his hand over a bolt of cloth and say: "Tis worth so much." If asked how he knows it is worth the price named, his reply is, "I know by the feeling." You say to him: "These two pieces seem to me to be identical; now tell me how do you determine there is a difference?" "By feeling. I cannot tell you more definitely." Sensation is all there is of it. The water should be out of the prunes to the extent that they no longer feel watery or mushy—soft, but on moving the flesh of the fruit it feels too stiff to indicate the presence of water except in a very limited degree. It is still pliable. This is my nearest approach to an answer to the foregoing question. If trays are in abundant supply, so that the fruit can be "stacked up" when half or two-thirds cured, and left so until fully cured, I think that is the best method. If trays are cheaper than land, have enough of them to cover your drying grounds several times. It will enable you to cure a large quantity of fruit on a small lot of land and yet do the work well.

In "stacking the trays" to finish curing the fruit, let one tray project over one end of the pile and the next tray over the opposite end, thus permitting the air to freely circulate over the fruit.

When the fruit has been properly cured, dump it into a pile in a close apartment, each grade by itself, and leave it there to go through the sweat. Better examine it occasionally whether you do or do not doubt its having been properly cured. Better cure it a little too much than not quite enough.

F. M. RIGHTER.

Campbell, Cal., June 27, 1893.

ONE SEASON'S LESSON.

Mr. Aiken Tells of His New Way of Handling Prunes.

TO THE EDITOR:—The RURAL PRESS has been my companion in prune-growing for about 20 years, and I am pleased to make a contribution to the "Dried Fruit Edition." Under the present management the PRESS has greatly improved, the editorials especially being able and interesting.

Believing my location on the Santa Cruz mountains to be well adapted, in soil and climate, to the growth of the prune, I began setting them out early in my orchard work, and have year by year increased my acreage till I now have about ten thousand trees which promise a large crop of very fine fruit this year.

Perforating Instead of Dipping.—Having written on prune culture before, I will connote this article to my experience last season with a machine that perforated the prunes with needles. The lye-cutting contrivances had become expensive, troublesome and unsatisfactory to my mind, and I was glad to avail myself of the ingenuity of a neighbor—a practical prune-grower—who made for me a needle machine that promised to do good work. The idea was to cut the skin of the prune by passing it over a bed of needles with the grader motion. The machine was placed on a floor about 12x12 with a roof and open sides built near my grader. As a rule, about five tons of prunes were gathered and graded each day by 4 P. M. and were passed over the needles and put out on drying ground in trays by 6 P. M., thus doing a good day's work and saving the heating and injury resulting from standing over night. Even in boxes in this way ripe fruit can be handled promptly.

Gathering.—My practice in gathering prunes is to pick up the first fall of ripe prunes and then in about a week gently shake the trees upon canvas, getting only ripe fruit that would soon fall. Then in another week or so shake again on canvas, and, after that, when the remaining fruit is ripe, shake and pick from ground, as too many leaves will fall for use of cloth. Four such efforts in about a month's time will gather the prunes ripe for drying. Growers must bear in mind that green, immature prunes will not make a salable, merchantable article of food. The grader, of course, removed leaves, etc., so the prunes passed clean over needles which perforated them so thoroughly that they dropped from the needle board on to the tray almost dripping wet, the water bursting out, as it were, from every hole. After being out about a week on trays, they were brought in, cured and placed in bins to heat for at least two weeks, when they were ready to market. It is advisable to shovel them over on the floor in bins to more evenly cure.

Time of Curing.—The length of time they must be kept out on trays to properly cure so as to keep well depends upon the climate. At my elevation, 1500 feet, and consequent dry atmosphere, one week is usually sufficient, while on the coast, where fogs and damp air prevail, driers are used. In closing, I will state briefly the points of advantage that needle-perforating has over lye-cutting:

1. It breaks the skin more generally, and consequently prunes dry more evenly and in less time.
2. The prune retains its sugar and fruity substance and presents a richer and more glossy appearance than the partially lye-cooked skins of other prunes.
3. It yields a heavier prune, dried, for its size, my crop drying substantially two pounds to one.
4. Buyers and consumers were so well satisfied with my last crop, which brought full prices, that they want all I will have this year.

I have no interest in the sale or manufacture of the machine, and only write about it because I believe it to be of interest and real value to those engaged in drying fruit.

The Burrell prune machine with grader attachment is on exhibition in San Jose by the owners, Messrs. Burrell & Dodge, to whom application can be made for further information.

W. H. AIKEN.

SIGNIFICANT QUERIES.

Prunes Can Be Cured in Many Ways, But Proper Methods are Scarce.

TO THE EDITOR:—In line with your invitation for an expression of opinion or experience in fruit-drying, I should like to present a few facts and queries with regard to prune-drying for your readers' consideration. We all know that prunes may be treated in almost any way and even abused to a great extent, and still make a fairly good article of commerce, but I am of the opinion that their *proper curing* is as little understood by the generality of prune-growers and driers as any subject in fruit-drying.

It is pretty generally conceded that prunes should be dipped in a solution of hot lye preparatory to drying. All driers have found this process to be of great advantage in most cases, while in others it is evidently of little use. The natural inference would be that either there had been some difference in the manner of dipping or in the fruit itself. There are a few points in connection with this phase of the subject which, if more generally understood, would, I think, throw some light upon it.

In the first place, the skin of the prune is covered with a substance of an oily nature, which makes it almost impervious to the curing action of the sun, and which is undoubtedly removed by the action of the lye. Now, what is this coating? A fact in connection with this, which I presume has not been generally noticed, is that the scum that rises to the top of the lye after prunes have been dipped, when skimmed off and allowed to settle, is found to be very oily and of a highly inflammable, if not explosive, nature. Now, is this gummy matter removed from the fruit or is it a property of the lye? What effect would it have on the fruit if not skimmed off, but allowed to cover the prunes as they are passed through the dirty lye? Would this cause the "puffs" or "frog bellies," as they are known in the pruneman's parlance?

Again, if prunes are allowed to remain too long in the hot lye in our efforts to check or crack the skins, there will be a certain portion of them that will show no inclination whatever to dry, but will, after lying for days in the sun, ferment and then dry after a fashion, but forming an article really unfit for food. This condition is especially noticeable in silver prunes, and is the source of considerable annoyance and loss to the drier. When examined, such fruit is found to be dark under the skin. The question is, What causes this condition and how are we to avoid it? Is it caused by dipping in lye that is too hot or too cool?

In any case, not more than two-thirds of the fruit is ever checked by the lye, those that are not drying equally well with those that are, and always better than those that are excessively dipped. Now, is it necessary to check the skins?

Another trouble that is sometimes met with in our prunes is their sugaring after being packed for a certain length of time. Now, may not this be caused by excessive dipping? I could tell you in a very few words how I would proceed to dry prunes. Most any grower can, and perhaps will, tell you that he has raised and cured the best prunes in the country, but really I don't think we know much about it. Perhaps I am cranky, but cranks have their uses, and we may be able to grind out something that will be of use to us all. I should like to see this subject treated by Prof. Hilgard or some one else competent to tell the whys and wherefores of it.

W. C. ANDERSON.

San Jose, Cal.

[These comments and inquiries are suggestive and significant. We trust they will prompt to investigation and observation. Indirectly, they show that there is plenty of chance for the fruit-drier to use brains as well as heat and alkali.—EDITOR.]

HOW TO CO-OPERATE

Organization of the Growers at West Side, and Workings of a Drier.

It is certain that a greater proportion of the California fruit product for 1893 will be dried than in any previous season; and it may also be considered settled that co-operative organizations will be a more important factor in handling, curing and marketing fruit than ever before. Co-operative establishments have come to stay. They have secured a permanent foothold in California and are destined to become agents of great profit and usefulness to the fruit-growing industry. The example of the Sutter county organization has been of vast encouragement and value to producers throughout the State, and the recent marked success of the West Side, Campbell and other Santa Clara county associations is of most important assistance to others who desire to form similar organizations, but who have heretofore encountered among growers a spirit of opposition growing out of an unaccountable belief that they were not as smart and bright and capable as the average middleman, and that they must sell their products to him when, how, and at what price the buyer was pleased to offer.

Much has been said and written about the achievements of the West Side and Campbell associations in Santa Clara county, but no exact description of the manner of organization and of their practical operation has yet appeared in public print. For the purpose of furnishing an account of the methods and every-day workings of a model co-operative organization, a representative of the RURAL PRESS last week made a trip to West Side, Santa Clara county. The location of the West Side drier is about three miles south of the town of Santa Clara, and four miles from San Jose, near the Saratoga road, in the heart of a fertile fruit-growing district. The association was organized in 1891. The plant consists of 20 acres of drying ground, upon which are also located the various buildings—a warehouse with a capacity of 20 carloads of fruit, packing-house and boarding-house, besides dipping building and cutting

sheds; 25,000 trays; the usual appliances and machinery used in drying; tracks, trucks, tools, etc., all purchased and erected at a cost of \$20,000. The patrons and stockholders of the association are made up of 80 of the most prominent and substantial growers of the Santa Clara valley, nearly all recruited from the list of growers immediately contiguous to the drier. The association has had two profitable seasons, and has entrenched itself so completely in the confidence of the public that every fruit-raiser, with one or two exceptions, in the tributary territory is a patron of the establishment or has asked for stock.

The relations of the management of the association to its patrons are very intimate and friendly; but they are, nevertheless, based on sound business principles. Co-operation in its best sense is the cardinal principle of the organization. That is to say, the association is really a pool in which the marketing of all products is placed with one agent, and the profits or losses for the season are shared in common. A balance is struck at the end of the season, and the proceeds are distributed pro rata, according to the quantity and quality of fruit handled and marketed.

In accordance with the by laws of the association, stockholders are required to give notice before the season begins as to whether they will bring their green fruit to the drier or whether they desire their dried fruit (many dry themselves) to be handled by the association. The following agreement is required to be signed:

THIS AGREEMENT WITNESSETH: That I, _____, of _____, in the County of Santa Clara, State of California, do hereby agree with the WEST SIDE FRUIT GROWERS' ASSOCIATION to deliver to the said Association, at its place of business, my crop of drying fruit:

GREEN OR DRV.			
Apricots, .....	..... estimated at .....	.....	tons
Peaches, .....	..... estimated at .....	.....	tons
Prunes, .....	..... estimated at .....	.....	tons
Silver Prunes, .....	..... estimated at .....	.....	tons
Pears, .....	..... estimated at .....	.....	tons
Plums, .....	..... estimated at .....	.....	tons

at such time as the same shall be suitable for delivery and in good merchantable condition whether green or dry. And I further agree to accept in consideration for the delivery of said fruits, a sum not exceeding seventy-five per cent of their market value, as adjudged by said Association, on each kind when delivered, and the balance when said fruits shall have been sold by said Association, and a final distribution of the receipts therefor be made.

Witness my hand this, day of, A. D. 189

And the WEST SIDE FRUIT GROWERS' ASSOCIATION acknowledges its obligation in the above agreement on the day and year above written, by its Manager.

It will be observed that in the foregoing agreement the association agrees to pay on delivery seventy-five per cent of the market value of the crop so delivered; but it is a significant fact that few or none of the patrons of the establishment ask for all the advance. Some draw a little before the season ends, others prefer to wait until they can secure their entire proceeds in a lump sum. In other words, the association is a bank where their money is on deposit. They know they can get it when they want it. They have something of the feeling of a foreign depositor in a bank on which there was a heavy run. He hastened to the bank with his certificate of deposit (the amount was \$2) and demanded his money. The cashier promptly handed over two dollars. The depositor seemed astonished and exclaimed: "You got 'em, eh? Then I no want 'em. If you no got 'em, I want 'em." And shoved back the \$2 and walked off.

The method of handling the green fruit after it has been received at the drier may be briefly described. When green prunes are taken they are first weighed on wagon-scales, then dumped into a hopper and elevated to the second story; thence they pass through a grader, which separates the fruit into four grades. The prunes fall from the grader into bins of a capacity of one ton each; thence they pass into a dipper and thence to the automatic spreader. By means of trucks the fruit is conveyed to the field for sun-drying. After drying the prunes are run through a dried-fruit grader and separated into six sizes. And the process is complete when the prepared fruit is placed in sacks ready for shipment.

Apricots are taken in through a green-fruit Fleming grader, whence in 50-pound boxes they go to the cutters. Here they are cut and spread on trays; thence they are deposited in the sulphur bath, where they remain from one-half to three-quarters of an hour; thence the fruit is taken to the field for drying; after drying, the apricots are returned to the warehouse and placed in the sweat for two or three weeks; thence they are placed in sacks and are ready for shipment.

Peaches are handled in the same way.

Mr. R. W. Hersey, the manager of the association, has invented a process for grading, dipping and spreading prunes, by which he expects to save three handlings of the fruit. Its capacity will be 200 green tons per day. The plans are drawn but the appliance is not yet constructed.

The West Side drier employs, in the height of the fruit season, about 150 persons, of whom three-fourths are women, girls and boys, who are engaged in packing or cutting. They are paid by the piece. The price is not yet settled for the season, but it will be from 8 to 10 cents per 50-pound box for packing dried prunes. The average earned is over \$1 per day, though expert packers earn \$1.50. The work lasts a month. Every convenience is afforded for the women and girls and all others, and the fruit packing season has come to be regarded in that part of country as a time when recreation and work can be profitably combined. A grove has been leased by Mr. Hersey just across the road from the drier, and it will be used as tent grounds for those who come to work at packing and want to "camp out." The intelligence and character of those who engage in this sort of work is of the very highest. For instance, Mr. Hersey has just received an application for employment from a young woman who is a recent graduate of one of California's best-known colleges. She

says she and her husband want to learn the fruit business, and they propose to go at it in a practical way.

The West Side drier expects to begin active work on apricots July 17th. The last prunes will be received about September 20th. It is expected that about 3000 tons of green fruit will be handled by the association this year. The amount marketed, including fruit dried by the association and by growers themselves, will be about 100 carloads of dried fruit, against 50 carloads two years ago and 30 carloads last year. The proportion of different fruits handled will be about as follows in green tons:

	Tons.
Prunes	2,000
Peaches	400
Apricots	300
Pears, plums, etc.	300
Total	3,000

An important function of the manager of the West Side Association—in fact, the most important and responsible—is the marketing of the output of the drier. To that end it is necessary for him to have complete and accurate information as to the condition of the home, eastern and foreign markets, the quantity and quality of the output of competitive districts, domestic and foreign, the history of past seasons, the amount of carried over stock in various centers of trade, the best methods of handling his own product, freight rates, the financial situation, and a variety of other information that has much to do with fixing the price and influencing the value of his own fruit. To be successful, he must have experience and good business sense.

The West Side Association seems to have been very fortunate in the selection of a manager, judging by the experience of the past two seasons. Last year the net prices realized to the grower, all expenses paid, were as follows per green ton:

	Green Ton.
Prunes	\$87.50
Apricots, Moorpark	50.00
Apricots, Royal	42.00
Small Royal and all others	34.00
Peaches	38.00

The peaches, it should be stated, were culls, the choice fruit having gone to the canners. These prices, it will be seen, were above the average realized for the various fruits.

In the operation of the West Side drier little or no working capital has been necessary. It has been found that returns from fruit sold amply meet all demands in time to pay all running expenses, including requirements of such growers as want advances when green fruit has been delivered at the drier. Of course, in the beginning it was necessary to provide certain funds by calling in a fraction of the subscription of the capital stock. For instance, subscribers to stock were compelled to pay in advance 20 per cent of the par value of the stock. But only a small part of the total capital stock was issued, so that the actual cash subscription was very small.

The East Side Fruit-Growers' Union, in Evergreen district, proposes to organize on the basis of the West Side. It has formed a corporation with a capital stock of \$100,000, divided into 4000 shares at \$25 each. But it is designed to make the first issue only 500 shares, or one-eighth the total, and to require payment of 20 per cent of the par value of each share at the start. So the total par value of the stock subscribed will be \$12,500 and the cash payment on that amount \$2500. It has been the experience of the West Side Association, and has been and will be of others, that little or no trouble is experienced in borrowing what remaining money is necessary in purchasing land, buildings, drying appliances, etc.

The basis of issuance of stock in the West Side Association is two shares of stock for every five acres of bearing fruit or fractional part thereof. But the matter of issuance of stock on a modified basis is placed in the discretion of the board of directors.

There are now organized in Santa Clara county, or are in process of organization, the following fruit associations:

East Side Fruit Growers' Union	Evergreen District
Berryessa Fruit-Growers' Union	Berryessa
Willow Glenn Fruit-Growers' Union	Willows
Campbell's Fruit-Growers' Union	Campbell
Mountain View Fruit-Growers' Union	Mountain View
West Side Fruit Growers' Association	West Side

These will all market through the Santa Clara Fruit Exchange at San Jose.

So it will be seen that the co-operative movement has borne good fruit in Santa Clara county.

THE MARKET OUTLOOK.

Experience Teaches There is More Profit in Drying Than in Selling Green.

The condition of the market for dried fruits is a matter of the greatest consequence to growers who contemplate preparing their product in this form; and a review of the situation will be found timely and suggestive. The probabilities are that California will put forward this season a greater quantity of dried fruit than in any previous year in its history. The reasons are several: (1) The output of drying fruits is heavier than ever before. (2) The canneries will dispose of smaller quantities than for a number of years. (3) The demand for fresh fruits has not been sufficient to absorb the usual proportion of the product. Nothing is left to be done but to dry the fruit or place it green on a market already glutted, or allow it to rot in the orchard. It is a fortunate circumstance that conditions in California are such as to place no limit upon the opportunities for disposing of a heavy fruit yield by curing. Fruits which in other States must be marketed in season, and which, in the nature of things, can be sold for only a part of the year, can in California be translated into permanent form for sale and use during any of twelve months of the year. The advantages to the grower who cures his green fruit, or who places it in a co-operative or other drier to be cured, have been so conspicuously illustrated time and time over that it is singular so great a proportion is

still allowed to be taken out of first hands in its perishable form. Too many growers sell green. They want to get rid of all responsibility when the fruit is delivered to the drier. They sell for what they can get at the time. Further, they sell at the opening of the fruit year, when buyers and speculators and other bear influences are hardest at work depressing the market, that they may buy low to cover some contract already made for future delivery. They sell at a time when the volume and quality of the output of fruit elsewhere is not fully known, and when the market is uncertain and its tendency and tone yet to be developed. They sell when the chronic cry of over-production is at its loudest, and when reports of large crops and glutted markets are most numerous and least reliable. They sell, in short, when exact knowledge as to real conditions is hard to obtain, and is, indeed, unobtainable. It is the general experience of the past that the price for dried fruits advances as the year progresses. This is not the uniform history of the dried fruit market, it is true, but it can be said with no danger of successful contradiction that the time of low prices for dried fruits has been more frequently just previous to and during the drying season than at any other time. The lesson has certainly been plain, and the moral ought to be obvious.

Condition of the Market.—The market for dried fruits for 1893 has not yet opened up. It is usual at this time of year for brokers to do more or less business in futures—selling fruit now, two or three months before it is possible to deliver. But this year speculators and brokers have encountered several obstacles that make business of this kind a matter of considerable difficulty. In the first place, buyers are timid, because of the uncertain financial conditions, and doubt as to the quantity of the output. In the second place, growers and holders of fruit are not anxious to sell at prevailing prices, being convinced that improvement will come later in the season. On this basis, it is hard to carry on trade. But a broker is bound to do business at any price. An Eastern man, say, goes to a buyer and wants to sell him a carload of prunes at 6 cents. The buyer does not want them. Then the broker asks if he will give 5½ cents. "No," responds the buyer. Then the despairing broker implores him to make some sort of a bid, and the buyer perhaps makes a tentative offer of 5 cents. The broker telegraphs to his California correspondent that the market is in very bad shape, but that he has been able to close a deal for a carload of prunes at 5 cents. And he wants the carload of prunes, or the contract closed for the carload. He gets his 2½ cents commission, has taken no risk and carries on business at any price before prunes are on the market. He had none in the first place. Such influences as these do much to demoralize and break the market, and have in the past been at least partly responsible for low prices at the beginning of the season, when conditions really warranted transactions on a higher basis. If growers were to go into co-operative movements and hold their fruit from sale until it was ready for market, they would do much to prevent the year starting out on a speculative basis. Futures would be discouraged and a harmful element removed.

Prunes.—A most important factor in determining the price of dried prunes is the quantity and quality of the French crop, the leading and almost the sole competitor of California and Pacific Coast prunes. All reports agree that in quantity the French crop will be heavy, and much of the dried product will seek a market in the United States. But its quality is likely to be inferior. Severe and continuous drouth has prevailed in France, and the fruit will probably be poorly developed. French prunes are now offered in New York at 6½¢@7¢, freight and duty paid. The duty is 2¢ per pound, and the freight about ¼¢. This would leave the grower from 4¼¢@4½¢, from which he must pay his commission, drying and other charges. For the week ending June 30th we find in a New York fruit journal quotations with a little wider range than we have indicated: Prunes, foreign, 5½¢@7½¢; California, 9½¢@13½¢. The freight from California to Eastern terminal points is \$1.40 per 100, or 1.4¢ per pound. Deducting the freight and reasonable commission charges from these quotations, it would seem that at least 6 cents per pound is not too much for California growers to expect even at this time.

Conditions for this year appear to be much the same as in 1891. The French output was then large, and so was the Pacific Coast crop. Growers in the Santa Clara valley who sold early received 5 cents net per lb. As soon as a good share of the crop had passed out of first hands, the price advanced to 6¢@6½¢, and those who held over until toward the close of the season got 6 to 8 cents.

One more factor that must be taken into consideration is the general fruit output both at home and in the East. All fruits are more or less competitors with one another. Dried apples, for instance, are strong rivals of prunes. New York and Ohio and the Middle West generally dry many apples. We have as yet received no reliable information as to the probable output of the important producing districts, but it is likely to be considerable. Reports from the East and Middle West are generally of large production in nearly all lines.

The dried-prune output of California for 1893 will be over 30,000,000 pounds—an excess of 5,000,000 to 8,000,000 over any previous crop. Oregon and Washington will also yield heavily, perhaps 6,000,000 dried pounds. There are no other important districts in the United States. As at least a partial offset to the larger production over 1891 (the crop of 1892 was below average and should be left out of consideration), we have the advantage of two years' increase in population, better advertising and a generally increasing knowledge that the California prune is better than the foreign.

A third factor of some importance is the possibility that lower freight rates will prevail than in past seasons. Prunes can be shipped very cheaply by way of Panama, and many tons will no doubt seek an Eastern market through this outlet. The tendency will be to compel reduction of railroad rates. As it is now, the duty and freight on the French prune are almost offset by our freight

charges across the continent, and compel our product to enter the Eastern market on almost an equal footing with the foreign.

The financial situation also has an important influence; but expectation that the monetary atmosphere will be cleared by fall is, we think, justified. With the market in formative shape, it seems unwise to sell at this time.

Apricots.—The general glut of fruit, the financial stringency and the absence of the cannery factor tend to hold prices down to a level that conditions would not appear to justify otherwise. The shortage of the apricot yield is very material, and growers have naturally expected a heavy demand for this fruit. California is practically the only producer of apricots in the United States. The foreign product does not seek a market here. The asking price per dried pound at San Jose is 9 cents, but transactions are few.

Peaches.—The situation in this line of fruit is exceedingly uncertain. Besides the general influences which now conspire to depress all fruits, the market opens up with heavy stocks of canned peaches carried over. The competition in eastern districts is heavy, and the production will be large. The New Jersey and Delaware yield will, according to late advices, not be so enormous as expected some time since, but it will still exceed the large crop of 1891. It is true that peaches are not dried in the East or South as they are in California, but in Georgia and other southern districts, nevertheless, considerable quantities of the fruit are disposed of in this manner. Still, there is no doubt that the safest and most profitable way to dispose of a great quantity of the California product is by drying. There is little prospect that canners will demand large quantities, and the retail green fruit market is pretty heavily burdened. Dried peaches are held now at 8 cents, with no sales.

DRYING IN ALL STAGES.

A Complete Review of the Methods Practiced in the Sacramento Valley.

[Reprinted by request from the special fruit-drying edition of the RURAL PRESS, Aug. 27, 1892.]

TO THE EDITOR:—Before fruit can be dried it must be gathered. In gathering fruit when the whole crop is to be dried, it is many times advisable to shake the fruit off the tree instead of picking it. On the average, it costs about one-half as much to shake the fruit off as to pick it. One advantage in shaking fruit lies in the fact that only that which is ripe will, as a rule, fall to the ground; and, above all things, in drying fruit of all kinds, be sure that it is thoroughly ripe. Green fruit will only dry into chips, hard and badly colored, while even overripe fruit will much of it make a good dried article. If it will hold its shape when cut and not run on the tray, it is not too ripe. Of course it is not necessary, and no one should leave fruit on the tree until it will not handle nicely or the skin will break too easily.

If it is decided to shake the fruit from the tree, a canvas should be prepared, from 16 to 20 feet square, according to the size of the tree, and one seam in the middle sewed only half-way, so as to allow to be spread on each side of the tree. The trees must not be shaken too hard, for fear of getting some that is not entirely ripe. I have known orchardists to gather fruit in this manner for 75 cents a ton, while the average cost of picking is a little more than \$2. The only objection to shaking the fruit off the tree, and that is slight, is that it necessitates more prompt handling by the cutters. It cannot stand stacked up in boxes for two or three days, as each bruise will then develop into a black spot which will show when the fruit is dried.

Culling Fruit for the Drier.—There is a tendency among growers to try to gather and dry everything, no matter how small or inferior it may be. If growers would only learn that fruit is excellent food for hogs, and would thus dispose of some of their inferior stuff, it would be much better. The writer has frequently bought fruit at prices which did not pay wages to the grower for cutting and handling it, to say nothing about anything for the fresh product, besides injuring the reputation of the producer, the section in which it was grown, and the State, as well as every dealer who touched. Cull out the little, hard, poor stuff and do not cut it. Stop the expense at once. It is worthless; do not spend any good money on it. It dries up into almost nothing, and the weight will never be missed if you leave it out. If you cut it and put it with your good fruit, the buyer will see it, and will always imagine, when he sees one piece, that there is ten times as much poor as there really is, and then the price goes off. This grading can best be done when the fruit is picked or shaken from the tree. Instruct your men what to take, and see that the other is thrown out. If it is not worth while to try to feed it to hogs, the best place for it is on the ground under the trees.

Cutting.—This is a very simple process and requires but little watching. The grower must watch that all the fruit is cut clean around, and each half separated before it is put on the tray. In this way the fruit will have a clean, neat appearance that will be lost if the fruit is cut part way and pulled apart the remainder. The cost of cutting varies with the size of the fruit. It varies from \$5 for smaller fruits, such as apricots and plums, down to \$3 for large peaches. In large orchards it may be best to grade fruit before cutting, but this is hardly practicable in small orchards and had best not be attempted. In spreading fruit on the tray, of course every one knows it should be placed with the cut side up and as close together as possible without getting one piece on top of another.

Trays.—The standard tray throughout the State is made 2x3 feet in size. The best trays are made of thoroughly seasoned pine sawed one half inch thick and surfaced on one side. I think those made of three eight inch boards the best. The boards are nailed on a cleat, 1x1½ inch, two feet long. Use wire nails long enough to clinch on the bottom of the cleat. Put three nails in the end of each board. Don't try to clinch the nails when you drive them by putting an iron under the cleat, but turn the tray over and

clinch carefully. Remember that your trays will see lots of hard usage and will need to be as strong as possible. Don't buy trays that are not standard size. You may want to loan them to your neighbor and then they probably would not fit his bleacher. In making trays, if the lumber is quite well-seasoned, don't crowd the boards too close. There wants to be a crack between each board. This crack will soon develop of itself, unless the lumber is unusually well seasoned.

Sulphuring or Bleaching.—In regard to this question there has been much discussion. Some able writers on the subject condemn it. One of the best known and most respected scientists says it should not be done. However, with all due respect to these persons, we must say that the growers of California fruits are not in the business for pleasure. As business men they must conduct their affairs so as to be successful. If they offer goods in the market for sale they must have what the buyers want and are willing to pay for. The buyer says that the goods must be bright, and every year he seems to want them a little brighter than the year before. If they want our fruit light-colored and we can make it so by such a simple method as sulphuring, we have no reason to complain. If they want it black, why we can develop some easy, simple, harmless method of making it black. This may not be "educating people to know and enjoy the rich, fruity flavor of natural fruit," but it is common sense and good business. We can afford to let scientists discuss the effect of the sulphur fumes as being deleterious to health, but we cannot afford to sell dried peaches for five cents a pound that we might by bleaching get ten cents for. The best bleachers are now made so that they will hold a truckload of fruit, truck and all. They are made about four feet wide by six long and seven high. Each end is made to open out, usually hinged on the top and raised by a weight on a rope passing over a pulley. If the bleacher is thus made, the handling of trays in and out of the bleacher is avoided and there is some saving in labor. Any kind of a four-wheeled truck or car can be used, so that it is wide enough to hold a tray, i. e., three feet, and long enough for two piles, or four feet. From 30 to 40 trays can be put on a car. The car or truck is run into the bleacher, sulphured, then run to the drying ground and the trays scattered out. If much fruit is being handled, it will be necessary to have several cars. For small orchards it is less expensive and almost as good to use the old-fashioned bleacher, which is made so as to receive and hold the trays in place. These are three feet one-half inch wide, four feet eight inches long and six or seven feet high, measurement clear on the inside. The frame is made on the outside and it is then covered with flooring on the inside, so as to have a smooth, light surface on three sides and the top, one end being left for the door, which can be arranged in any way to suit. The bottom may as well be left open. Strips an inch square and four feet eight inches long are then nailed on the sides of the bleacher, making slides or cleats on which to put the trays. These should be three and one-half inches apart, so as to allow the fumes of the sulphur to circulate throughout the whole of the fruit. These cleats should not be run closer to the ground than about 18 inches, which will give room for about 30 trays in a bleacher six feet high.

In putting the trays on the cleats, care should be taken that a space is left between the two trays that are on the same cleat, and also between the end of the bleacher and the tray. If the bleacher is made as above stated, four feet eight inches long, there will be nearly three inches space. The fumes of the sulphur are obtained by burning it in any convenient way in an old iron dish, which is sunk slightly in the ground inside but near one edge of the bottom of the bleacher. A very slight draft may be allowed.

The length of time which fruit is to be sulphured is usually stated at 30 minutes. Many growers, however, leave the fruit in the fumes a longer time. There appears to be a difference in the different varieties of fruit, and perhaps a difference also in the soil or amount of moisture in the fruit, that has something to do with the effect of the sulphur on the fruit. Peaches like Susquehanna or Muir, that are naturally bright yellow in color, do not need as much as others which are darker and thicker in their appearance. All these minor points can best be learned by experience. It will pay every one to try a little longer time than 30 minutes, and if better results are obtained by one hour than less, why, use more time. As to the kind of sulphur to be used, only the pure, sublimed article should be tolerated. Sublimed sulphur is at least supposed to contain nothing but sulphur, while ordinary ground sulphur contains much foreign matter—in fact, everything that comes with it as it is scraped up naturally where deposited, the process of manufacturing being nothing more than pulverizing, and the clays and other minerals may produce something in their fumes that would be injurious. We would caution growers strongly against the use of common kinds of cheap ground sulphur. The cost of a good article is so slight that no one need think of that. The amount to be used is about one and one-half pounds for a bleacher full of fruit. See that the bleacher is entirely filled with good strong fumes.

Taking up Fruit.—No time can be stated for drying, as it depends entirely on the weather. It is dry enough to take from the tray when the juice cannot easily be squeezed out of it. Never allow fruit to get dry so that it will rattle. It must be leathery and tough. A mass of it in a sack should feel soft and pliable. It should always be taken up in the middle of the day—the hottest part. Eggs of insects, if any have been laid during the preceding evening or morning, will then have been killed by the heat.

When emptying the fruit from the trays, it is best to cull out all pieces that have not made good dried fruit. All that is too dark, or any small or green fruit, should then be thrown out. The fruit is all spread out before you and it is a very easy matter to take out a few poor pieces.

As soon as the fruit is taken from the tray, it should be put at once in a close, tight room, merely dumping it on the floor. This room should have no ventilation, as by this means the rich, fruity flavor is much better retained. It is better also if the room can be kept dark. It goes with-

out saying that no insect life must be allowed in this room. This fruit on the floor should now be shoveled over once in two days, so as to allow fresh air to strike it, else some pieces that were rather green and soft may mold. As it is put in fresh, that part may be kept somewhat back from the rest, and, as it cures, it is piled deeper and deeper and requires less and less frequent shoveling.

This after process of curing fruit is very important, and the grower's success depends very much on how he manipulates his fruit after it comes from the tray. It is owing to the difference in this respect that makes so much difference in estimates of the number of pounds of green fruit required for a pound of dried fruit. One man who understands his business can take 5½ pounds of Muir peaches and make a pound of extra choice dried, while another takes 8 pounds to make a pound of common dried fruit. If you will ponder on these figures you will find a vast difference in the results in dollars.

If fruit once gets too dry it is a rather risky thing to try wetting it. You may make it work successfully, but it is doubtful. The best way is to keep the natural juice in the fruit, all that you can, and have your fruit safe to keep.

Packing.—There is little call at present for fruit packed in boxes, except for direct trade with the Rocky mountain States and some fancy trade East. The standard boxes are 25 and 50 pounds. In packing, line the box with white paper and face on a sheet of oiled paper. Face the box with nice, bright, average-sized pieces, packed in rows face or pit side down. This, the top of the box, will be filled first, and then the box filled and pressed down and the bottom nailed on. There are various kinds of screw and lever presses, any of which are good.

The package in which the bulk of the crop of California fruit will go to the market is the white cotton sack. Use sacks that are heavy enough. There was much complaint last season in regard to light-weight sacks; many receivers say that they arrived torn and damaged. The difference in price is only one cent, and claims for loss will frequently amount to much more than that.

Marketing.—In marketing dried fruit, as in all other products, each one must be his own judge of what is most advisable. We shall only observe that, judging by the past, in seasons of high prices the freesellers have been the lucky ones; that sales previous to or about the time when the goods were ready to deliver, made most money. In seasons of low prices, those who were able to and did hold until very late in the season, until almost the next year, got the best returns. Selling is something, however, that each one knows best about for himself, at least he thinks so.

Yuba City, Cal.

C. E. WILLIAMS.

CHEAP APPLIANCES.

Several Ways to Economize and Expedite Work of Drying Yard.

TO THE EDITOR:—In a recently published article Byron Jackson tells how his attention has been called to the idea that railway tracks and switches and the necessity of often carrying trays long distances by hand can be dispensed with. He proposes to make a sulphur-box out of a goose-necked truck with good springs by covering it with a suitable platform and a top of painted or enameled canvas. This he would haul to the part of the yard where the fruit was to be spread.

Suggestions for Further Improvement.—As the goose-necked truck is somewhat expensive and many would be required on large farms if one was to be used for each sulphur-box, suppose we smoothe the ground in vicinity of cutting shed and drying yard so that no springs will be needed and then use the common three-wheeled raisin truck that is so convenient and cheap and used in every vineyard in the San Joaquin valley. By using an extra platform of the size needed for the sulphur-box and making the canvas top detachable, the trays can be loaded on the platform beforehand so as to dispense with the cost and trouble of slides. If it is desired to sulphur at one particular place, the canvas top could be fastened by a pulley to a derrick so as to be easily lowered or raised after the car of trays was in place. A hole in the bottom of the false platform would permit pipes from a sulphur stove to serve several boxes at once if necessary.

If it is best to sulphur in the yard where the fruit was to be spread, the extra platform could be equipped with a suitable kettle and pipe to burn the sulphur without danger of setting fire. The canvas top could be managed by the two men who were spreading trays.

To Avoid the Necessity of Many Trucks.—One of Senator Langford's sons arranged a very simple device for this purpose. The device for unloading or loading a stack of trays is simply two scantlings with hinged supports set just far enough apart to clear the truck and catch the lower tray, or false platform, and high enough to raise the load an inch or two from the truck when standing erect. When ready to receive a load they are dropped back at an angle, the supports resting against a stop so as to bring the scantlings a little lower than the platform of the truck. As the load of trays reaches the farther end of the scantling, the corners strike bumpers and the momentum of the load carries the scantlings with their hinged supports past the vertical point against a stop, and you draw out the truck and leave the load all ready to be reloaded on the truck by simply running it back again when you get ready and pulling the stack of trays hard enough to carry the support back over the center again. With a dozen set of these limber-jointed wooden horses a man with one horse and truck could handle the work of quite a large establishment. Two or three could be standing at the cutting shed to pile trays on and others could be easily moved from place to place as needed in the drying yard.

Any one can see by a moment's figuring that the painted or enameled canvas sulphur-box would be cheaper, neater and lighter than wood, and also that it is a great saving to dispense with the expense of tracks and necessity of carrying a part of the trays a considerable distance by hand.

FRANK S. CHAPIN.

HORTICULTURE.

State Horticultural Society.

Prof. E. W. Hilgard, director of the agricultural experiment stations of California, at the last meeting of the State Horticultural Society, gave a most interesting review of his visit to Europe. It was not a formal address, but simply an informal talk, and it brought out many things the members of the society were anxious to learn. The professor talked mostly about agriculture and horticulture in Europe, and particularly in Germany, and told about the organization and methods of agricultural societies, colleges and experiment stations. In part the professor said:

"It was just forty years since I had had a good view of the old country. I left there at a time of revolution and readjustment of things commercial and political. I was struck by the great progress made in almost every branch of industry, particularly in manufactures. The evidence of the thrift and prosperity of Europe, and especially in France and Germany, was the absence of beggars, who used to obtrude themselves very conspicuously upon the visitor.

"I first went to Bremen, then to Heidelberg, to Switzerland, to Munich (where I stayed six weeks), and to Berlin (three months); thence to Dresden, to Paris, London, Liverpool, to New York, Chicago, and home. That was my itinerary.

"The agricultural and horticultural societies of Europe are organized on much the same lines as in America. At the head of such organizations in Germany is the German Agricultural Society, which holds annual (sometimes semi-annual) meetings, in the various leading cities of the empire. Delegates are elected to the parent society from distant societies. These latter organizations are under the same regulations and are supported in a way similar to our district societies. They hold district fairs, but they have no racing. These district organizations are the direct supporters of most of the German experiment stations. These institutions are largely local in their purposes and work, in that they direct their investigations to matters in which the adjacent country is immediately interested. The interest of the public in the result of their experiments is very lively. In Germany the soil is exhausted, and it is of the utmost importance for farmers to know what to do, and to have intelligent, scientific direction as to what can best be produced. Despite the poverty of soil, and largely because of these experiment stations, they are able to raise good crops. There is generally a change of crop every three or four years, including one fallow. That shows what good cultivation, management and husbandry will do. General interest in agricultural affairs is kept up by migratory meetings, and lectures corresponding to our farmers' institutes.

"Agricultural colleges labor under exactly the same difficulties that we do here. Out of 130 students at one of the schools, an analysis of the attendance showed that there were, besides the straight agricultural studies, students of agricultural engineering, drainage, road making, and, most of all, of forestry. The latter pursuit attracts the greater number because of the certainty of government employment. The renewal and preservation of forests in Germany is an important subject.

"The tendency in Europe is to concentration of properties, rather than subdivision, as in this country. In Northern Europe immigration has greatly decimated the population, and agriculture has become unprofitable to the small proprietors. Fertilizers cost too much, and other economical appliances can be used best only on a large scale. Going to the cities there is even more common than here. It is a very serious problem how to keep the boys on the farm. It is a frequent subject of discussion in agricultural meetings. At Berlin I heard a proposition advocated to prevent the free movement of labor from one part of the empire to another.

"In my conversations with the directors of experiment stations, I found that we know a good deal more about agricultural work in Europe than they do about work in America. Still they had much to say about our organization, and commented on the fact that we have much elementary work to do, while theirs is strictly scientific. The reason is that we have much to learn here to adapt knowledge to new things and conditions. Such matters are already settled there.

"I found that very little was known of America or California. The average German looks at California through the eyes of Bret Harte and Mark Twain. They think we are still in the pistol and lynching period. At one of my numerous lectures I brought this matter out, and I had to repeat it time after time. I found pretty much the same state of things in Paris. We don't let our light shine enough. People are unwilling to believe what is said. We should by some means give people abroad a chance to know what we are and what we have. Part of this feeling and ignorance is due to government influence. The newspapers there invariably class the United States as a part of America with Chile, Uruguay, etc. In England matters are different. The English know us and like us.

"In London our fruit importations of last year made a good impression, though there is a general complaint that California fruit lacks flavor. The reason is, of course, the early picking. I do not see why we cannot ship fruits to Paris as well as to London, and also to Berlin, where at Christmas I paid fifty cents apiece for pears and peaches. There ought also to be a good market in Europe for our dried fruits, though it will have to be developed.

"In London I was struck with the carelessness generally with which agriculture is regarded. People seem to think they have to buy their food elsewhere anyway, and it don't make much difference what happens to the English farmer."

In the course and at the conclusion of Prof. Hilgard's remarks, he was warmly applauded. It was divided, as one result of the address, to send samples of California dried fruits to Berlin, and other prominent points, that

Germany might know exactly what is to be secured here. The State Board of Trade will bear the expense.

Prof. Allen, of Santa Clara County, who has just returned from a long stay at the World's Fair, told the society a few things that aroused much enthusiasm. "I want to tell you," said the professor "that in mass and general appearance the California exhibit far exceeds that of any other State or country. Let newspapers criticize how they will, California has "got there" in splendid style. I heard it everywhere, on the streets, in the cars, sidewalks, and wherever I went. Our fruit exhibit is great. Florida makes no comparison with our citrus display. There are some small foreign displays that beat us in delicacy and finish. Of preparation, but not in quality. Our lemons are better than the Sicily. I understand California has already been given first premium on lemons, and the chief of the award committee is an Italian, too. Of fruits in fluid, New Jersey only can be compared to us. They certainly make a fine display in some lines. But the quantity is small. In dried fruits there is a vast difference in the manner in which our fruit is presented. Oregon and Washington have fine fruit displays, but they are not presented so well as ours. They do not know so well as we how to handle them, both as to color and appearance. Santa Clara has, I think, the finest of the county exhibits."

The subject of discussion, "Summer Irrigation of Deciduous Orchards," was taken up and considered somewhat briefly, being engaged in by Messrs. Hilgard, Rumsey, Lelong, Brainard, Shinn and others. The result of the whole was very well summed up by Professor Hilgard, who said it was very bad to give a general rule for summer irrigation. Much depends on the local circumstances. Fruit matured on dry soil is firmer and sweeter than in irrigated. But if the fruit falls short of a good marketable appearance, then it is well to summer-irrigate, but cautiously, and with great regard to the temperature of the water. Great care especially must be used with artesian water. The professor had once been inclined to think irrigation not desirable in the foothills, but he had modified his opinion considerably. Moderate irrigation may be desirable. The fruit becomes larger and better in appearance.

Mr. J. C. Shinn spoke of the necessity of grading land before planting, where irrigation was used. Where land is uneven, it is impossible to irrigate so that one portion of the orchard will not get more water than another. In regard to the choice of summer or winter irrigation, he declared that in shallow soil the only possible time is in summer. Mr. Shinn recommend two periods—before the fruit is set, and after it hardens.

The same subject will be discussed at the July meeting.

Dried Fruit and Green.

TO THE EDITOR:—Mr. Adams published a very valuable table in the RURAL PRESS of June 24th. I found some errors and wrote to Mr. Adams, who replied and confessed error and asked me to write the corrections as he had no time. As the errors in the first line involved \$3 to \$4 per ton, it is a matter of moment to have the table correct. I send the corrected table. E. W. MASLIN.

San Francisco, July 1, 1893.

DRIED FRUIT FROM GREEN.

	Pounds green to make one pound dry.	Coat of drying per dried pound.....	Equivalent net prices per cental of dried, compared with prices per green ton, on basis of shrinkage of 1891.
	1891.	1892.	
Moorpark Apricots.....	5 1/2	5 1/2	2 cts. \$ 9 87 \$11 19 \$12 50 \$13 81 \$15 12
Other Apicots.....	6 1/2	5 3/4	2 cts. 11 37 12 94 14 50 15 06 17 62
Early Peaches.....	5 1/2	5 1/2	1 1/2 cts. 9 75 11 12 12 50 13 87 15 25
Late Peaches.....	5	4 1/2	1 1/2 cts. 9 00 10 25 11 50 12 75 14 00
French Prunes.....	2 5/4	1 1/2	2 cts. 4 56 5 19 5 83 6 46 7 10

THE FIELD.

Pioneer Wheat Growing in the Upper San Joaquin.

Since wheat growing in the San Joaquin, south of Stanislaus has attained such vast proportions that Tulare county is in some years the banner wheat county of the State, much interest pertains to the early enterprise which carried wheat growing into that great arid region which was once considered worthless, but is now a productive empire in itself. The death of Capt. A. Y. Easterby recently in Napa valley has induced a writer for the *Chronicle* to review his connection with pioneer agriculture in Fresno county. The statements will interest all, and be of especial moment to the new home makers in the region indicated.

Capt. Easterby always claimed to have been the first to grow wheat in the southern part of the valley, but this is disputed by a year by the Tennessee colony, which located on the San Joaquin river, where the town of Borden has since grown up, and by M. J. Church, who is known as the father of the irrigation system of California. Church worked for Easterby, and put out his first crop. It is certain that Easterby acted entirely on his own motion, and without knowledge that any previous effort in that direction had been made. He has made a very good case for himself at any rate.

In the early sixties what is now Fresno county was a desolate and forbidding region. It was sparsely populated, only a few adventurous spirits having drifted there away from Millerton and old Fort Miller, on the Upper San Joaquin, where gold mining was the chief occupation. Along the foothills a few persons were raising cattle, but farming was unknown. It was along about 1862 or 1863 that W. T. Chapman and Isaac Friedlander of this city purchased from the United States Land Office vast tracts of land in the San Joaquin valley.

In 1868 the San Joaquin Valley Land Association, con-

sisting mainly of German merchants of San Francisco, purchased from Chapman and Friedlander 80,000 acres in Fresno county, they retaining 20,000 acres. Capt. Easterby, who had been a seafaring man, the owner of many vessels and largely engaged in grain buying, was asked to join the association, and subscribed for about 5000 acres, for which he paid \$1.80 an acre.

In conversation with the writer, Captain Easterby several years ago said that shortly after the purchase had been perfected he met Messrs. Eggers and Basse, two members of the association, one day, when he was asked, "What shall we now do with the land?"

"I replied, 'sell it, of course,'" added the captain. "We had paid only \$1.80 an acre for the land, and our highest aspiration was then to sell it for \$5. Since then I have seen \$500 and even \$1000 an acre paid for some of this very land."

There were no buyers of land in that valley at that time. Land was a drug in the market. It was suggested by Mr. Eggers, now one of the great vineyardists of the county, that wheat be tried. "I had never been in the valley," said Easterby, "and had not the remotest idea of the country. I told them, however, that I had just given a Napa man named Church permission to drive down his sheep, which were starving in Napa county for want of pasture, and suggested that some seed be sent him, and that he would undoubtedly put it in for us. To this they demurred, but said that if I would try the experiment myself I might segregate part of my land, and the trustees, Messrs. Chapman, Roeding and Ganssen, would be instructed to convey to me the tract I might select."

This induced Captain Easterby to take a trip to look at his purchase. It was no slight undertaking to go down into the center of the San Joaquin valley. The Southern Pacific road had not then been projected beyond Stockton. The coast division had its southern terminus at Gilroy.

In going to his new possessions, then, Captain Easterby went to Gilroy by train, and thence went by Visalia stage over the Pacheco pass to Firebaughs on the San Joaquin. There Huffman was then conducting a ferry, and he was induced to drive the captain, on his mission of creating a new empire, up the south side of the San Joaquin river. After a two-days journey they found Church's sheep camp.

Alfalaria grew knee deep and the sunflowers were ten feet high on this tract. He concluded that soil that was so rich would certainly grow wheat. In this, Church, who was a practical farmer, concurred.

Easterby engaged Church then and a small experimental crop was put in. This was in March, 1869. The seed wheat was obtained from a man named McBride, who had raised it near Millerton. The wheat came up very nicely, but when the moisture had been absorbed it died out in the main, and flying bands of wild horses and cattle, then plentiful in the valley, finished up what had escaped the heat. Captain Easterby's place was known as the "Banner Farm," because he had patriotically hoisted on a staff erected over the barn on July 4, 1872, the first American ensign that had floated on those plains, and young people who had never seen the flag came from far and near to look at it. Later it was called the Easterby rancho.

With the failure of his first crops he bethought him of irrigation, the practice of which he had observed on the Mediterranean and in India. He consulted and counseled with John Bensley, who originated the Bensley Water Works, now the Spring Valley, in this city. Bensley then had a scheme to take water out of Lake Tulare, and Easterby always contended that Bensley was the real father of irrigation in this State.

About this time Chapman, Friedlander, Ralston, Lux and J. Mora Moss were organizing their West Side canal. Breneton was their engineer. Chapman had the Borden canal constructed about the same time. Easterby bought the Sweet ditch, the mill having been attached for \$1800, and employing Church as superintendent, had the water run down Fancher creek. This involved a further cost of \$2343, trifling now, but large then, for an experiment. He subsequently bought the Centerville ditch. In the meantime the services of Charles Lohse were secured. He came from Concord, Contra Costa county, and put in a wheat crop. In 1871 Captain Easterby erected a house and a barn on his ranch, also a blacksmith shop. "These buildings," he said several years ago, "were erected on these lands, and the only shanties on those plains between the two rivers from Centerville to Watson's ferry. The check system of irrigation was then unknown, the water being turned loose over the ground. Two thousand acres were planted in wheat, and Mr. Lohse's success encouraged and stimulated the whole region.

"When the sprouting grain was just spreading a green carpet in the midst of the desert," said Captain Easterby to the writer, "Governor Stanford, Colonel Gray and Mr. Towne met me upon the ranch. It was a revelation to them—the first green spot they had seen since leaving Stockton on their railroad route, which they were then traversing after the survey and before the advent of Strobridge with his construction force. They called it an oasis in the desert. The place looked very pretty with the water running through it. 'Here,' exclaimed Mr. Stanford, 'we must have the town located.' They had already purchased four sections of land at Sycamore Bend for a townsite, but the fine appearance of my place, with its water supply, caused them to change their minds. I explained to the Governor that doubtless he could purchase all the land he required for a townsite from the association, and referred him to the trustees, Roeding and Chapman, from whom he soon after procured the present townsite of Fresno. The city of Fresno is therefore indebted to me for its present location."

The railroad reached Fresno on April 19, 1872, and Captain Easterby made the first shipment, eighteen carloads of lumber to fence in his place. The first wheat crop was a splendid one. Twenty thousand sacks were shipped to Friedlander in this city, the first wheat shipped over the new line. "The result was discouraging," said Mr. Easterby. The great expense of hauling everything over the plains before the advent of the road, and subsequent ex-

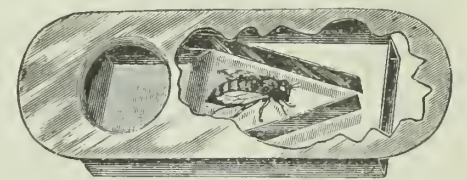
cessive freight of \$7.50 a ton—Stubbs wanted \$10—consumed all profits. In this instance Senator Stanford overruled Stubbs. Though not at first success, agriculture had been introduced and a new empire had been redeemed.

THE APIARY.

How to Produce Comb and Extracted Honey.

TO THE EDITOR:—Some time ago I gave an illustrated description of the dove-tailed hive in the RURAL PRESS. Many readers who are now using this hive will be glad to learn the best method for producing comb or extracted honey.

To Produce Comb Honey.—The first thing requisite is to have strong colonies of bees as early as possible in the beginning of the season. If your stocks are weak, double them or feed to stimulate early brood-rearing. As soon as the honey season has fairly begun, the bees will fill all the available space in the brood combs with honey, and, finding they have no more room below they will build little bits of white comb, along the upper edges of the brood frames. As soon as you perceive this whitening of the combs, place a perforated zinc honey-board on the hives and put on your sections. It is absolutely necessary to use these zinc honey boards early in the season as the queen will go up and fill the sections with brood (if she is not prevented). Sometimes the bees are rather shy about entering the sections. To induce them to go up I generally put one or two partly filled sections among the empty ones, which I have either kept over from last season or taken from some other colony at work in the sections. When the bees have filled the super about half full, raise it up and place another super filled with empty sections under it, and, when the top super is full and all the sections are capped over, remove it from the hive and place a third super under the second. To get the bees out of the sections smoke down between them, raise the super on one end and with a light brush, brush off the bees in front of the hive. But the best and easiest way is to use a bee escape. This is a simple device known as Porter's bee escape and is one of the recent developments for automatically getting the bees out of the surplus apartment or upper story of the hive, previous to taking off the honey crop. All you have to do is to place the escape fitted into a suitable board, between the super and the brood chamber, and in a short time all the bees will be out. This is a small device made of tin and fitted with a very delicate arrangement of springs which permit the bees to go out, but prevent their return to the super. It is an indispensable article in a large apiary and worth its weight in gold although it is sold for a few cents. The cut below shows the interior arrangement of the springs.



PORTER BEE-ESCAPE.

The sections being removed they should be scraped or any propolis removed from them and then packed in shipping cases holding 12, 24 or 48 pounds each, and they are ready for market.

To Produce Extracted Honey.—Your colonies should be strong early in the season the same as for comb honey. As soon as the honey season opens and the bees begin to get crowded, place a second hive body containing a full set of eight combs or frames containing foundation in full sheets on top with a perforated zinc honey-board underneath. If honey is coming in fast and the combs are getting filled without delay, lift the top story and place a second one under it (in the same manner as recommended with the supers in producing comb honey) with another set of extracting frames. When the combs are pretty nearly sealed they are ready for extracting.

Should you not have time to extract as soon as the combs are sealed, leave them on the hive and give the bees more empty combs underneath, if needed. The honey can remain on the hives for two or three months if necessary, and it will be all the better for it, as it will become ripe and better flavored. To get the bees off the comb, the Porter bee-escape is the best thing to use as described above.

To uncap the combs, use a honey knife. One of the best for this purpose is the Bingham. When using any kind of a honey-knife, it is best to dip it in hot water occasionally, as it works much better. The cappings should be saved and drained on an uncapping can or sieve.

When ready to extract, your extractor should be screwed down to a bench at a convenient height to handle, and high enough to allow some other receptacle for the honey to be placed underneath the honey-gate. It is sometimes necessary to stand on a box or a bench, so that the crank can be more easily operated, and to facilitate the removal of the combs from the extractor. If your combs are not wired, you should by all means have a reversible extractor. With this machine, you can extract part of the honey from one side of the comb, and then reverse them without stopping the machine, throw out all the honey on that side and then return to the first side and finish them. This prevents the combs breaking down.

In large apiaries, where much extracting is to be done, it is a good plan to have all your combs wired. It does not pay to waste time with non-reversing machines and unwired combs, when much honey is to be thrown out.

Nearly all the large honey producers now use the cans and cases for shipping extracted honey. These cans are made to hold 60 pounds each, and are placed two in a box, making a handy receptacle for 120 pounds of honey. They may be purchased in quantity at eighty-five cents for two cans and a case.

San Mateo, Cal.

WM. STYAN.

THE HOME CIRCLE.

"Unto the Hills."

O restless heart, so full of cares,
Yet longing so for better things,
Impatient even in thy prayers,
And vexed at trifling happenings,
Receive the strength that calms and stills,
Lift up thine eyes "unto the hills."

They stand in silent majesty,
Clothed with the morning's pearl and rose,
Then soft white clouds about them lie,
And purple lights no valley knows:
Now by the sunshine they are kissed,
Now wrapped from sight in veils of mist.

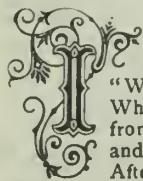
Through summer heat, through winter snows,
Strong and immovable they stand;
The wild storm wind about them blows,
By gentle breezes they are fanned,
A thousand shifting shadows fall
Upon them; they remain through all.

Then restless heart take courage new,
Think of the things which shall abide,
The strength unchangeable and true,
With which God's own are satisfied.
Thank Him whose love his whole world fills,
And lift thine eyes "unto the hills."

—Mary Thompson in the Congregationalist.

What an Owl Screeched.

[Written for the RURAL PRESS by Mrs. C. E. BANFORD.]



DO my work while you day-folks are sleeping.

"What is your work?" do you ask.
Why, I'm a hunter. I wake up from my daily nap about dusk, and I then feel a keen appetite.

After stretching my wings and getting my eyes well open I go off on a hunt.

I can fly real softly so I can catch a night-flying beetle before it knows I am anywhere 'round. Then when I hear a cricket singing its evening hymn, I slyly fly toward the place, and before its solo is through I pick it right up and swallow it, song and all. But one or two small insects only whet my appetite for more food.

When I think the farmer has put out his light and gone to bed, then I'm safe until morning. So I inspect his barns and corn cribs, and pick up many a fat mouse that would otherwise destroy his grain. To be sure the farmer don't know all that my folks do, or he would give us more credit instead of trying to kill us.

We watch his grain stacks out in the field where the mice are ever so thick sometimes. We love grasshoppers for our midnight meal, and we can find them easily because they are so often on the hop.

Some of my folks love frogs for food as well as the Frenchmen do. Will you keep a secret? I have a home somewhere in that tree yonder. My nest is in a hollow stump. A few feathers and soft, rotten wood make a fine nest for my four little ones to sleep in. My mate is taking care of our little owlets this minute. The stump-hole isn't big enough for all of us at once, so I sit on that tree close by, all the day long.

I used to sit among the leaves, out of sight I thought, but one day a little bird found me and it gave such a note of alarm that a dozen or more birds quickly surrounded me, and I tell you they made me so miserable with their picking, chatting and screaming that I was glad enough to fly up to a dark hole and get out of their sight. If the sun had not bewildered me, and I could have used my eyes, I would have devoured some of those screaming birds on the spot.

Did you ever see one of our storehouses? Sometimes the weather is so bad that we cannot go out much to search for food, so when the bluebirds, beetles and insects are plenty we pack them away for future breakfasts and dinners, just as the housewife, when fruit is abundant, puts some of it away for the time when it is scarce.

My folks can be found all over the United States; that is, my cousins, aunts and other relatives live all over the country. We are quite singers in our way, but some of you call us "screechers" instead of singers. Then we make a wailing note in the night which you might hear for a long ways. Some of us shout when we feel like it, or "hoot" as you might call it.

I love to take a bath in that pond yonder. You may not believe it; but we are very fond of water, and when my little birds get bigger we will go out bathing just at dusk, or later in the night. When we come out of the water we shake our feathers, ruffle them all up and cannot fly well for a time; but it pays, for when we get dry again we feel so clean and so refreshed that with renewed vigor we go to hunt for field mice. The mice can scarcely stir after dark without being seen by some of my relatives, and during the season we catch thousands of them.

My cousin, "Horned Owl," wears a pretty

white collar round its neck. It is a giant bird, sometimes two feet or so in length. One time a man caught two orphan little owls and carried them on his summer excursion for several hundred miles. He said they did not hoot until they were four months old, although they had two notes before this, one to express loneliness or hunger and the other one to express anger. These little ones were tied up during the day, but were let loose at night. Sometimes they remained away all night looking for food, but returned to the man's tent for shelter during the daytime. They never hooted excepting when enjoying perfect freedom at night. I don't remember how old I was when I began to screech, but I can screech big now. Do you want to hear me?

We have been called "feathered cats" and "feathered nimrods." Perhaps we do resemble cats, because of our staring eyes and because our eyes are fitted for night vision like those of the cat. We are certainly hunters and seldom return home without something for our little ones. We catch our prey with our talons, not usually with the beak. Some of our relations toss up the little mice and then let them fall head first into their mouths, but when the food is large we all pull it in pieces before swallowing. Our folks are fond of flesh, fowl and fish, and we destroy so many rodents and insects that we are worth millions to the agriculturists. We are members of the "four hundred" good birds' grange. We make little noise or display, but we are doing steadily and persistently a good work for farming interests. I believe with that poet Lowell, who said: "As for birds, I do not believe there is one of them but does more good than harm, and of how many featherless bipeds can this be said?"

In "cold and hungry circumstances" we may seem to be mischievous, but we are not "misfits" in this world, neither are we all like Thomas Gray's "moping owl sitting in the ivy-mantled tower complaining to the moon." We may seem to moan in the daytime because we are sleepy, but at night we work.

"We know not alway
Who are kings by day,
But the king of the night is the bold, brown owl."

The old Romans thought owls were sacred and called them the birds of Minerva, or the Roman god of wisdom. In our own country some of my relations are thought worthy to sit in state at Washington, D. C., but not in congressional halls. In the Smithsonian Institute my kindred have sat, perhaps "mopingly," for years. Some of them are clothed in snowy-white feathers, others have on gray suits. Some are verily giants in size while some are but the pigmy owls of California, not much larger than a house sparrow.

The Indians say that an owl of the genus *Nyctale* was at one time the biggest owl in the world and had a very loud voice. Now it has only a low note that sounds like water slowly dripping from a height. The Indians call that owl "pillip-ple-tshish," which means "water-dripping bird." But in old times it is said that this owl's voice was very loud. One day the owl perched near a large waterfall, and not only tried to imitate the sound of the water, but to drown the roaring of the torrent by its voice. This ambition was punished, for the big owl was changed into a little-bodied owl, and its voice was made to resemble slowly-dripping water, instead of the great roar of a cataract.

Hints to Housekeepers.

Asparagus is often served as a separate course, cold, as a salad, with a French dressing, or it may equally be so served hot, with the ordinary cream sauce or the following, which is better: Melt two ounces of butter in a saucepan and sift into it a level tablespoonful of flour, stirring all the time; add a gill of cold milk, salt and pepper; when the sauce is smooth and thick pour in a gill of cream and a teaspoonful of Tarragon vinegar or lemon juice; mix well and add one-half ounce of grated Parmesan cheese. Serve hot at once.

Grass stains on white goods can usually be removed in the following way: Wet the fabric, rub in some soft soap and as much baking soda as will adhere; let stand half an hour; wash out in the usual manner and the stain will generally be gone.

The stains and discolorations made in marble basins from the dripping of the faucets can be removed with pulverized chalk. Dip an old nail or tooth brush in water, then in the chalk, and an instant's rubbing will do the work.

The most nauseous physic may be given to children without trouble by previously letting them suck a peppermint lozenge, a piece of alum or a bit of orange peel. Many people make the mistake of giving a sweet afterward to take away the disagreeable

taste. It is far better to destroy it in the first instance.

To boil eggs so that the whites will not be hardened into a leathery, indigestible consistency, pour boiling water on them, and set the dish on the back of the stove for about ten minutes. You probably won't hit it just right every time if you prefer them soft boiled—they are really not boiled at all—but when you do, they are vastly more palatable and easily digested than when cooked by the three-minute rule.

To polish enameled leather mix two parts of the best cream with one of linseed oil, making each lukewarm in a small pipkin over the fire. The leather must first be thoroughly cleansed from dust, and the polish applied with a sponge.

To relieve pain from bruises, and prevent discoloration and subsequent stiffness, nothing is more efficacious than fomentations of water as hot as it can be borne.

Most babies are bathed each morning and seldom oftener; many times a cross child may be soothed by a pleasant bath before its evening meal. All bathing should be done before meals, not after. Such an evening bath tends toward a good night's rest. Still, half the sleepless children would sleep if they were given exercise. A good practice is to let the baby lie on the floor and kick at the air; by throwing a sheet or quilt on the floor first, and having its edges raised, draughts may be avoided. Such exercise tires, but strengthens, and spine troubles and peevish nurses are not often seen in homes where this is the practice.

—American Cultivator.

Forefathers of the Presidents.

The recent congress of the Scotch-Irish calls attention to the immense value of the element in the development of our country, and to the fact that it has furnished four Presidents—Jackson, Polk, Buchanan and Arthur. It is interesting to recall the racial lineage of all the Presidents.

George Washington was of pure English stock, his father's family dating back in England to the 13th century. His mother was likewise of pure English stock. Both came from an agricultural ancestry.

John Adams was likewise of pure English blood, but his forebears were generally mechanics, merchants, ministers and small farmers.

Thomas Jefferson came of pure English stock, his paternal ancestors being English farmers. His mother was a Randolph—also pure English.

James Madison's father was of pure English blood, and his mother, Elizabeth Conway, also of English blood, with an admixture of Irish.

James Monroe was of English blood, his grandfather having been a captain in Charles I.'s army.

John Quincy Adams was pure English, his mother's name being Abigail Smith.

Andrew Jackson was Scotch-Irish on both sides. His father was a farmer, and his mother, Elizabeth Hutchinson, belonged to a family of weavers.

Martin Van Buren was of pure Dutch blood. His grandparents on both sides were farmers, and his mother was a Miss Hoes.

William Henry Harrison was English as far back as the family could be traced. His mother was a Randolph.

John Tyler traced his lineage back to Wat Tyler, the great English rebel of the 14th century.

James Polk was Scotch-Irish on both sides, his mother having been a Knox. Zachary Taylor was English to the core.

Millard Fillmore was of pure English blood.

Franklin Pierce was of English blood. James Buchanan's father was a Scotch-Irishman, and his mother the daughter of a farmer of Adams county Pa.

Abraham Lincoln came of pure English stock on both sides. His mother was Nancy Hanks.

Andrew Johnson's parents were probably of English or Scotch descent.

Both of U. S. Grant's parents were of Scotch descent.

R. B. Hayes came of pure English blood. James A. Garfield's paternal ancestors were Puritan English, and his mother's Huguenot French.

Chester A. Arthur's father was a Scotch-Irishman, and his mother an American of English descent.

Grover Cleveland is of pure English blood. Benjamin Harrison comes of pure English stock.—National Tribune.

Most Interesting Thing in America.

An English traveler passed through this city on the way to London. He had spent three months in the United States seeing things. A friend asked what was the most

interesting thing he saw in the country, and he answered without hesitation that it was a mule! Then he explained that he had visited certain mines where mules were used to haul tramcars, and their wonderful patience and intelligence had made on him a deep impression.

Some of the tunnels were so low that the animals had to hold their heads down and partly stoop to go through, but there was never any trouble. He pointed out a characteristic of the mule that makes him unlike a horse. Many Americans have noticed it. If a horse touches his ears in going under a low bridge or through a tunnel he will invariably throw his head up and receive a hard knock. When a mule's ears touch anything his head goes down. In some parts of this country it is a high compliment to a man to say that he has as much sense as a mule.—New York Tribune.

Gems.

To know before acting is our evil temptation.—Desjardins.

A soul occupied with great ideas best performs small duties.—H. Martineau.

Of expectation fails, and most oft there where most it promises.—Shakespeare.

If you would have a house when you are old, lay a brick every day.—E. P. Day.

The less a man thinks or knows about his virtues the better we like him.—Emerson.

For tasks in hours of insight willed
May be in hours of gloom fulfilled.

—Matthew Arnold.

The sum of all that makes a just man happy consists in the well choosing of his wife.—Massinger.

Surely oak and threefold brass surrounded his heart who first trusted a frail vessel to the merciless ocean.—Horace.

In an ill-organized society the laws are like spider's webs; little insects are stopped by them, but the great pass through.—Dumas fils.

He was a wise fellow, and had good discretion, that, bid to ask what he would of the King, desired he might know none of his secrets.—Shakespeare.

Haste and rashness are storms and tempests, breaking and wrecking business; but nimbleness is a full, fair wind, blowing it with speed to the haven.—Fuller.

Our nature is inseparable from desires, and the very word desire—the craving for something not possessed—implies that our present felicity is not complete.—Hobbes.

Grief is a tattered tent,
Where through God's light doth shine;
Who glances up at every rent
Shall catch a ray divine.

—Lucy Larcom.

To be able under all circumstances to practice five things constitute perfect virtue. These five are gravity, generosity of soul, sincerity, earnestness and kindness.—Confucius.

Men of sense often learn from their enemies. It is from their foes—not their friends—that cities learn the lesson of building high walls and ships of war, and this lesson saves their children, their homes and their properties.—Aristophanes.

Waste cannot be accurately told, though we are sensible how destructive it is. Economy on the one hand, by which a certain income is made to maintain a man genteelly, and waste on the other, by which, on the same income, another man lives shabbily, cannot be defined. It is a very nice thing; as one man wears his coat out much sooner than another, we cannot tell how.—Johnson.

Overwork and Underwork.

Everyone has heard of the danger of overwork, yet few understand just where the danger lies. A man can hardly overwork himself if he takes care of himself in other respects—secures a normal amount of sleep, breathes pure air, takes exercise, and eats food moderately.

The main trouble is that the man who is overworking is violating fundamental conditions of health. He burns his candle at both ends.

With due care a man of good heredity is capable of safely doing an almost incredible amount of solid work. Mr. Gladstone at 83, with no show of weariness, carries the weight of the British Empire. The celebrated John Wesley did more work than almost any other man of the last century; but he observed the laws of health, and, still active, reached his 88th year.

Much of the so-called overwork is the overwork of worry, care, anxiety and haste. These make the severest draught on the vitality of the system.

We seldom hear of a Quakers dying of overwork, and yet they are a very industrious people. The pupil who has permanently broken down in his studies might have gone on under even heavier loads if there had been nothing to fret him in his home sur-

roundings, and competition, examinations and scholarship markings had no place in our school system. The fact is, work, and plenty of it, is healthy in a high degree.

And this leads us to say that a lack of work, with brain or hand, is highly injurious. Underwork may be as harmful as overwork to the brain if not to the body. Nations living in conditions in which the means of livelihood come almost without effort are in every way feeble. Close confinement in prison tends to idiocy.

Further, where the mental faculties are not called into action, the moral also lie dormant, and the lower propensities become all-controlling. In all ages the corruptions of the higher classes are due to this fact. Few worse things can befall one than to have nothing to do.—Youth's Companion.

What Jack Overheard in the Cellar.

"This cellar is awfully damp," said the Rat-trap. "I'm afraid I'll catch malaria."

"If you don't catch malaria any better than you catch rats you needn't be afraid," said the Kindling Wood.

"You seem to have a cold," said the Milk Pail to the Refrigerator.

"Yes; in my chest," said the Refrigerator, with a smile.

"I hate being locked up here in this dull place," said the Furnace.

"O, I don't think it's so bad," said the Fire.

"It's easy enough for you to talk," said the Furnace. "Fires can go out, but Furnaces can't."

"How did you happen to see all these things you tell us about?" asked the Coal-bin of the Saw.

"The same way I saw everything else," said the Saw; "with my teeth."

"I hear you called on the Refrigerator yesterday," said the Wood-box to the Pail. "Were you received pleasantly?"

"No. The Refrigerator treated me with great coldness," said the Pail.

"This house is beautiful upstairs," said the Furnace to the Poker. "The flues are going up there all the time, and they told me all about it."

"O, please stop poking me," said the Furnace Fire to the Poker. "You tickle."

"I hear you are quite a sportsman," said the Snow Shovel to the Coal.

"Never handled a gun in my life," said the Coal.

"Why I'm certain I overheard somebody saying that he'd seen the Coal chute," said the Snow Shovel.—Harper's Young People.

Food Prices in European Cities.

A commercial return has just been issued in London, showing the average retail price per pound avoirdupois of various articles of domestic consumption, medium qualities, in some of the principal cities of Europe, during the last year. The cities selected are: Paris, Lille, Berlin, Frankfurt-on-the-Main, Hamburg, Vienna, Buda-Pesth, Prague, Rome, Florence and Brussels. The price of prime beef varied very much. In Prague it could be obtained for 14c a pound, in Vienna for 16c, in Rome and Buda-Pesth for 17c, while in Paris the price fluctuated between 24c and 32c and in Lille as much as 35c had to be paid. Flour ranged from 2c in Buda-Pesth to 5c in Paris, Frankfurt and Florence. It is curious to notice that, while in Lille flour can be purchased for 4½c a pound and white household bread costs 3½c, in Berlin this was exactly reversed, bread costing 4½c and flour being 1c cheaper. Potatoes were under 2c a pound in all the cities except Hamburg. Rice ranged from 2½c (in Brussels) to 10c. Sugar, "good white lump, cracked or powdered," from 7½c to 5c (in Rome and Florence), and coffee (Brazil or plantation, roasted and ground, without chicory or other coffee substitute), from 3½c in Berlin to 60c fresh roasted in Paris. In Brussels coffee from the Dutch colonies can be obtained for 29½c a pound.

The Devotion of a Canine Mother.

Half a dozen small boys, a shepherd dog and her five puppies, and a box of matches caused a five-hundred-dollar fire in Allegheny.

The dog and her puppies were kept in a vacant stall in the rear of George W. Evans' livery and feed stables on East street near Elm street, and the boys were looking at the pups through a knot hole in the side of the building, and in order to get a better view of them, held lighted matches to the knot hole. One of the lighted matches fell through the knot hole into the straw in the stall and set it on fire. The boys, seeing the blaze, ran away for fear, and did not give the alarm. The fire was discovered by a policeman.

When the fire broke out the mother of

the puppies made a heroic effort to save her offspring, and succeeded in carrying them all to a place of safety except one, which was roasted alive. She had to leap over a high barrier to get out of the stall, and the last one she carried out was all ablaze when she sprang from the flames with it in her mouth. Her grief at not being able to rescue the last was evident, and she had to be held to keep her from rushing back into the flames for it.—Pittsburg Dispatch.

The Baby's Airing.

It is well to send the babies out for an airing every day, if they are confided to competent hands. But often baby's tender little body is jarred and wearied by being rattled over a rough road, bounced into and over gutters, and thumped over crossings at headlong speed, until it receives more harm than good from its outing. Almost every one knows what a difference there is in drivers—how one man will, however easy the carriage, take you to your journey's end feeling that you are black and blue from jolting about, while another will avoid every loose stone and moderate his speed at the rough places. Be sure that babies suffer quite as much as their elders from unskillful charioteers.

It is perfectly easy to guide a child's cab over the gutter without a jar, but it is seldom done by a servant, and often not by mothers themselves. Not only are the little ones jerked and bumped along in this tiresome fashion, but they are kept hours in their carriages without change of position, getting numb and cold in consequence. This is quite wrong. Young infants should take the air in the arms of an attendant. Very serious evils result from subjecting their tender bodies to jars.—Hall's Journal of Health.

A Promising Girl.

A Marysville girl who is attending the intermediate department of the "B" street school, was yesterday requested by her teacher to prepare a short essay for the closing exercises which will take place at the schoolroom on next Friday afternoon in the presence of the parents and invited friends of the pupils. She chose for her subject, "The Boy," and this morning proudly placed the following on her teacher's desk:

"The boy is not an animal, yet they can be heard at a considerable distance. When a boy hollers, he opens his big mouth like frogs, but girls hold their tongue till they are spoke to, and then they answer respectfully and tell just how it was. A boy thinks himself clever because he can wade where it is deep, but God made the dry land for every living thing and rested on the seventh day. When the boy grows up, he is called a husband, and then he stops wading and stays out at nights, but the grew-up girl is a widow and keeps house."—Marysville Democrat.

Short Furrows.

An ounce of brain is worth a pound of brain. Gold-brick men bait for rascals and catch them.

It is a great fault to be continually fault-finding.

You never get nearer heaven by stepping on other people.

No ghosts are so hideous as the recollections of one's own sins.

A milking stool is a poor thing with which to quiet a fidgety cow.

He that does not produce as much as he consumes is a deadhead in society.

It is bad manners to be more polite to your neighbor's wife than to your own.—Marion Rambo in American Agriculturist.

Waste of Force.

A source of dyspepsia is emotional waste of nervous force. The nerve force is to the physical system what steam is to the machine. In the normal condition of things, it is renewed as fast as it is used. But nature makes no provision for the immense amount expended by excessive care, by fuss and worry, by hurry and drive, by explosions of passion and by the undue excitements of pleasure. All these are like a great leakage of steam. The stomach is the first and largest sharer in the loss.

Brain-Work.

Brain-work is specially exhaustive of nerve-force, and the exhaustion is greatly increased by the fact that high intellectual activity gathers to itself a most delightful momentum, making a few hours of high-pressure work more productive than days of plodding. Moreover, a brain-worker generally neglects physical exercise and curtails sleep. He is like the careless engineer who, while driving at the highest speed, fails to supply the needed wood and water. He cannot help being a dyspeptic.

YOUNG FOLKS' COLUMN.

An Unfortunate Visit.

Said the Queen of the Cannibal Islands one day
To the King of the Cannibal Isles,
"I fervently wish you would take me away;
My appetite's really becoming passe;
I should like to go miles upon miles."

So they ordered their boat, and away they set sail,
And with talk both pleasing and witty,
And a glimpse now and then at a sociable whale
(With occasional pauses in order to bail),
At last they arrived in the city.

"Now the first thing, my dear," said the king to the queen,
"That we really, you know, ought to do—"
"Yes, dear husband," she murmured, "I know what you'd say."

So they entered a restaurant over the way
And ordered a little-boy stew.

"And, pray," said the king to the waiter, who stared
With his eyes popping out of his head,
And who would have fainted right there had he dared,
"I trust you will see that it's ably prepared,—
We're particular how we are fed."

"Excuse me, good sir," said the waiter, whose hair
Was beginning to whiten with fright,
"But little-boy stew—O! I hope you won't care—
Is not to be found on our poor bill of fare;
We're short of that order to-night."

"Very well," said the king, "bring a little-girl -ple,
And see that the crust is well done."
Just then there arose a terrible cry.
For the king, who was hungry, had fixed a keen eye
On the waiter, who started to run.

I really can't finish this pitiful tale.

The police took the strangers in hand;
And I venture to say if that sociable whale
Had dreamed in the least how the journey would fall,
He would not have allowed them to land.

—N. P. Babcock, in St. Nicholas.

A Snake in the Nursery.



HERE'S only one thing in the world that my wife's afraid of, and that's a snake," said Sir Philip D—to three or four of his friends, with whom he was chatting in the spacious veranda of his pretty bungalow (country house) among the mountains of Southern Ceylon. "I've known her almost to faint on seeing a spotted green ribbon hanging over the back of the chair, and only the other day, when our gardener, after watering the plants, left his hose-pipe on the grass, instead of putting it away, she jumped half across the lawn at the sight of it, thinking it was a boa-constrictor."

His friends laughed, for their charming hostess, though she had been only a short time in Ceylon, had already acquired a reputation for a cool courage that might put many a man to shame, and no one who had seen her facing a flood as tremendous as that which swept away Johnstown, or guiding her frightened horse through a burning forest with the pursuing flames close behind her, would ever have suspected her of being a coward. In fact, small and slight as she was, one had only to look at Lady D's firm lips and bright, fearless eyes to be fully convinced of the perfect truth of the characteristic compliment paid her by Mayor O'Mulligan of the Irish brigade, "She's a man every inch of her!"

The house stood half-way up the face of a gently sloping ridge, and on three sides of it the jungle had been completely cleared away; for Sir Philip D—, like most of his neighbors, had "gone into tea-growing." But at the back of it a bristling mass of black impenetrable thickets, dense enough to have hidden a buffalo or an elephant, came down to within a few hundred yards of the palisade that encircled the villa and its belongings, and this was a constant nightmare to poor Lady D—, whose snake-haunted fancy peopled this obtrusive patch of jungle with every kind of serpent from a 30-foot boa-constrictor to an adder no longer than her neck-ribbon.

Early in the afternoon of that memorable

day, when all the gentlemen had gone off to take the nap which is as recognized a feature of a hot day in Ceylon or India as either breakfast or dinner, Lady D—, stretched at her ease in a light hammock, was just dozing off to sleep likewise, when she suddenly heard, or thought she heard, her baby utter a cry.

This was more than enough to startle the anxious mother into instant activity. Throwing herself out of the hammock she hurried off to the nursery (which was only two rooms away), quite forgetting, in her headlong haste, that she was herself doing the very thing for which she had so often blamed her easy-going husband, viz., going about the house barefoot, in defiance of all risk of snakes, scorpions, centipedes and other "ingenious creepers."

Little Phil was lying snugly in his small, white cot, all alone, for his careless ayah (native nurse) had slipped out as soon as she thought her mistress safely out of the way, and his mother (whose disturbed imagination had pictured him to herself as stung by a deadly cobra, or struggling in the coils of a python, the moment she heard him scream) was not a little relieved to find that the calamity by which he had been overtaken was to all appearance nothing worse than the kicking off upon the floor of the light sheet that covered him.

The child stretched forth his tiny hands to her with eagerness, and she stepped hastily toward him, but in doing so she happened to tread upon the sheet which he had thrown to the floor.

Instantly she felt beneath her bare foot, with inconceivable horror, the furious writhing and struggling of some living thing, which, as she knew at once, could be nothing else than a snake!

It was even so. The sight of the hideous reptile wriggling across the floor had startled the child into uttering the cry which its mother had heard, and the serpent had either been covered by the falling sheet, or sought a hiding place there of its own accord.

Expecting every moment to feel the deadly fangs in her flesh, but resolute to save her boy at whatever cost to herself, the brave woman pressed with all her weight and strength upon the writhing snake, shouting for help meanwhile with the full power of her voice.

She did not call in vain. Alarmed by her cries, three or four native servants came bursting in, and the foremost of them, a bold and active lad from the mountains of Mysore, came armed with a heavy bamboo stick, which, guessing at once the cause of the tumult, he had snatched up as he ran.

Signing to his mistress to spring back, the cool and courageous Hidoo tossed aside the sheet with the end of his stick, and dealt a heavy blow to the now motionless snake beneath it. But the stroke was not needed. The convulsive pressure of that small, white foot (which had fortunately alighted right on the serpent's head) had done its work, and the reptile, a cobra of the deadliest kind, and nearly five feet in length, was now harmless for evermore.

The very next day Sir Philip began to cut away the snake-sheltering jungle at the back of the house, thinking, no doubt, that one visit from such neighbors was quite sufficient. But, curiously enough, poor Lady D—'s terrible adventure, so far from inspiring her (as it might naturally have been expected to do) with a greater horror of snakes than ever, seemed to have quite swept away her former terror of them, and from that day forth she never troubled herself about them at all.—Harper's Young People.

Historical Inaccuracy.

A small boy with an inquiring and analytical mind, residing on a farm about 16 miles in the country, sends this in:

Dere Sur—I notice in the history that we are studying that Rome was saved by the cackling of a lot of geese, but I don't believe it, for I have lived on a farm all my life and I never heard a goose cackle yet. Doant they mean a hen? Yours truly.

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder
ABSOLUTELY PURE

PATRONS OF HUSBANDRY.

From Worthy Master Davis.

If the Midwinter Fair is to come to California, why not get our grange forces into line for that exhibition? Each subordinate grange can do much to advertise the worth and the wealth of California.

Deputy J. C. Purvine expects to bring one or two new granges to the State Grange next October.

What has come of the effort to organize a couple of new granges in Kern and Madera counties?

Fresno county ought to have half a dozen subordinate granges. The same for Los Angeles county.

Worthy Overseer Roache and Worthy Lecturer Huffman were unable to meet with Santa Rosa Grange, Saturday, July 8th, though both were expected. Sorry they could not attend.

Santa Rosa Grange has just bought a new piano. They got the start of Yuba City Grange on the piano business.

About the only friend of financial profit that the California farmer has to rely on in 1893, is the old hen and her brood of chicks.

Farmers of California be careful of your nickels and dimes, for the Tax-Collector has to gather in about \$6,000,000 this year for State purposes—"And the farmer feeds them all."

With the establishment of creameries all over our State, the dairy industry is getting to be of great magnitude. It is one of the most certain sources of revenue to the farmer, and is destined to be more extensively developed in this State where climate and other conditions are so favorable. California has already won a prominent rank among the States, in the production of fruits, dairy products and poultry.

Petaluma Grange passed a class to the Master's office last Saturday. All enjoyed the feast of edibles, of music, of wit and wisdom. A good attendance and much enthusiasm was manifested about the coming session of the State Grange.

The assessed value of the cows of this country is reported to be \$700,000,000, while all the gold paid up by national banks is placed at \$640,000,000. Hurrah for the bossy cow! Who would have thought that the cow is "hoss" of the national-bank business? It is authoritatively asserted that the cows of the nation, in the year 1890, produced 1,200,000,000 pounds of butter, which sold for more money than the entire lumber, iron and wheat product for that year. Is it any wonder that the wise man wrote, "There is no distress greater for a family than to be without milk"?

What better service could the State Grange render to the boys and girls of the farm than to offer a yearly scholarship, say of \$250, to the son or daughter of a patron who should pass the best examination for admission to our State Agricultural College at Berkeley? The payment of this money to be conditioned upon a certificate from the president of the agricultural college, that the student had mastered the course of study in that college for the year just passed. Think about this and work out the details in the interests of higher education for the boys and girls of the farm.

A call has been made by the Humane Association of Sacramento, for a State "Good Roads Convention," to assemble in the State Capitol building on the 7th of next September. No people are more directly interested in this subject than the farmers of the State. They are the ones who have to foot the heaviest bills, and they are the ones who are most inconvenienced by bad roads. It is to be hoped that the Governor will select some of the very best farmers of the State as delegates to the convention, and that the boards of supervisors in the several counties will not overlook the practical men in their jurisdiction when it comes their time to select delegates. This convention may do great good to the State, or, by its influence and resolutions, may do no little harm to the tax-payers of California. It is not a very good time, owing to the very low prices realized for products and the great stringency of the money market, to think of honoring townships, counties, or the State, even for so worthy an end as the betterment of our public roads. Let wise councils prevail, and let the man who has a personal axe to grind be left at home to grind it on his own not the public's grindstone.

For some unaccountable reason, there seems to be a strong desire on the part of a great many people to antagonize everybody who holds official station. This is not only true of those men who hold offices of honor

and emolument, but it seems equally as true of those who hold office when the only compensation is that of so-called honor—honor that, alas! too often, is only empty honor. This condition of public sentiment is not in the right direction. It ought not to be allowed to expand. Public men are at all times subject to just criticism. They expect it; they deserve it. But there are men in public station who are honest, who are worthy, who are just and true; and these men ought to be selected from the mass, and their worth ought to be recognized. Honor to whom honor is due. Commend the honest man. Punish the rascal and the knave. It matters not though he be a senator, representative, governor, judge, hank president or cashier. Down with the sycophantic sympathy that goes out for a defaulting cashier, a handit train-robber and murderer or a bribe-taking official, merely because he is one of the Four Hundred, and that would punish the starving tramp for stealing a loaf of bread or sleeping over night in an out-building. Equal and exact justice to high and low is the motto of the Grange. Let's have it at any price.

Yosemite and Surroundings.

TO THE EDITOR:—In accordance with the suggestion of Worthy Master Davis, that its patrons should write for the RURAL, I considered it a possible matter of interest to your readers to write something of my recent trip to the Yosemite valley, from which I have just returned overland with my family.

We traveled with teams and camping outfit via Tulare lake, Lemoore, Grangeville, Kingston, Fresno to Raymond. Suffice it to say that on about the 1st of June we reached Raymond, situated in the foothills at a fag end of the Southern Pacific railroad system and sixty-two miles southwest from Yosemite. There is nothing of note about the place but some granite quarries surrounding and a gulch intervening, on the sloping sides of which stand two stores, a stable and a hostelry, built half in the hill. From Raymond, climbing curved and circling roads, over rocky ridges and scrub-oak hills, the sawmill is reached, some twenty miles from Raymond.

Here pine and cedar timber has reached dimensions justifying active work of the big saw. At the sawmill we found the first toll-gate on the road which is controlled and operated by the milling company, as well as the road from this point to Raymond. From the mill to the Yosemite valley, a distance of over forty miles, the "Yosemite Stage and Turnpike Company" absolutely own and control not only the road, but everything valuable in the way of stages, hotels, lunch-houses and beer hollies. It is a monopoly of the most exacting nature. Continually you see the assumption protruding, that, although a heavy toll-road, precipitous and indifferently constructed and maintained, no one has any rights thereon that the company is disposed to respect.

The mountains, generally steep and rugged, are heavily timbered through this vast region, cedar, fir and pine predominating. A few years ago the Government opened the country for entry. Dummies were placed on almost every quarter section of good timber land which in time was proved upon by false swearing, dictated and encouraged by the manipulators, and now the whole timber belt, forty miles wide and scores of miles in length, is substantially in the hands of combinations and speculators.

Five miles east of "Fish Camp," and thirty miles from the Yosemite valley, there is a stage stand. Here you leave the main road and make "the loop" around by the "Mariposa Big Tree Grove," four miles out and four miles back on the same road. The first indication of "the grove" you discover is some dozen monster "sequoia gigantea" in a canyon.

Being strangers to the situation without any knowledge of the ground, and no guide-boards to direct, we wandered around over the steep and winding roads in the endeavor to discover the several segments of the grove. After winding and climbing for an hour we came across the "Guardian's" habitation, a log cabin, one-story shaked, with chinked and daubed cracks, at the feet of "Governor Markham." An old silurlan, by the name of Cunningham, was in charge of the grove, who appeared to take no further interest in it than to sell his collected "curios" and brag of the big holes they had been enabled to hurn in these giants of the forest. We complained to him that there were no finger-boards to direct strangers, and consequently not one in a dozen of such sight-seers, other than those under the guidance of the stage company, ever discovered half the segments of the grove.

This riled the old fossil so much that he snappishly replied that "the stage company built and controlled the roads, and that he

was not going to hother his head about sign boards." We inquired how it was that the grove had received such a destructive burning. He replied "that there had been two severe fires since his association with it—one in the year 1864 and the second in the fall of 1890—when, especially at the latter date, they fought fire for several weeks." He said that the commission had concluded to have the underbrush, fallen trees and limbs cleared out in order to prevent future fires.

When we suggested that the extent of the ground over which the Sequoias grew more or less thickly aggregated more than a thousand acres, and consequently would employ forty men all the time to keep the debris cleared up, and as a substitute for this proposed annual and immense expense that the gushing streams, which have their source from the highest snow peaks of the surrounding hills, should be turned into iron pipes and run around through the several sections of the grove, with a hosebib set therein opposite every great tree, so that water could be thrown on the trees at will, thereby saving them from future injury, which could all be done for a few thousand dollars.

The idea of "an old tramp of a man with two plug horses and a rattled-wheeled wagon" suggesting anything to him or the States' commission relative to the protection or government of the grove, was over-powering to Mr. Cunningham. Consequently, he so far forgot himself and the respectful duties of his position as to grossly insult Miss Luke and my children, who subsequently visited the silurlan.

It is a notorious fact that the average man, like the government mule, can be pampered to such an extent, and fed so long at the government crib, that he is disposed to hray and kick the life out of his master at the least provocation, regarding the rest of mankind, as his obedient subjects.

Now Mr. Editor, the next time your artist goes to the "Mariposa Big Tree Grove" to sketch, photograph or engrave please instruct him not to always take the best side of the best trees for his representations, but rather have him give us a realization of the present situation, as blackened forest of innumerable cedars, pines, oak and fir, with here and there a huge monster overtopping them all, with hase charred around and holes burned to the heart of many of them.

Hardly a single one of these giant trees remains unscathed by fire brands in the hands of vandals, who, it is said, three years ago set fire oftener than they extinguished it, in order to make the government job last as long as possible.

Wawona, situated on a tributary of the Merced river, twenty-six miles from the Yosemite valley, is the chief stage station and toll-collecting depot on the route. A good hotel, stable, blacksmith shop, and a studio of Hill's constitute the improvements. A toll gate would be beneath the dignity of the place, instead thereof a notice is posted on a tree some hundreds of yards west from the station directing all travelers to leave the main road, call around by the hotel and pay the exorbitant toll charges demanded at this place.

After ransacking the hotel for a collector, I ran afoul of a big slick, lazy looking fellow, who demanded and received thirteen dollars and a half as the toll in and out of the valley, for four horses.

From Wawona we had an uphill grade for twelve or thirteen miles, much of it very steep and in places dangerous. The decent into the valley, seven miles, is also steep and precipitous. It is unnecessary to describe the valley here: everyone has at least read of its extent and wonders, our purpose being simply the giving of some insight as to the situation and methods prevailing there. Two or three years since the *Examiner* and *Chronicle* made war on the State commission for its lax management of the valley and the favoritism shown to the ghouls who infested it. Scathing articles were printed declaring that the vandals were cutting the timber and destroying the beauty of the valley, and that they had been allowed by the commissioners to fence in the greater and better portions of the valley with barbed wire, for grain and hay fields, to the exclusion of the camper and general public. Subsequently the whole controversy quieted down, and the presumption of everybody was, that the vandalism complained of had ceased and the obstructions had been removed. Upon inquiry, we found that some fencing below the "Yosemite" known as "Barnard's Hotel" had been removed from around small inclosures, but in traveling over this valley we discovered that the main valley on the north side of the Merced river, between the Stoneman house on the east to and below Barnard's hotel on the west, a distance of nearly two miles, was substantially all fenced in with hoards and barbed wire. The fields enclosed contained some-

where in the neighborhood of 400 acres of the best meadow land in the valley—and about all that was out of the matter of this class at the time of which we write. The land within these inclosures, in conjunction with the great stables and other buildings near the Stoneman House, are all rented to "Coffman and Kenney" for a term of years, at the nominal rate of \$750 per annum, about the price of a dozen tons of hay charged campers in the grove near by, who have no recourse other than to pay \$75 per ton for ground barley and from \$50 to \$60 per ton for hay. This same stable company have a monopoly of the sight-seer carrying trade of the valley, in which they employ from forty to sixty bronchos and mustangs daily, at the rate of from three to five dollars per day. The Stoneman House was built by the State some ten years since, at a cost of about \$50,000, and rented presumably to the Monopoly Stage Company with J. J. Cook as keeper—at the nominal rent of \$1,200 per annum. Rates of board \$4 per day.

Mr. Galen Clark, "Guardian of the valley," so far as he has any authority to act—which is the control of anything that needs no control—is very gentlemanly and obliging to campers, in locating them outside of any inclosure.

I never realized the influence which induced Governor Markham to veto the bill passed by the late Legislature, providing an appropriation for building a free road into the Yosemite valley, from Mariposa, and up the Merced river, until my investigation of the situation. Had he signed said bill it would have broken up the railroad and stage monopoly rates, and reduced freight charges to such an extent as to have made it possible for campers and all other sight-seers to visit and live in the valley at prices not ruinous to the average citizen.

J. V. WEBSTER.

Creston, July 9, 1893

To the World's Fair!

WEEKLY EXCURSIONS!

Are you going? If so, call on or write to the undersigned before arranging for your trip. The "SANTA FE ROUTE" is the only line under one management from California to Chicago! Palace and Tourist Sleepers through to Chicago every day without change! Excursions every Tuesday. W. A. BISSELL, G. P. A., 660 Market Street, Chronicle Bldg., San Francisco, Cal.

Fruit-Pitting Knives

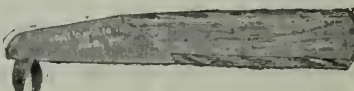
—AND—
SPOONS.

FRUIT-PITTING SPOONS.



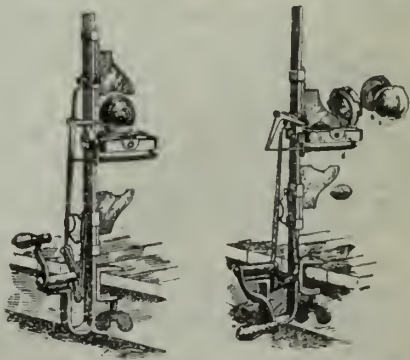
LIGHTNING CLING-STONE PEACH PITTING SPOONS. No. 3, Steel Blade, Polished Handle, per doz., \$2.50.

FRUIT-PITTING KNIVES.



LIGHTNING CLING-STONE PEACH-PITTING KNIVES. Blade 3-inch, per doz., \$5.00.

FOREMAN
FRUIT-PITTING MACHINE.



The Foreman Fruit Pitting Machine cuts fruit rapidly and evenly, leaving no ragged edges. It saves a great deal of labor and, compared with other machines, is very economical in its work. In pitting peaches the peach can be cut at a given point. Many pitters, while they work very rapidly, do unsatisfactory work for canners and dryers, because the fruit is not cut clean and through the flower.

We guarantee the Foreman Pitter to give good satisfaction, or it may be returned at our expense after a trial of one day. It is especially suitable for the wants of canners and dryers.

PRICE \$12.50 EACH.—We offer liberal discounts to the trade.

BAKER & HAMILTON,

SAN FRANCISCO AND SACRAMENTO.

Seeds, Plants, Etc.

AN INVITATION

IS EXTENDED TO ALL INTERESTED TO VISIT THE SAUSAL FRUIT FARM DURING THE FRUITING SEASON, WHERE ALL VARIETIES ARE TESTED THAT ARE GROWN AT

NAPA VALLEY NURSERIES.

AN INSPECTION OF THE NURSERIES ALSO SOLICITED. CLEAN STOCK, UNIRRIGATED, PROPAGATED FROM BEARING TREES.

LEONARD COATES, NAPA, CAL.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrobalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond
Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

OLIVE TREES.

ALL KINDS OF
Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,
Pomona, Cal.

HEADQUARTERS

For Rare new Tropical fruit and ornamental plants and trees. Palms, Ferns, Orange Trees, Pineapples, Bamboos, Aquatics, Etc.

Plants safely shipped everywhere. Send stamp for new and full catalogue which tells all about this subject.

REASONER BROS
Oneco, Fla.

CALIFORNIA FRUITS

HOW TO GROW THEM.

A MANUAL OF METHODS WHICH HAVE YIELDED GREATEST SUCCESS; WITH LISTS OF VARIETIES BEST ADAPTED TO THE DIFFERENT DISTRICTS OF THE STATE.

BY EDWARD J. WICKSON, A. M.

Assoc. Prof. Agriculture, Horticulture and Entomology, University of California; Horticultural Editor PACIFIC RURAL PRESS, San Francisco; Secretary California State Horticultural Society; President California State Floral Society; President San Francisco Microscopical Society.

PRACTICAL, EXPLICIT, COMPREHENSIVE
Embodying the Experience and Methods of Hundreds of Successful Growers, and Constituting a Trustworthy Guide by which the Inexperienced may Successfully Produce the Fruits for which California is Famous.

Large Octavo—599 Pages, Fully Illustrated.
PRICE \$3, POSTPAID.

PUBLISHED BY

THE DEWEY PUBLISHING CO.,
PUBLISHERS PACIFIC RURAL PRESS,
220 Market Street, Elevator 12 Front Street
SAN FRANCISCO, CAL.

The American Bee Journal,

(Established 1861.)

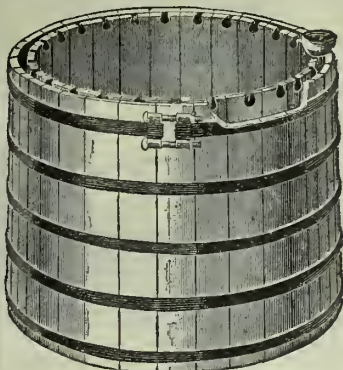
Is Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample.

\$1.00 BEE-BOOK FREE

GEO. W. YORK & CO., 56 Fifth Ave., Chicago, Ill.

PACIFIC RURAL PRESS!
Is the Largest Illustrated, and Leading Agricultural and Horticultural Weekly of the West. Established 1870. Trial Subscriptions, 50c for 3 mos. or \$2.40 a year (till further notice). DEWEY PUBLISHING CO., 220 Market Street, San Francisco.

Patent Non-Shrinking Water Tanks.



WILL NOT LEAK OR DRY OUT.

THE BEST TANK NOW MANUFACTURED.

EVERY ONE GUARANTEED and cost no more than Common Tanks.

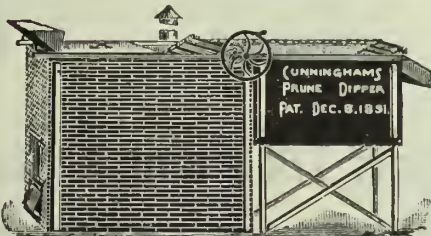
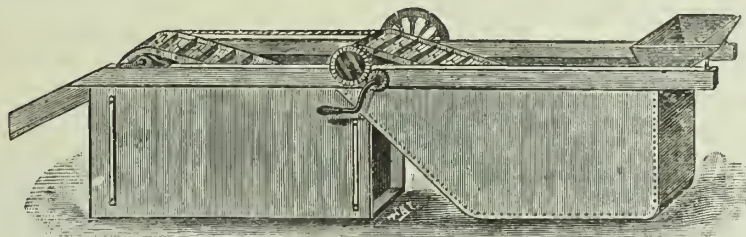
IF YOUR DEALER DOES NOT KEEP THEM, buy no other kind.

WRITE FOR ILLUSTRATED CATALOGUE AND PRICES.

W. E. HAMPTON,

SOLE OWNER OF PATENT AND MANUFACTURER.....27 BEALE ST., SAN FRANCISCO, CAL.

CUNNINGHAM'S PRUNE DIPPING MACHINE.



CUNNINGHAM'S DIPPER.
Built with Circular Flue Furnace.

A MACHINE FOR SCALDING in hot lye water and RINSING in fresh water Plums, Prunes and Grapes of all kinds.

Made for Hand or Power Use.

CUNNINGHAM'S PRUNE SPREADER

Is one of the best labor-saving machines ever brought before the fruit-growers and driers.

Send for Circulars.

L. Cunningham,

PATENTEE AND MANUFACTURER.....SARATOGA, SANTA CLARA CO., CAL.



The Anderson Prune Dipper

W. O. ANDERSON, Patentee and Sole Manufacturer.

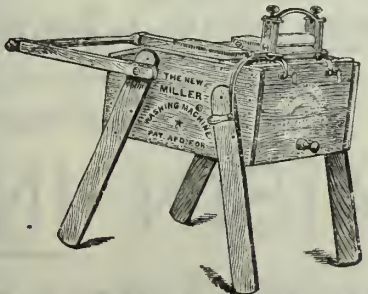
THIS WELL-KNOWN DIPPER is in use in almost every plum-growing section of the State and has given perfect satisfaction wherever tried.

WE HAVE MADE SEVERAL IMPROVEMENTS THIS SEASON in additional heating capacity, facility for spreading the fruit, etc., which makes the machine indispensable both for the factory and the farm.

We also keep a full line of FIELD CARS, TURNABLES, TRANSFER CARS, Etc.

For further information address the Manufacturer,

P. O. BOX 970, SAN JOSE, CAL.



"LATEST IMPROVED NEW MILLER" Washing Machine

In localities where as yet I have no Agents. I will ship Sample Machine on 60 days' trial, the party to pay for it at wholesale prices, and act as Agent, if found satisfactory; if not, return it. The New Miller is the leading Washing Machine in America. It is fast absorbing the large trade I have had for the Becker. It only needs to be seen to be appreciated, and for merits you have never seen its equal. A trial is convincing. You want one for your own use. I want you as an agent. Write to-day.

E. W. MELVIN,

170 EAST SAN CARLOS ST., SAN JOSE, CAL.
Proprietor and Manufacturer.

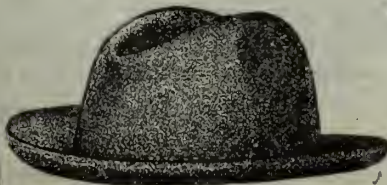
HATCH PRUNING SAW.



PACIFIC SAW MFG. CO.

17 & 19 FREMONT ST.,
SAN FRANCISCO.....CALIFORNIA.

SAWS AND MACHINE KNIVES of every description made to order.



HERRMANN THE HATTER

WILL GIVE YOU A BETTER HAT FOR YOUR MONEY THAN ANY STORE ON THE COAST.

Send for Illustrated Catalogue, mailed free.

Address 834 KEARNY ST., SAN FRANCISCO.

FALL 1893

"KEYSTONE" Corn Husker and FODDER CUTTER.

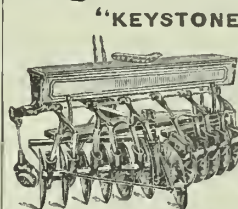


Husks the corn and cuts the fodder at same time.



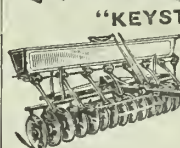
"KEYSTONE" CIDER MILLS.

Two sizes:—
Do fast and good work.



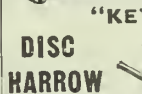
"KEYSTONE" DISC GRAIN DRILLS

Pulverize the soil, drill any grain and cover it.



"KEYSTONE" DISC SEEDER

Pulverize the soil, broadcast the seed and cover it.



"KEYSTONE" DISC HARROW

The great pulverizer for any soil.

Send for full descriptions.

KEYSTONE MFG. CO.,
Sterling, Ill.

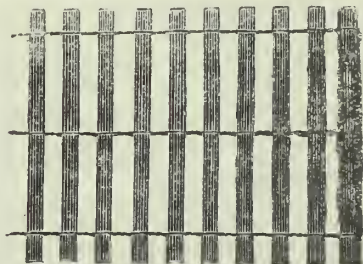
RABBIT-PROOF STOCK FENCE.

Cheap, Durable and Effective.

Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2 1/2 ft., 4 ft., 4 1/2 ft. and 6 ft. high. Send for circulars and price list to

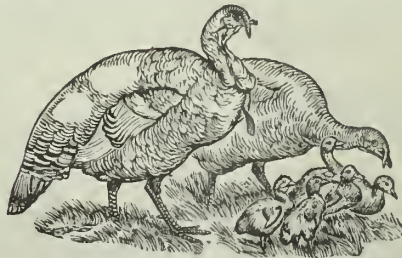
JUDSON M'F'G CO.,

12 & 14 Fremont St. San Francisco.



The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wire on the posts above it, it will turn any stock whatever.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular

E. FOUGERA & CO.,

30 North William Street, New York.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOTS GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.

CALIFORNIA If you want to know about California and the Pacific States, send for the PACIFIC RURAL PRESS, the best illustrated and leading Farming and Horticultural Weekly of the Far West. Trial, 50c for 3 mos. Two sample copies, 10c. Established 1870. DEWEY PUBLISHING CO., 220 Market St., S. F.

Gleanings.

DIVERSIFY, but don't scatter and try to raise everything.

THERE IS A GOOD DEAL OF DIFFERENCE between green fruit and green fruit. One is ripe and the other is not.

BUSINESS WITHOUT ADVERTISING is like potatoes without salt—flat, stale and unprofitable—sagely remarks the Yolo Mail.

SPEECH IS SILVER, and the correction is gradually forcing itself upon the country that somebody has been talking too much.

SANGER, FRESNO COUNTY, wants a packing-house, and is making arrangements to that end. Sanger also proposes to co-operate.

THERE ARE A FEW—just a few, thank heaven—agriculturists who own good land and who don't know enough to raise an umbrella on it.

THE TOTAL FRUIT YIELD of the Snake river country, in Washington, will this year be about 65,000 boxes. Last year the prune crop aggregated 30,000 pounds, dried.

SPEAKING OF POLITICS, there are one or two California gentlemen "mentioned" for the late Senator Stanford's shoes, who would fill the vacancy a good deal like a joint of stovepipe stops a hole.

FIRST WAS THE COWBOY RACE and now comes the announcement that two young Iowa women will drive to the World's Fair in huggies, the winner to marry the young man both desire to wed. Why not make the destination Utah and give everybody a chance to be happy?

THE TRIBUNE OF MADERA regales its readers with a story of the slaughter of 32 snakes, each a foot in length, alongside a Madera wood pile, says the Fresno Republican. Can it be possible the newspaper man has corded up his breath stove-wood length and carelessly left it out in the sun?

A NEW WORK by Mr. H. M. Wilson states that by irrigation 25,000,000 acres are made fruitful in India alone. In Egypt there are about 6,000,000 acres, and in Europe about 5,000,000. The United States has but just begun the work of improving its waste area, but has already about 4,000,000 acres of irrigated lands.

A WILD WEST SHOW at Visalia, last week, offered \$5 to any one who would ride a vicious broncho. Ah Tie, a Chinaman, accepted, put blinds over the animal's eyes, mounted him and rode him all over a five-acre lot. Weeping Jerushy! Has it come to this? A Chinaman beat our noble cowboy at his own sport! Turn on the dogs of law and let the Geary law be enforced!

BLONDIE, A SEVEN-YEAR-OLD STALLION, lowered the world's racing record for two miles at Salem, Or., July 5th, trotting in 4:43 flat. This is the best time ever made in a race, but greater speed has been made against time. Blondie was foaled near LaGrande, Or. His sire was Le Monte, dam Mollie by Frank Chapman. Blondie has a pacing record of 2:15, made last year. His trotting record for a single mile is 2:17½.

THE SAN JOSE GRANGE recently had a discussion on the cultivation of orchards. The members were quite unanimous in the opinion that oftentimes the cultivation of cherry trees is a detriment. Their roots are very near the surface of the ground, and, in plowing, large roots as well as small are broken. The orchardists expressed confidence in prices, believing that the low offers made are in no way prophetic of continued low prices.

IT IS EXPECTED that all the canneries throughout the county will resume operations in the near future, says the Petaluma Courier. This will be good tidings to those who had become greatly exercised over the late reports to the effect that all the canneries save Petaluma's had shut down for the season. It would have been a great calamity to the fruit-growers and the canning operatives if those enterprises had not been able to handle this season's fruit crop.

FOLLOWING IS A LIST OF CARS of fruit shipped East from Vacaville for the week ending Thursday, July 6th:

	Cars.
Earl Fruit Co.....	8
Vacaville and Winters Fruit Co.....	8
California Fruit Ass'n.....	4
National Fruit Ass'n.....	2
F. H. Buck.....	8
Total.....	25
Total shipped to San Francisco.....	10

SECRETARY J. STERLINO MORTON never spoke a truer word than when he said that the difficulty with too many of our statesmen was that they were demagogues and afraid of the immediate effect upon their political prospects of what they might do, says the Santa Rosa Democrat. In spite of the fact that the most conspicuous political success of the last half century has been gained by Grover Cleveland, who is just the opposite from a demagogue, it must be confessed Mr. Morton is right. All parties have suffered from this evil, one as much as another.

A GROWER OF APPLES IN SYDNEY, New South Wales, has just made an interesting experiment. He wanted to find out which was the shortest route to Chicago, east or west. So he packed a barrel of yellow apples and a barrel of red apples, and started one each way around half the world. The barrel of yellow apples passed through the canal, through the Mediterranean sea, up the English channel, and finally reached London. Here it was taken from the boat and sent by railroad to Liverpool. Then the barrel of New South Wales fruit was loaded into an ocean racer, and started on its way across the Atlantic to New York, whence it went to Chicago by railroad. It was just sixty-

six days to an hour when they arrived at Chicago. In the meantime the red apples had crossed the Pacific ocean to San Francisco in twenty days. Then they were sent by freight to Chicago. After numerous delays along the way the apples arrived. They had been fifty-two days on the way. Now the globe-trotting apples sit side by side at the World's Fair.

IF IT IS IMPOSSIBLE for our fruit men to coalesce in co-operative enterprises to handle, cure, preserve and market the product of their orchards and vineyards, they must severally depend upon their own resources for salvation, says the Yolo Mail. They must study and improve themselves in the art of drying and bleaching their fruit in the orchard. Fruit canning and preserving in the same way is practical. Each fruit-raiser can, at small expense and with a little experience, put up his own fruit fresh from and under the shade of the trees that bear it; and in this line he can score a splendid success if he honestly and persistently tries.

THE BIGGS ARGUS IS PLEASED to notice the readiness of a number of young ladies of Biggs to take employment in orchard work and who have the pride, self-reliance and industry to earn their own living and assist their parents in providing the staff of life. Twelve of our most intelligent and accomplished young ladies, who will be chaperoned by Mrs. Baldwin, will commence packing fruit for Warren Treat at once. They will occupy a tent at the orchard so as to work evenings when necessary to prepare a carload when hurried. They are paid two cents a box for packing, at which rate they can earn \$2 per day. We are pleased to see the girls doing well.

THE SANTA CLARA "prune" horse is attracting as much attention as any other single California exhibit at the World's Fair. But some way the exhibitors have a hard time convincing visitors that the horse is really what it is. The common impression is that the prunes are raisins. One man wanted to know if "that horse wasn't made of pebbles," another if "it were not made of nuts," and many exclaim, "Just look at those dates!" The error has become so common that it has been necessary to put up a sign: "This here is made of prunes." Hereafter the common expression, "Don't know beans," ought to be changed in Santa Clara to "Don't know prunes," thus indicating the sublimity of ignorance.

THE AVERAGE DUTY ON GRAIN BAGS is \$16 a bale. The tariff provides for a drawback on bags of American manufacture, or, rather, that domestic bags returned may be entered at the Custom House free of duty. It has been always a prolific source of fraud, says the Santa Rosa Democrat. Late investigations prove that the government was robbed last year of about \$250,000 duty on Calcutta-made bags, which were entered as domestic. Of course the importers had to swear to a lie to get them in, but what difference does that make to those who think it no crime to steal from the government. The farmers who pay the taxes did not get their grain sacks a hundredth part of a cent cheaper on account of this roguery.

The Hamilton Fruit Grader.

Mechanical skill and inventive genius has been enlisted in making and devising implements and devices for gathering and marketing fruit. Prominent among these is the Hamilton Fruit Grader. This grader has been used five years, and with small improvements added each year it seems, in durability, efficiency and rapid work, to have approached perfection. Mr. W. C. Hamilton, the inventor and manufacturer, has a full force of help at his factory, in San Jose, making these graders on orders. Col. Hersey, of San Jose and President of the West Side Fruit Company and Santa Clara Fruit Company, has placed an order for a five-foot fruit grader for the West Side Fruit Company and two three-foot fruit graders for the Santa Clara Fruit Company. Mr. Hamilton makes a specialty of manufacturing and dealing in implements and labor-saving machines for gathering and handling fruit, such as dipping baskets, field cars, transfer cars and turntables.

Baskets, Screens and Graders.

Within the last few years there has been great progress made in the manufacture of new and improved machinery for handling fruit crops, and this is more particularly the case in regard to prunes, both green and dried. The more rapidly and economically the crop can be prepared for market, the more satisfactory are the profits at the end of the season. D. D. Wass, 141 First St., S. F., makes a specialty of this class of machinery in the line of Graders, Baskets and Screens for prune-growers, and has the very best facilities for turning out this class of work on short notice. If you are in need of anything in this line, he can suit you. Do not fail to see his advertisement in this issue of the RURAL PRESS.

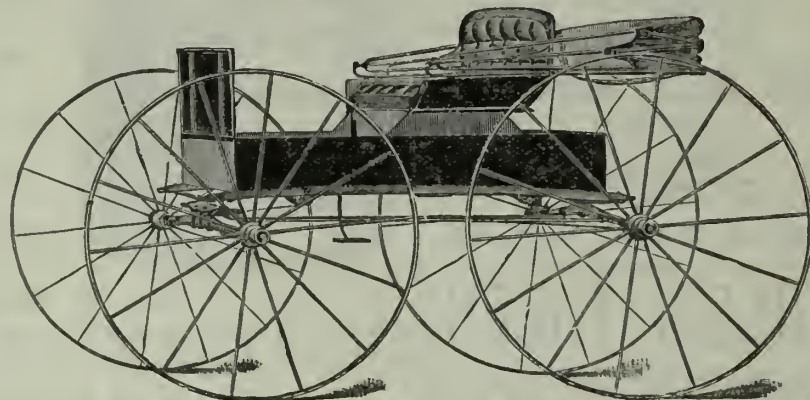
\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California street, San Francisco.

GERMEA
The Monarch of
Breakfast Foods
THE JOHN T. CUTTING CO. SOLE AGENTS

T. A. LAUDER,

— IMPORTER AND DEALER IN —



STUDEBAKER KNOWLTON

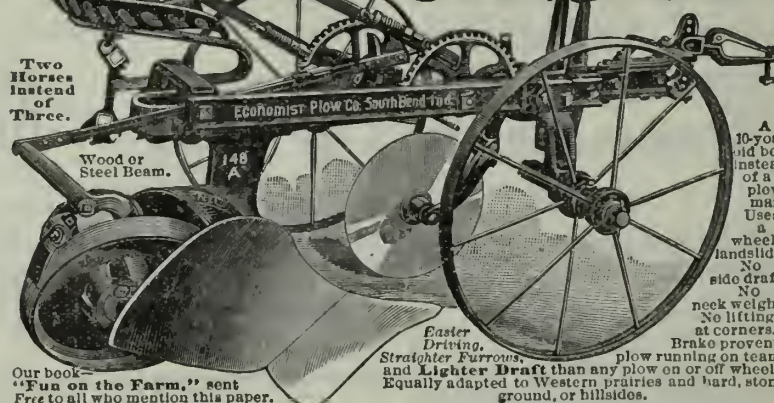
WAGONS,
CARRIAGES,
CARTS,
BUGGIES.

MOWERS,
RAKES, and
CANTON CLIPPER
GANG and
WALKING PLOWS.

Cor. 10th and K Sts., Sacramento, Cal.

THE "WONDER ON WHEELS."
NO POLE.

SOLID COMFORT
Self-Guiding Tongueless



Our book
"Fun on the Farm," sent
Free to all who mention this paper.

ECONOMIST PLOW CO., So. Bend, Ind., or Stanton, Thomson & Co., Sacramento.
Special prices and time for trial given on first orders from points where we have no agents.

THE RAISIN INDUSTRY.

A PRACTICAL TREATISE ON THE RAISIN GRAPES,
THEIR HISTORY, CULTURE AND CURING.

By GUSTAV EISEN.

This is the Standard Work on the Raisin Industry in California. It has been approved by Prof. Hilgard, Prof. Wicksou, Mr. Chas. A. Wetmore and a multitude of Practical Raisin Growers.

Sold only by the DEWEY PUBLISHING CO. or its Agents at the uniform price of \$3.00, postage prepaid. Orders should be addressed:

THE DEWEY PUBLISHING CO.,

220 Market St., San Francisco.

THE CALIFORNIA STATE FAIR

Of 1893 will be held at SACRAMENTO,
SEPTEMBER 4th to 16th ::::::::::: TWO WEEKS.

\$20,000 IN CASH PREMIUMS \$20,000
FOR CALIFORNIA PRODUCTIONS.

FARMERS AND HORTICULTURISTS!
As well as MECHANICS AND ARTISANS!

Should make preparation to exhibit at THE ANNUAL FAIR as the opportunity is specially given to show CALIFORNIA'S CAPABILITIES.

INVITE INVESTMENT of capital by showing the products of your section.
INQUIRIES AS TO LOCALITIES are being constantly made. We reply by sending reports of exhibits, which speak for themselves.
OBJECT LESSONS are valuable, and when written upon and their description heralded, they become a standing advertisement.
SHOW WHAT YOUR COUNTY can produce, and capital will flow in the direction thereof.
LANDS HAVE BEEN IMPROVED by the hundreds of acres in tree and vine planting through capital attracted by exhibits made at the State Fair.
MECHANICAL PLANTS HAVE BEEN ENLARGED by means of extra capital attracted by exhibits made at the State Fairs.
THE STATE FAIR is the stimulating agent of progression.
THE STATE FAIR is the medium that brings the two electrical currents—labor and capital—together each year.

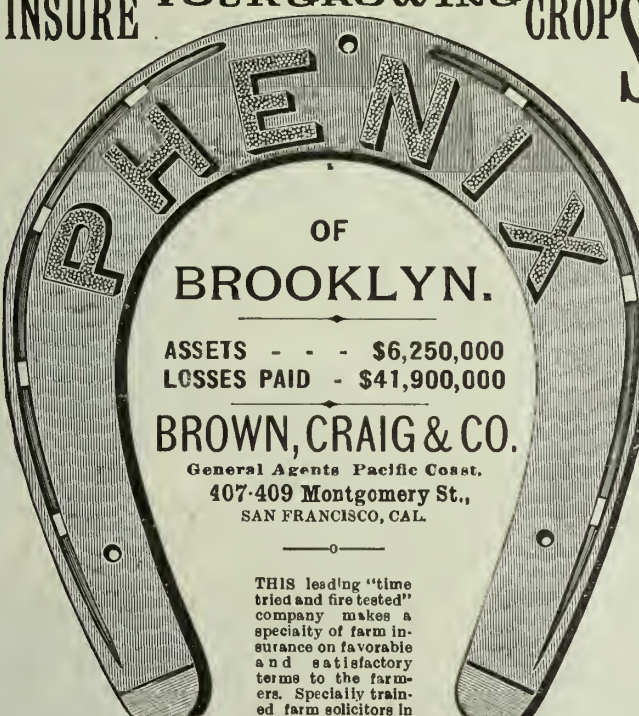
THE STATE FAIR aids all classes. It is the recreation ground of the farmer, the school of information for the breeder, the point of observation for the mechanic, and the period of investigation for capital.
FAILURE TO EXHIBIT is an acknowledgment of weakness.
KEEP YOUR PRODUCTIONS before the people, and the people will always keep your locality in view.
THE USUAL EXTRA ATTRACTIONS for entertainment of visitors at the State Fair of 1893 will be furnished in keeping with the occasion, that exhibitors may benefit thereby.
Information furnished upon application to the Secretary, at Sacramento.
JOHN BOGGS, President.
EDWIN F. SMITH, Secretary.

INSURE YOUR GROWING CROPS

Farmers SHOULD INSURE! AND Farmers Should KNOW THAT

In the dry climate of California there is great danger from Fire: that the loss of a crop or of a barn and contents, or a dwelling and contents, without Insurance, will seriously embarrass you.

INSURE IN THE OLD PHENIX OF BROOKLYN



OF BROOKLYN.

ASSETS - - - \$6,250,000
LOSSES PAID - \$41,900,000

BROWN, CRAIG & CO.
General Agents Pacific Coast.
407-409 Montgomery St.,
SAN FRANCISCO, CAL.

THIS leading "time tried and fire tested" company makes a specialty of farm insurance on favorable and satisfactory terms to the farmers. Specially trained farm solicitors in every county.

F. W. KROGH & CO.,
51 BEALE STREET,
SAN FRANCISCO.

DEEP WELL Pumps,
POWER PUMPS,
Steam and Irrigating
PUMPS,
— AND —
Pumping Machinery
OF ALL KINDS,
Also, several different kinds of
HORSE-POWERS.

F. W. KROGH & CO

Send for Catalogue and Price List.
Kindly mention this paper.



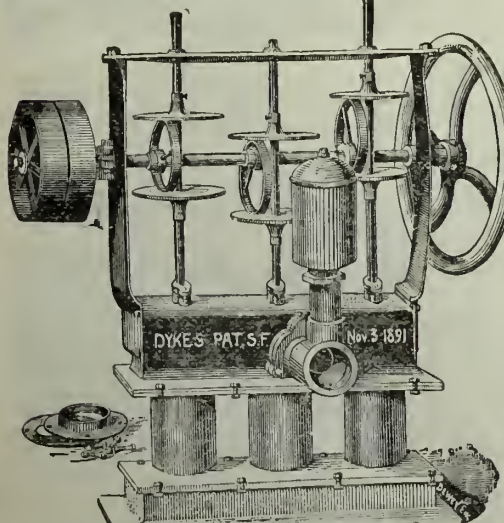
Dykes' Improved TRIPLEX PUMP

Medal and Diploma awarded at Mechanics' Industrial Exposition, San Francisco, 1893.
The Best Well Pump, Windmill Pump, Irrigation or Drainage Pump.

It is more simple than any other pump. Any one who can use a wrench and a hammer can take it apart and put it together with ease and correctness. It will very seldom need repair, and will not break, except for rough usage. But about three lines of instructions of how to set it up and use it are needed, as follows: Fasten it to your platform; attach your suction and discharge pipes; put in a bucket of water; start your power, and your pump will do its work. It will deliver more water with the same power than any other pump.

Careful inspection is what we want. Give us a chance to bid on the work you want. Any size Pump made. We were awarded two First Premiums at the California State Fair, 1892, and one First Premium at the Stockton Fair. Send for circular.

TROWBRIDGE & DYKES,
Manufacturers, West Berkeley, Cal.



PROTECT YOUR TREES
— WITH —
GILMAN'S TULE TREE PROTECTOR.

Cheapest, Best and Only One to Protect Trees and Vines from Frost, Sunburn, Rabbits, Squirrels, Borers and Other Tree Pests.

For Testimonials from Parties who are using them send for Descriptive Circulars.

B. F. GILMAN,
Sole Manufacturer of Patent Tule Covers,
420 NINTH ST., SAN FRANCISCO, CAL.



FRANCIS SMITH & CO.,
MANUFACTURER OF

SHEET IRON & STEEL PIPE

FOR TOWN WATER WORKS.
Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes
NO. 180 BEALE STREET, SAN FRANCISCO, CAL.


Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.

GEM STEEL WIND MILL
WITH GRAPHITE BOXES.
Never Requires Oiling or Climbing of Towers.

Guaranteed more durable without oil than other mills that are oiled. Practically, these mills require no attention. TRULY A GEM, and worth its weight in Gold. It combines beauty, strength, durability and simplicity. Grows itself perfectly, is easily erected and is sold on its merits: in fact, it is the best mill on earth. They are geared back three to one—the wheel making three revolutions to one stroke of pump—making them run in the lightest wind or breeze. The mill is made entirely of Steel and Cast Iron. Each one of our Gem Wind Mills is warranted. If not satisfactory, freight will be paid both ways and money refunded. We also carry Pumps of all kinds, Tanks, Pipe Fittings, Hose, Etc.

WOODIN & LITTLE, 313 MARKET ST., San Francisco, Cal.

SEND FOR.....
CATALOGUE....
MAILED FREE.



AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

Register: John Edwards, a miner for many years at Thompson's Flat, has shown the possibilities of the old mining ground in that vicinity. He has cleared, leveled, plowed and planted several acres to orange trees, corn and vegetables.

Register: Ex-Sheriff McClellan lately visited Durham, Dayton, Nelson and Biggs, and examined with some care the grain in those sections. He says he was surprised to note that the latter was so much better than the farmers had expected. The cool and pleasant weather has brought out the grain wonderfully, causing it to grow long after the usual season, and giving time for the heads to fill out and the kernels to become plump and full.

Colusa.

Sun: The first green fruit shipped from Colusa has been sold in Chicago, and the prices netted from one to four cents a pound here—averaged over \$40 a ton. The growers think the next will bring better prices, but two cents a pound is good.

Contra Costa.

Antioch Ledger: What intelligent effort and persevering industry will accomplish is demonstrated by J. W. Fuller, who bought the old Metz place in the sand land about two years ago. He has a young almond orchard that we believe will heat anything in the State. The trees are two and one-half years old, and the growth is simply marvelous and almost passing belief. Every orchardist should visit this place and see this splendid growth, all produced without irrigation, but by intelligent cultivation, and thoroughly learn the lesson it teaches. If the splendid growth Mr. Fuller has secured does not prove that cultivation is more potent than irrigation, we don't know what it proves. The old Metz place is the pioneer of the chaparral and sand land, and the first to demonstrate its adaptability to fruit culture. Mr. Fuller is digging up and replacing all the old vines and fruit trees, because he finds the varieties were not selected with the best of judgment.

Fresno.

S. F. Chronicle: S. C. Lillis, the banker of Lillis, who has arrived here, reports that that part of the country has unusually large yields this year of grain and fruit, and that the failure of Eastern banks has not alarmed the people there any. "Everything is on a firm basis," he said, "but we ought to be assisted a little in marketing our crops. The merchants and others who have dealings with the people there ought to help them out in this. Through the reports of the failures of Eastern banks the people there did not lose their heads. As soon as our big crops can be sold, we will be in exceedingly good shape." Mr. Lillis is at the Palace. He proposes to establish his family here for several months, and is now securing a residence for them.

Humboldt.

Times: The Vance estate have in contemplation some very radical changes in their Lindsay creek property, to be made at no distant date. It is their intention to drain the Lindsay creek pond, and use the land thus reclaimed for dairying purposes. The pond covers an area of about 150 acres of as rich land as can be found in the county. This, with the rich hill slopes and 40 acres above the pond, already in clover, will afford pasturage for a large number of cows. It is also their intention to erect a creamery there.

Kern.

B. F. Hoy a few days since killed a rattlesnake on A. B. Robinson's place, near San Emigdio, which measured seven feet in length. The reptile was very prettily marked in black upon and old gold background, and dead was much more to be admired than living. He was exceedingly ferocious and showed fight as soon as discovered, but a well-applied rifle shot carried away his head with its dangerous fangs, and Mr. Rattler became quiet and innocent.

Californian: Careful estimates of the cost of raising wheat in the Tehachapi country have been prepared by competent authorities, who give the following as the maximum figures per acre:

Plowing.....	\$1 00
Seeding.....	1 00
Harrowing.....	25
Heading.....	1 25
Threshing.....	1 25
Sacks and sacking.....	80

Total.....\$5 55

Seed varies from 50 to 100 pounds per acre, making the total cost from \$6.30 to \$7.05 on land which yields an average of ten sacks of wheat.

Kings.

Hanford Review: S. C. Lillis and family left the Laguna de T. che ranch on the 26th of June for San Francisco, where they will reside in the future. Dr. Thornton will take charge of the ranch on the Fourth of July, and the parties who bought the property over two years ago will have legal possession in October. Since the sale was made Mr. Lillis has shipped over 15,000 head of cattle, and still has about 3000 head on hand, which are being shipped at the rate of 300 per week. Mr. Lillis, having extensive interests in this valley, will probably be a constant visitor here.

Los Angeles.

Times: The last weather and crop report from the Southern California Weather-Crop Bulletin places the apricot crop in this valley at one-half or one-third of last year's crop.

This is certainly a mistake. A careful investigation among buyers and orchardists places the crop at fully 800 tons, and the growers are receiving from \$25 to \$30 per ton for their fruit. Last year's crop amounted to about 1000 tons. The prospects are brightening every day. With the advanced prices being received this year it will be a much better year than last, which is saying a great deal. The buyers are shipping fruit in this green state every day.

Progress: The statement which we have made a number of times, that Pomona is getting to be a nursery center of no small magnitude, is pretty well substantiated by the following figures, furnished by Horticultural Inspector Atkinson, of the number of trees shipped out of this place during the past season. There are still a few small shipments to be made:

Variety.	No. Trees.
Oranges.....	116,357
Lemons.....	4,376
Prunes.....	16,204
Peaches.....	10,018
Apricots.....	5,960
Plums.....	633
Apples.....	232
Olives.....	615,642

Total.....769,422

Mendocino.

Democrat: Haying is in full blast. Those who have hay to sell this season can command a good price. About \$12 is the ruling price, while it usually brings but \$6 per ton at harvest time.

Monterey.

Watsonville Pajaronian: The beet crop of the Moro Cojo ranch continues to look first-class. There are going to be some big beet returns from the Salinas valley this year, and the crop in this valley is going to be larger than many of the sharps were predicting two weeks ago. This outlook is encouraging for a big campaign at the factory.

San Bernardino.

Ontario Record: The rabbit-hunt Saturday was an exciting event. J. T. Lindley's side got away with 128, and J. B. Moore's party with 116. The best individual score was made by G. T. Stamm, who brought down 22.

San Joaquin.

San Joaquin grain-dealers are offering to buy the new crop and loaning \$15 to \$18 per ton on stored wheat at Stockton, showing a better condition of money matters. All wheat coming in is being stored, as prices are too low.

Santa Barbara.

Experienced bee-keepers in Santa Barbara county predict that the honey harvest this season will be the best for several years.

Santa Clara.

Fruit-picking will begin at Campbell very soon. Both drier and cannery will be in readiness for all the fruit that will be brought in. The new stock in the drier is being taken rapidly, and any who may desire it must apply very soon or be left out.

Solano.

Dixon Tribune: The following horticultural statistics are taken from Assessor Schirmer's rolls for 1893: The number of acres of grape-vines in bearing is 2853, including table and raisin grapes 1483, wine grapes 1375. The number of trees of the various varieties growing is as follows: Apple 2248; apricot 227,695; cherry 26,350; fig 13,987; olive 6378; peach 299,596; pear 186,231; French prunes 123,629; other prunes 51,428; lemon 208; orange 4452; almond 91,330; walnut 4291; other trees, 1559.

Sierra.

A number of rattlesnakes have been killed on the outskirts of Downieville lately. There is said to be an unusually large crop of these pests this year in Sierra county.

Sutter.

The early varieties of grapes are ripening and will be in market in a week.

Farmer: Robert McMullen, the levee watchman in No. 70, brought in 1100 gopher scalps and received the bounty of three cents per scalp as allowed by the Board of Supervisors.

Sonoma.

Santa Rosa Democrat: J. A. Kleiser of Cloverdale was a visitor here Wednesday. He says a great grape crop is looked for in the northern part of the county.

Blucher Valley Cor.: Vineyards look rather seedy in some hilly localities, showing a lack of rain, but the grapes seem to be doing nearly as well as if they had been cultivated. Perhaps they will continue to do so until the summer becomes more advanced; then they will certainly show the absence of cultivation and the necessary moisture.

Blucher Valley Cor.: A comparatively new line of fruit-raising has been introduced. It is berry-growing, and the raspberry has the lead. There are several large tracts devoted to their culture, Mr. Cristy having one of the largest, and a fine quality of that fruit is picked each day and marketed. Strange there are not more currant and strawberry patches, for a scarcity is always noticed when fruit-canning comes, sometimes it being impossible to obtain them at any price, when the market is glutted with other berries.

Vine Hill Cor. Republican: Our locality will be noted for its big chicken ranches some day. There will be one of two thousand and one of one thousand hen-power under way soon. There are already several five hundred power, and flocks of one and two hundred are too common to eggcite remark. The projectors of the latter (h)enterprise, of course, don't expect to come up eggsactly to the "scratch" with

those numbers; but they mean to leave no egg unturned to secure the intended number when they start the incubators. Being eggperienced poultrymen, they will succeed, as a matter of course. One party here having a flock of 500 chickens took in \$10 per day last season. The cut-out-cut-a-cut of the American hen may not be as musical and alluring as the "lay" of the nightingale, but it's more business-like.

Tehama.

People's Cause: The cannery has exhausted its fruit supply and closed down for a few days. When it starts up again it will make a run on peaches.

Corning Observer: The Arbnckle Autocrat says that rabbits are multiplying in that part of the county, especially at the foothills, and doing much damage. Of course they will increase, as the coyotes have decreased. They are doing much damage west of Corning, and there are many of them. On the Maywood Colony there are none to be found, because the superintendent, Mr. Galliher, keeps several hounds. It is a cheap and easy method of destroying rabbits. It is much better to keep greyhounds than mangy curs and they can make their own living.

Tulare.

Citizen: Word comes from Huron that some of the harvesters there have stopped work because no sacks can be had without the money and the wheat will not bring the money. Men who have tons of wheat at the depot cannot get sacks and are not able to finish their threshing. Some of the Lucerne farmers are in the same fix.

Visalia Delta: Horace Demaree, who farms what is known as the E. O. Larkins' place, one mile southwest of this city, Monday brought to the Delta office a box of the largest blackberries that has been seen here. The patch of vines is not more than 30x60 feet in size, and every other day for the last two weeks he has been gathering an average of 50 pounds at a picking, and the vines are not yet as productive as they will be a week or two hence.

Times: One of the most gigantic irrigation schemes ever devised in this country is contemplated by some capitalists of Tulare, among whom is Mr. Linder, the hardware man. The plan is to irrigate Rosend valley and the country about Lindsay by water taken from the streams high up among the pines at the source of north Tulare near the old Dillon sawmill. Flumes will be used much of the way eastward around the mountains till the water is carried to the head of Lewis creek at the southern extremity of the Blue Ridge range. It is estimated that 6,000,000 feet of lumber will be required in the fluming. At Blue Ridge the water will be turned into Lewis creek and a large reservoir made lower down the stream. Work is expected to begin soon.

Ventura.

Santa Paula Chronicle: A. D. Williams has begun operations on a small scale at the drier. Only a few apricots are coming. The crop promises to be fairly good and is paying \$20 per ton now, but the outlook for future prices is not encouraging on account of there not being a demand for dried fruit. He will not run a large force until after the Fourth.

Venturian: M. H. Mendelson is trying the experiment of putting his bees on bean blossoms, and will move between 600 and 700 colonies to the valley. He says honey made in this way is very fine, and is as clear and white as can be desired. He has extracted 30 tons so far, or about one-half of what he should have. The price, he states, is very low, but beemen are prepared to hold for six cents. He states that the crop through southern California is just about a half-crop, and there is no just reason for this low price.

Venturian: J. H. Shepherd, the boss strawberry man of Rincon, was visited this week. His brother, S. A. Shepherd, stated that from an acre and a half they had realized as high as \$1800, but they could not depend upon doing so well every year. In speaking about his crop, J. H. Shepherd, the one who has the largest strawberry field, says: "This season I expect to have 12,000 boxes, and am realizing 11 cents a box for all I can supply. The best variety to grow I find is the 'First Season.' They ripen a full red and are a good keeper. Next season I will put out two acres. I am going into lemon culture as fast as possible, and about two years more will let me out of strawberries."

Yolo.

Winters Express: Most of the fruit-growers are drying their fruit now, owing to the unsatisfactory prices obtained for the fresh article; still, a large amount in the aggregate is being shipped each day.

Dunnigan Cor. Democrat: Chas. Byrnes reports that the grain he is cutting now is yielding about 12 sacks to the acre. He has about 1600 acres, one-fourth of which he has harvested. He does not expect that all of his grain will yield so well, but it is nevertheless a good crop.

Democrat: Chas. Byrnes is cutting barley for the Willow Oak Park farmers. He has already harvested for quite a number of them, and he informs us that the lowest yield has been 17 sacks and the highest 21 sacks to the acre. That seems to us a pretty fair yield, considering the general cry of short crops.

Guinda Cor. Democrat: The fruit-growers of this vicinity do not employ Japs. . . . The fruit shipments from this place have been quite large for several days. . . . A field of winter-sown grain east of town, which was harvested by the Hamilton brothers on the third of July, yielded an average of 8½ sacks to the acre. . . . I. McGrew, as is his usual custom, spent the Fourth of July threshing out the golden grain. He was operating on the

Foster ranch, in Hungry Hollow, this year, and 1364 sacks was the result of the day's work. The average per day for the machine since it started up has been 1150 sacks. We should be pleased to hear reports from other machines. The yield of the grain is much better than was anticipated before harvesting.

Yuba.

Marysville Democrat: The disease known as "swelled head" is now making its rounds among the chickens on the Brown's Valley road. George Crossly has lost 600 hens in the last two weeks through its ravages. Other farmers in that section report that the disease has made serious inroads into their poultry flocks.

OREGON.

Portland Oregonian: The apple trees in the orchard in Stephens' addition, where millions of caterpillars had germinated, are being cut down and will be burned. There was no use for the citizens of that section to try to exterminate caterpillars on their premises as long as this breeding-place existed.

SPECIAL ANNOUNCEMENT.

We have made arrangements with Dr. B. J. Kendall Co., publishers of "A Treatise on the Horse and his Diseases," which will enable all our subscribers to obtain a copy of that valuable work free by sending their address (enclosing a two-cent stamp for mailing same) to Dr. B. J. KENDALL CO., ENOSBURGH FALLS, VT. This book is now recognized as standard authority upon all diseases of the horse, as its phenomenal sale attests, over four million copies having been sold in the past ten years, a sale never before reached by any publication in the same period of time. We feel confident that our patrons will appreciate the work, and be glad to avail themselves of this opportunity of obtaining a valuable book.

It is necessary that you mention this paper in sending for the "Treatise." This offer will remain open for only a short time.

Three and One-Half Days to the World's Fair.

We take pleasure in advising the readers of the PACIFIC RURAL PRESS that the UNION PACIFIC is the most direct and quickest line from San Francisco and all points in California to the WORLD'S FAIR.

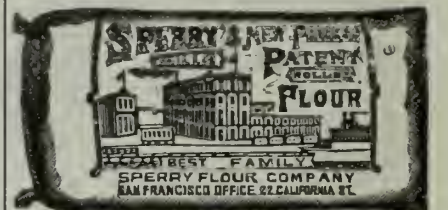
It is the ONLY LINE running Pullman's latest improved vestibuled Drawing-Room Sleepers and Dining Cars from San Francisco to Chicago without change, and only one change of cars to New York or Boston.

Select Tourist Excursions via the UNION PACIFIC leave San Francisco every Thursday for Chicago, New York and Boston in charge of experienced managers, who give their personal attention to the comfort of ladies and children traveling alone.

Steamship tickets to and from all points in Europe. For tickets to the World's Fair and all points east and for Sleeping Car accommodations call on or address D. W. Hitchcock, General Agent Union Pacific System, No. 1 Montgomery street, San Francisco.

Hay Pressing.

If you are interested in pressing hay write Truman, Hooker & Co., San Francisco. They will save you money.



Horse Owners! Try GOMBAULT'S Caustic Balsam

A Safe Speedy and Reliable Cure. The Greatest Heat BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bruises or Blisters from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blister. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

DIVIDEND NOTICE.

SAN FRANCISCO SAVINGS UNION, 536 California Street, corner Sansome. Branch, 1700 Market Street, corner Polk.

For the half year ending with 30th of June, 1893, a dividend has been declared at the rate of five (5) per cent per annum on Term Deposits and four and one-sixth (4 1/6) per cent per annum on Ordinary Deposits, free of taxes, payable on and after Saturday, 1st of July, 1893.

LOVELL WHITE, Cashier.

FOR THE BEST IMPROVED
ARTIFICIAL LIMBS
ADDRESS
MENZO SPRING,
9 Geary St.
SAN FRANCISCO, CALIF.
OFFICE 5.

HAY PRESSES.

Eli Challenge Full Circle.
Champion Full Circle.
Junior Monarch.
Petaluma.
Miller Lightning.
Ingersoll's.

ECONOMY HOP PRESSES.

Write for prices and get full particulars.

WE ARE HEADQUARTERS

On Hay Presses and Haying Tools.

BALE YOUR HAY WITH T. H. & CO.
BALE TIES.

TRUMAN, HOOKER & CO.,
San Francisco and Fresno.

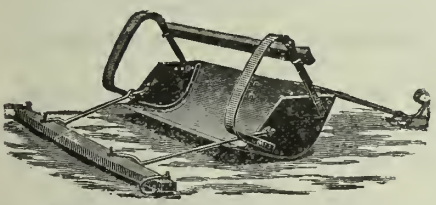
HAY PRESSES.

The Monarch, Junior Monarch, and other kinds of Presses, made by the Celebrated Hay Press Manufacturer, Jacob Price, for sale by

L. C. MOREHOUSE,
San Leandro, Cal.

Porteous Improved Scraper

Patented April 3, 1883. Patented April 17, 1883.



Manufactured by G. LISSENDEN.

The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Levelling Land, Road Making, etc.

This Implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

This Scraper is all steel—the only one manufactured in the State.

Price, all Steel, four-horse, \$40; Steel two-horse, \$31. Address all orders to G. LISSENDEN, Stockton, California.



REGULATE THE
STOMACH, LIVER AND BOWELS,
AND
PURIFY THE BLOOD.

A RELIABLE REMEDY FOR

Indigestion, Biliousness, Headache, Constipation, Dyspepsia, Chronic Liver Troubles, Dizziness, Bad Complexion, Dysentery, Offensive Breath, and all disorders of the Stomach, Liver and Bowels.

Ripans Tablets contain nothing injurious to the most delicate constitution. Pleasant to take, safe, effective. Give immediate relief.

Sold by druggists. A trial bottle sent by mail on receipt of 10 cents. Address

THE RIPANS CHEMICAL CO.,

10 SPRUCE STREET, NEW YORK CITY.

TREE WASH.

"Greenbank" Powdered Caustic Soda and Insecticide.

T. W. JACKSON & CO.,

Sole Agents,

No. 5 Market Street, San Francisco, Cal.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos. A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St., San Francisco.

STEVEN'S FRUIT CASE!

A notable invention of the Columbian year, for transporting California's fresh fruit to market. Look into it! It is worthy of trial! Its advantages truly stated are: Fruit can be picked later and riper; requires no wrappers; no decay from pressure, bruising or rubbing; the ventilation is absolute and positive; it grades and counts the fruit in the carrier; fruit all open to inspection; no rehandling or repacking at destination; no skilled labor for packing. Gives the grower all the advantage arising by arrival of his fruits in markets ripe, sound, luscious and attractive, instead of half ripe, bruised or decaying. It isolates each piece of fruit by double, elastic walls, with air spaces between, over and around it. It is not an untried quantity. Messrs. Brown & Wells, of California Market, San Francisco, say: "We have made shipments of green fruit in it to Honolulu, Panama, Boston, New York, Philadelphia, Australia and Arizona, and have received report to the effect that the fruit arrived in perfect condition. We believe it is surely destined to become in the near future the universal package for short or long distance shipments." Nothing to equal it for fine apricots, peaches, plums and pears. Will carry fresh figs successfully. Carriers now ready for delivery for apricots. Send in early orders to insure supply.

PRICE (for ordinary standard package) \$15.00 per hundred, including outside and inside cases. Call on us or send for circulars.

STEVENS FRUIT CASE CO., 307 Front Street, San Francisco,
Agents for the Pacific Coast.

BETTER THAN EVER!

P & B Fruit Dryer

RAPID—SAFE—CHEAP.

WRITE FOR SAMPLES AND CIRCULARS.

PARAFFINE PAINT CO., 116 Battery Street, San Francisco, Cal.

ONLY 25 YEARS OLD
AND A GIANT!

THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS. STOCKTON, CAL.

ARE YOU A

Hay Baler? If so, do you use our Patent

Steel Wire **CROSS HEAD** Bale Ties?

IF NOT, WHY NOT?



—MADE ONLY BY—

THE WASHBURN & MOEN MFG. CO.

San Francisco Office and Warehouse

8 and 10 Pine Street.

A. T. DEWEY.

W. E. EWER.

G. H. STRONG.

DEWEY & CO.'S

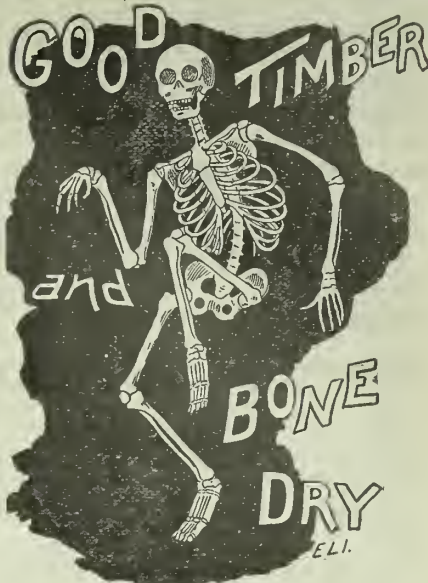
Scientific Press



Patent Agency.

ESTABLISHED 1863.

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class Agency. We have able and trustworthy Associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 220 Market St. S. F.



RUSHFORD FARM WAGONS

LIGHTEST DRAFT WAGONS
IN THE WORLD.

EVERY ONE GUARANTEED.

TRUMAN, HOOKER & CO.,

SAN FRANCISCO AND FRESNO.

Deep Well Pumps.



The Valves and working parts of the Fulton Pump can be removed, repaired and replaced without taking the pump out of the well.

Pumps fitted up for all depths of wells, ready to put in.

Send for Circular and Price List to

A. T. AMES,
GALT, CAL.

MANUFACTURER OF PUMPS AND
WINDMILLS.

ALAMEDA STEEL WIND MILL.



10, 12 and 14 ft.
Cheaper than any
First-Class Mill in
the market.

Every One
Guaranteed.

No bearings, no
springs, no wheels
to get out of order.
The simplest mill in
the world.

10-foot..... Write

12-foot..... for

14-foot..... Prices

Agents Wanted

— ADDRESS —

TRUMAN, HOOKER & CO., San Francisco or Fresno.

The FAIRBANKS

GALVANIZED



STEEL
WIND
MILLS

AND

TOWERS

1893.
Are WARRANTED to be
strictly first-class in material
and construction, to be the best
regulated, and to produce more
power than any other steel mill made.

THE ECLIPSE WIND MILL
the Original Self-regulating Wood Wheel.

Pumps, Tanks, &c. Send for Catalogue and Prices.
FAIRBANKS, MORSE & CO., CHICAGO, ILL.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

JOHN LYNCH, Petaluma. Breeder of Thoroughbred Shorthorns. Young Stock for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER SAXE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

C. BLOM, St. Helena. Brown Leghorns a specialty.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

JOHN McFARLING, Callistoga, Cal. Importer and Breeder of Choice Poultry. Send for Circular. Thoroughbred Berkshire Pigs.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

FOR SALE at low prices—Three extra fine young thoroughbred Dishface Berkshire Boars. T. Chittenden, Chittenden, Cal.

C. H. DWINELLE, Fulton, Sonoma Co., Cal. Shropshire and Crossbred Shropshire-Merino Rams for sale.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

R. H. ORANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

SWINE.

J. E. ALSFORD, Woodside, San Mateo Co. Breeder of Berkshire Hogs and Toulouse Geese.

P. H. MURPHY, Perkins, Sac. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, Low Prices.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.



OXFORD DOWN SHEEP FOR THE PACIFIC COAST.

W. A. SHAFER, Middletown, Ohio,
Largest American Importer of
O. D. Sheep,

Is prepared to quote prices on the best stock of Oxford Down Sheep to be had in England. Parties wanting first-class stock should write for particulars and induce their neighbors to join them. Import will arrive in June. Write at once.

EGGS! EGGS! EGGS!

S. C. BROWN LEGHORNS.
S. C. WHITE LEGHORNS.
EGGS \$2.50 per setting; \$4 for two settings; \$5 for three settings. White Leghorn pen headed by "Volante," score 96; Brown Leghorn pen headed by "Imperial," score 93. Send for circular. Satisfaction guaranteed to all.
FRANK A. BRUSH,
Care Santa Rosa National Bank..... SANTA ROSA, CAL.

THE HALSTED INCUBATOR COMPANY.
1312 Myrtle Street, Oakland, Cal.
Send Stamp for Circular.

POLAND-CHINA

BEST MODERN STRAINS OF.....

PIGS FOR SALE.....

Sired by first class imported males. My Brood Sows, imported from the East, are the admiration of everybody, being fine individuals and, like the Boars, rich in such blood as Teemseh, the most famous hog that ever lived, King Tecumseh, his greatest son, Tom Corwin 2d, whose owner refused \$1000 for him, Cora Schellenberger, whose produce sold for \$3300 before she died, and other prize-winners at Eastern State Fairs. Inspection invited and correspondence solicited. Parties giving timely notice will be met at station. Ranch one mile from station.

H. J. PHILPOTT, Niles, Cal.



WEATHER
VANES

For the Cheapest
and Best
SCALE

Grain & Store
TRUCKS

COFFEE
MILLS

Of any style known
to the trade
Address

GROCERS'
FIXTURES

HOWE SCALE CO.

75 Front St., Portland, Or. 3 & 5 Front St., San Francisco

GRANGERS' BUSINESS ASSOCIATION, AND SHIPPING COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.
Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.

Full Cargoes of Wheat furnished Shippers at short notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

A. M. BELT, Assistant Manager.

MEXICAN PHOSPHATE AND SULPHUR CO. SEASON OF 1893.

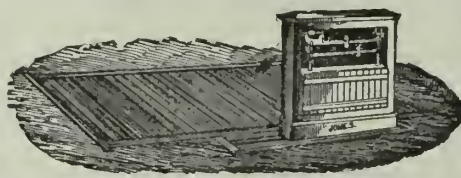
NITROGENOUS SUPERPHOSPHATE

AS AN EFFECTIVE FERTILIZER IT STANDS UNRIVALED.

.....Send for Circulars.....

H. M. NEWHALL & CO., Agents,

809-811 Sansome Street San Francisco, Cal



THE JONES 5-TON WAGON SCALE.
Price \$66, Delivered Anywhere in the United States.

These Scales have STEEL BEARINGS, Not Wood—BEAR THIS IN MIND.
From 25 to 50 per cent cheaper than any other Scales of like quality. All sizes and kinds of Scales always in stock.

Truman, Hooker & Co., San Francisco.

Send for Price Lists
OF GUNS

And all Articles used
by Hunters and
Anglers.



GUNS SENT ON
TRIAL.

OLD GUNS TAKEN
IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.

Short-Horn BULLS

Calves, Yearlings and 2-year-olds

FOR SALE.

ROBERT ASHBURNER,

Baden Station, San Mateo County, Cal.

Only three-fourths mile from the terminus of
the S. F. and San Mateo Electric Road.

Dr. A. E. BUZARD, VETERINARY SURGEON.

MEMBER OF THE ROYAL COLLEGE OF VETERINARY Surgeons, London, England. Late Veterinary Surgeon in the United States Army. Veterinary Contributor to the "Pacific Rural Press." The diseases of all Domestic Animals treated on Scientific Principles. Special attention given to Chronic Lameness and Surgical Operations. 406 BRODERICK ST., SAN FRANCISCO. Calls to the country promptly attended to. Telephone No. 4697.



A BARGAIN!
Two 3-year-old Imported Shire Mares in foal. Also Imported English Coach Stallion. Address W. W. RUSHMORE, Importer and Breeder of Draft and Coach Stallions. P. O. Box 86, Stahle, Broadway and 32d St., Oakland, Cal.

The Kansas City Veterinary College

Incorporated by the State.
FOR catalogue address J. H. WATTLES, D. V. &
310 East Twelfth Street.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STOCKTON, CAL., Dec. 19th, '92.

DR. R. J. KENDALL CO.

Gentlemen:—Having read one of your Treatise on the Horse and seeing the Spavin Cure advertised, I thought I would try it. I had one horse with a prominent Spavin of 12 months standing. I removed it with 1/2 bottle. I tied up one fore foot on same side the spavin was and compelling the horse to rest on lame leg while I took a cure and drew it across the hock or spavin until the hock or spavin got very warm with the friction, then putting on Spavin Cure. I had a mare that had a running from her nose for 12 or 14 months. I rubbed the Spavin Cure from her eyes down to nostrils, then from back of jaw bone down under the throat for a week. I have not seen any discharge for two months.

Yours truly, **HUGH McDADE.**

Price \$1.00 per bottle.

DR. R. J. KENDALL CO.,

Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

BACK FILES OF THE PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes) \$4. Inserted in Dewey's patent binder 50 cents additional per volume.

Commission Merchants.

DALTON BROS.,

Commission Merchants,

—AND DEALERS IN—

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

Grain, Wool, Hides, Beans and Potatoes.

Advances made on Consignments.

308 & 310 Davis St., San Francisco.

[P. O. Box 1986.]

Consignments Solicited.

P. STEINHAGEN & CO.



404 & 406 DAVIS ST. S.F.

ALLISON, GRAY & CO.

501, 503, 505, 507 & 509 Front St.,

And 300 Washington St., SAN FRANCISCO.

GENERAL

COMMISSION MERCHANTS

GREEN and DRIED FRUITS,

POULTRY, EGGS, GAME, GRAIN, PRODUCE AND WOOL.

MOORE, FERGUSON & CO.

WOOL, GRAIN, FLOUR

—AND—

General Commission Merchants,

310 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

[ESTABLISHED 1864.]

GEORGE MORROW & CO., HAY and GRAIN

COMMISSION MERCHANTS,

39 Clay Street and 23 Commercial Street

SAN FRANCISCO, CAL.

SHIPPING ORDERS A SPECIALTY.

GRANGERS' BANK OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 200,000
Dividends paid to Stockholders..... 720,000

OFFICERS.

A. D. LOGAN.....President
I. O. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

General Banking. Deposits received, Gold and Silver.
Bills of Exchange bought and sold.
Loans on wheat and country produce a specialty.

January 1, 1893. **A. MONTPELLIER**, Manager.

MAKE YOUR OWN GAS!

BADLAM BROS.

519 Market St., San Francisco.

SOLE MANUFACTURERS OF THE CELEBRATED
PEELES GAS WORKS. New process,
safe and inexpensive, from \$100 upward. Light cheaper
than coal oil. Send for catalogue and prices.

S. H. MARKET REPORT

Market Review.

SAN FRANCISCO, July 12, 1893.

The better tone in the monetary situation, it would seem, ought to have a corresponding effect on the wheat market, inasmuch as a serious depressing factor in the grain situation has been and is the hard times. But the market is slow to improve. During the week prices have shown some improvement in New York and Chicago, and a slightly better feeling has developed in the local market; but it has not been material, nor does it give confidence that a general advance all along the line is about to occur.

Harvest is well under way in the State, and reports are that the yield in northern portion of California will be better than expected, while in the upper San Joaquin and in the lower part of the State generally the yield will be full. Serious trouble to producers was threatened because of inability to secure advances on the new crop sufficient to secure grain sacks, but the State Board of Prison Directors has attempted to relieve the situation by announcing that they will sell grain bags on credit. Ten per cent cash only is required, the remainder being by promissory note payable in 90 days. This determination is contingent upon the opinion of the State's Attorney-General as to whether it is legal. Trade in the local market has been of small dimensions. For the most part sellers are disposed to hold on as long as they can, and buyers are in no hurry. The lack of ready money prevents purchases that otherwise might be invited by prevailing low prices.

During the six months ending June 30, 1893, the exports from this port were 795,126 cents more than for the corresponding period in 1892. There was, however, a falling off of 2,390,714 cents for the past cereal year, as compared with 1891-92. The average export price last year was \$1.31 per cent, against \$1.68 in the previous year, resulting in an apparent net loss of \$7,993,572 for 1892-93.

The condition of the American and European crops shows no important changes, except that spring wheat in the Middle West is in poorer condition than a month since. The average condition of wheat in the United States, however, shows just a little improvement over conditions a month since. July returns to the Department of Agriculture show the following averages of all grains: Corn, 93.2; winter wheat, 77.7; spring wheat, 74.1; oats, 88.8; rye, 85.3; barley, 88.8; potatoes, 94.8; tobacco, 93.0. The condition of winter wheat is 77.7, against 75.5 of last month and 89.6 in July of last year. The principal States' averages are: Michigan, 79; Illinois, 66; Missouri, 77; Kansas, 46; California, 88; Oregon, 96.

The condition of spring wheat is 74.1, against 90.9 in July of last year. Last month it was 86.4. State averages are: Iowa, 95; Nebraska, 63; South Dakota, 89; North Dakota, 73; and Washington, 91.

The condition of wheat July 1, 1893, was 76.6; on June 1st it was 78.8. The condition of oats remains about the same as last month, being 88.8, as against 88.9 June 1st. July returns show a slight advance in the condition of rye from 84.6 on June 1st to 85.3 this month. Winter rye stands at 83.9 and spring rye at 89, the combined average as stated above being 85.8. The condition of barley has changed but little during the month. The average is 88.8, against 88.3 on the 1st of June.

The European Crop.

Beerbohm's for June 23d contains a statement of the condition of European crops, from which we condense the following: The end of the long drouth has been reached at last, being broken in England by copious rains. A heavy thunder shower is reported in Austria. The wheat crop in England is rapidly maturing under the forcing of the drouth, and a very early harvest is the result. The yield will be very short.

France—Unsatisfactory; not sufficient rain. Belgium and Holland—No improvement. Germany—Fair. Hungary—Improved; medium. Italy—Better; fair. Spain—Better. Roumania—Damaged by copious rains. Russia—Satisfactory.

In brief, the trouble with the wheat market is the financial situation, the excessive carry-over stocks, and the fact that no country except America shows a heavy deficit in the growing crop. Europe will doubtless have, as a whole, a yield much below average, but the shortage is pretty well distributed. A wet harvest would increase the damage very materially.

Other Grains.

The depression in the wheat market has turned the attention of dealers to barley, and trade has shown some activity during the week, resulting in an advance of quotations. There is moderate demand for feed purposes, and offerings are not neglected. Brewing quality meets with tolerably good favor, and holders of lots suitable for export purposes can find customers within the quoted range. Nothing doing in Chevalier. It is a little too early for business in that line.

Oats are dull. Prices have recently gone down, but they do not seem to have stimulated trade.

Fruits.

There is not much new to be said about the fresh fruit market. All kinds of seasonal fruits make an abundant showing, and prices are reasonable throughout the whole list. The demand is good, but the supply is better. Apricots have not been as high as expectation seemed to warrant, and canners are able to get a very good quality for 14c per pound, the range being 10 to 14c. Cherries are very plentiful and easy, and berries also are abundant. White cherries are a drag. Peaches are low and weak. Grapes have been received from Vacaville, but they are small and sour. Cantaloupes have appeared but receipts are light as yet.

Watermelons are in the Los Angeles market from Cabuenga. This is very early for that section. They retail at from 5 to 20 cents each.

Two or three weeks ago Riverside people were offered \$1.85 per box for Mediterranean Sweets, which they refused. They are now trying to get \$1.75. Colton people are congratulating themselves

on having accepted the former price when it was offered.

Napels have disappeared from the San Francisco market, and only a few Seedlings are left.

The dried fruit market is reviewed elsewhere in this issue. New apricots have appeared here and found sale at 9c per pound. Quotations for old stock are nominal.

Fruit Crop Notes.

A letter from White Plains, N. Y., says: "The apple crop in Westchester county is being seriously affected. Peculiar insects are lodging themselves on the leaves of the trees and the life and color of the leaves soon disappear. The apple blossoms have also felt their withering touch, and in many cases the growth of the apple has been nipped in the bud. A number of well-to-do farmers are treating their fruit trees to a wash of Paris green water in hopes of allaying the work of the destructive pests."

St. Louis Cor.: The California fruit season, which has just begun, promises to be a memorable one in every respect. The crops will be larger, the quality of fruit better, the price to the consumer lower, and the profits to the grower more adequate than any previous year. The large reduction in freight rates has contributed to the latter feature. The growth of the industry when told in figures is absolutely startling.

The Farmers' Club at Grand Rapids, Mich., reports that the early apples will probably be a fair crop; winter apples very promising; cherries a good crop; plums fair if the mucrolio is kept down; peaches good; pears and quinces good; grapes and all the small fruits promise good cheer—to the eater. Inquiries were made for a patent medicine to kill all the host of the farmers' and fruit-growers' enemies—worms, weeds, bugs, fungi and moths—and nobody had anything to offer and warrant it.

There will be big money in apples this season for parties who can properly or correctly gauge the situation. It is clear that the crops of Missouri, Illinois, Kansas and most of the Western States will be small. A Cincinnati firm, writing a St. Louis commission merchant on the subject, says: "The crop in this section will be very light—almost a complete failure."—New York Fruit Trade Journal.

Estimate of the Peninsula Peach Crop.

At present the outlook of the peach crop will exceed the estimate of 1891, but full returns have not been received yet, which may change the result.

In 1891 there were very few peaches south of Felton, Del., while this year the estimates below that point are heavy.

There is falling off in the estimate on the N. Y., P. & N. R. R., and a slight decrease on the middle part of the Delaware R. R., and Newcastle county is showing a slight decrease.

Through the kindness of I. N. Mills, special agent of the P. W. & B. R. Company, we give their estimate as follows, in baskets:

Delaware R. R.	2,300,000
Q. A. & K. R. R.	1,000,000
D. & C. Railway	1,100,000
D. M. & V. R. R.	500,000
Baltimore & Delaware R. R.	690,000
N. Y. P. & N. R. R.	10,000

Total.....5,600,000

—New York Fruit Trade Journal.

Dried Fruit In England.

At Tuesday's meeting of the State Board of Trade, E. W. Maslin, the manager, read a report upon the reception the fruit shipped from here to England met in London.

In speaking of the report, Mr. Maslin said they had endeavored to send the fruit in a commercial manner and not in any way as a curiosity. They had shipped the fruit in a way in which more could be shipped with a profit. The green fruit was packed in pine boxes and the dried fruit went in sacks in just the way it is shipped to New York. When it gets to New York the dealers place the fruit in fancy packages themselves, and it was with the same intention that the experimental fruit was sent to England.

Regarding the age and the odor of the fruit sent, Mr. Maslin said the fruit was all young, some of the dried fruit being just from the drier, and that it was all in good condition when it left here. About the odor of the plums and prunes, he said that was something frequently complained of at first by purchasers, but on a slight acquaintance it was not considered a detriment.

Upon serious consultation it was decided not to bring up the matter of the relations between the fruit-growers, the canners and the banks.

Vegetables.

Potatoes are coming in with greater freedom and the range of quotations is lower than a week since. Onions have shown no change. Supplies of tomatoes are plentiful and cucumbers make a very liberal showing. Peppers are also plentiful. Eggplant, which has made a somewhat light showing, is in larger supply. Summer squash is very weak. Green peas are received freely.

Provisions.

There is no change in pork products, though the range of prices in the East is lower. Bacon is firm, and lard and hams are weaker. The Cincinnati Price Current, in its review of the market for the week ending July 6th, says: "Changes in values during the week have been moderately toward lower figures. The comparative plentitude of hogs has had some influence in unsettling the speculative sentiment. There is some talk of disposition to hold hogs back in the country because of shrinkage in prices, but it is doubtful if this policy will prevail to any important extent, for, although current prices are lower than had been counted on, still they yield a good margin for feeding operations." The pack at Western houses for the week ending July 6th was 260,000, against 250,000 the previous week and 245,000 the same week last year.

Poultry and Eggs.

Poultry is in fair demand and choice stock finds a very ready market. Turkeys, however, are weaker. Inferior stock is quite abundant and has an important effect in reducing prices. Eggs show improvement as receipts fall off. The prediction was ventured by one dealer this morning that the mar-

**The Judson
Fruit Company,**
308 and 310
WASHINGTON STREET
San Francisco, Cal.

ket would stiffen materially in a few days as the hot weather interferes with production.

Receipts of eggs at this port in June were as follows:

Source—	Dozen.
California.....	172,920
Oregon.....	1,350
Eastern.....	260,290
Total.....	434,560
May.....	675,071

Decrease.....240,511

Butter and Cheese.

The general tendency of butter is toward improvement, though there has been no change in quotations during the week. Receipts continue liberal for the time of year, though the proportion of choice and fancy grades is not large, and is likely to become smaller for the remainder of the summer months. Quotations for faultless qualities are firm, but for medium and poor grades the situation is altogether in favor of the buying interest.

The weakness of cheese has again lowered prices for Young America and choice cream; but supplies are becoming less liberal and improvement may fairly be expected before long.

The receipts of Butter and Cheese at this port in June were as follows:

Source—	Butter.	Cheese.
California, lbs.....	1,897,400	510,000
Oregon.....	67,300	32,000
Eastern.....	48,600	19,200
Totals.....	2,013,300	561,200
May.....	2,365,000	765,200

Decrease.....351,700 204,000

Wool.

There is nothing new to report in wool. Occasional small sales are made, buyers almost having their own way as regards terms. Asking prices are considered low, but the situation will have to brighten materially before any business of consequence can be expected.

Hops.

Advance consignments of hops are at hand, but no business of consequence can be expected for several weeks. From 15 to 18c is offered, but dealers appear in no hurry for trade.

Miscellaneous.

The tone of the hay market shows improvement, and choice quality of stock brings an advance over recent figures.

The exports of flour during the first six months of this year were nearly the same as for the corresponding period in 1892, being 435,954 and 437,930 barrels, respectively. For the year ending June 30, 1893, the exports were 1,113,291 barrels, against 1,083,577 barrels in 1891-92. But while there was a gain of 29,714 barrels in the past year, the export value was \$893,383 less. Prices of mill products have been unchanged for some time past.

California Products In New York.

NEW YORK, July 9.—Trade in groceries is limited to prompt wants, and summer living is easiest for the masses. Tardy collections from the interior are reported, but not many account losses have appeared. Canned fruits are immovable, prices indefinite. New crop prunes are offered at 5c, four sizes. Buyers are cautious, and likely to be so until crop possibilities are more definite. Turkey and France will unquestionably yield largely, and all prunes will have unusual dried-fruit competition this coming season. Unpeeled peaches receive bids of 8c, but holders will not break stored lots at that figure. Georgia and Delaware will co-operate to some extent, but not to the displacement of the Coast.

Raisins—Bags nominally quoted at 5 cents as extreme for the best.

Apricots—Nothing of an instructive character to note.

Thirty cars of California fresh fruits made a showy assortment. The quality ran well, though some was too ripe to ship away. With good weather and numerous Fourth of July visitors here, sales were prompt and averaged well for the times. Present Georgia peaches are of a higher color than your Alexander sort, which makes the latter a little slow.

Porter Bros. Company sold 16 cars Royal Anne Cherries, in box, 66c@72.10; Tartarian, 60c@1.30; Bigarreau, \$1.05; Republican, \$2.40; Oregon, \$1.55 @1.60; others, 45c@75c; Alexander Peaches, 60c@1.70; Fears, \$3.25; Figs, \$2.12@3.12; Apricots, 60c@1.45; some of the Montague, \$2.20; Tragedy Prunes, \$1.85 @2.25; Clyman Plums, \$1.75@2.45; Cherries, 55c@1.55; Claude, \$1.65@2.50; Jackson, \$2.62; Native, \$1.75; Brill, \$1.55@2.22; Abundance, 44c@5.62; Mixed, \$1.65@3.

Earl Fruit Company sold ten cars of Royal Anne Cherries in box at \$1.36@2.30; Tartarian, \$1.20@2.35; Bigarreau, \$1.60@2.25; Apricots, 65c@1.30; Alexander Peaches, 65c@1.31; Tragedy Prunes, \$6; St Catherine Plums and Cherry Plums, \$2@1.90; Clyman, \$1.40@2.40.

Sgobel & Day sold three cars Royal Anne Cherries in box at 66c@1.15; Black Oregon, \$1.05@1.25; Apricots, 55c@1.15; Alexander Peaches, 60c@1.25; Clyman Plums, \$1.55@1.65; St. Catherine, \$1.15@1.35.

E. L. Goodsell sold four cars Royal Anne Cherries in box at 85c@1.35; Black Republican, \$1.15@1.25; Royal Apricots, 65c@1.35; Peach do, 65c@1.10; Alexander Peaches, 65c@1.50; Cherry Plums, \$1.15@1.40; Natives, \$1.15@2.40.

Louisiana expects to pack about 200,000 boxes of oranges this season. Growers there propose to make their fruit more of a market item than heretofore, and are arranging systematic preparations with that view. They can be put in the market almost, if not quite, a month ahead of Florida.

Wool—Prospective eastern money removed some gloom from the market, but sales are light. Boston's transactions were unusually small. Neither buyers nor sellers appear anxious for large deals. Sellers examine paper with great prudence, and manufacturers regard the situation in goods unfavorable for

(Continued on next page.)

— We are now better than ever prepared to receive consignments of all kinds of perishable products, such as Fruits, Vegetables, Eggs, etc. Our facilities for cool, dry storage and packing for long-distance shipping cannot be excelled. It is our constant aim to make our consignors and our customers stay with us.

GRANGERS' BUSINESS ASSOCIATION, (A Corporation).

Principal Place of Business, 108 Davis St., San Francisco, Cal.

NOTICE.

There are delinquent upon the following described stock, on account of assessments levied on the 8th day of May, A. D. 1893, the several amounts set opposite the names of the respective shareholders, as follows:

Name.	No. of Certificate.	No. Shares.	Amount.
D. Q. Adams.....	220	3	\$20 00
Nathan Barnes.....	231	16	40 00
G. W. Brake.....	44	2	2 50
Nelson Carr.....	61	20	25 00
Jas. A. Clark.....	59	20	50 00
Annetta Clark.....	60	4	10 00
Clement V. Detten.....	146	2	2 50
T. G. Frost.....	77	2	5 00
W. H. Frye.....	76	20	50 00
J. A. Holliday.....	89	4	10 00
Joseph Huntly.....	170	4	10 00
Mrs. Joseph Huntly.....	171	4	10 00
H. M. Hollenbeck.....	238	8	20 00
Mrs. H. M. Hollenbeck.....	239	8	20 00
C. H. Holliday.....	251	6	15 00
H. M. Jewell.....	111	38	95 00
John Johnson.....	96	4	5 00
Mrs. Sarah Johnson.....	456	10	25 00
Mrs. T. E. Ketchum.....	139	12	15 00
T. E. Ketchum.....	140	28	35 00
Geo. A. Lamont.....	464	60	150 00
Mrs. L. E. McMahon.....	124	20	50 00
C. W. Plasse.....	212	20	50 00
P. Peterson.....	303	28	70 00
P. Peterson.....	361	14	35 00
P. Peterson.....	469	28	70 00
Thomas B. Pilkington.....	312	8	20 00
E. M. Smith.....	168	20	25 00
L. Stone.....	206	20	50 00
Mrs. Julia E. Sylvester.....	352	4	10 00
J. E. Sheat.....	414	8	20 00
Thomas Salmon.....	428	20	25 00
G. W. Tillotson.....	199	4	10 00
A. A. Van Sandt.....	200	4	5 00
J. F. Vincent.....	243	10	12 50
Uriah Wood.....	161	54	135 00
J. Wisecarver.....	184	8	20 00

And in accordance with law, and an order of the Board of Directors, made on the 8th day of May, 1893, so many shares of each parcel of such stock as may be necessary will be sold at the office of the Corporation, 108 Davis Street, San Francisco, California, on WEDNESDAY, the 12th day of July, 1893, at three (3) o'clock P. M. of such day, to pay delinquent assessments thereon, together with costs of advertising and expenses of sale.

CHARLES WOOD,

Secretary Grangers' Business Association,
Office, 108 Davis St., San Francisco, Cal.

POSTPONEMENT.

Notice is hereby given that the above and foregoing sale is postponed until the 26th day of July, 1893 at the hour of three o'clock P. M., and said sale will take place and be held on said 26th day of July, 1893, at the hour of three o'clock P. M., at the office of the corporation, No. 108 Davis Street, in the City and County of San Francisco, State of California.

By order of the Board of Directors.

CHARLES WOOD,

Secretary Grangers' Business Association,
Office, 108 Davis St., San Francisco.

July 12, 1893.

HORSE COLLARS

—AND—

SADDLERY GOODS.

Davis & Son's Horse Collars are not filled with Self-Pulverizing Cork.

The U. S. Inspector of Harness Supplies and Horse Collars selected Davis & Son's make—both harness and collars. And so will all persons who want a solid, broad-faced, smooth collar which does not pinch the neck nor roll about unsteadily for three months before it settles down to a fitting shape or set squarely back on the shoulder. If you want a collar not stuffed with wads but our collars, as all other makers on this coast are wad collars. All wad stuffed collars flatten down in a short time so that a sweat collar is needed to protect the horse from the wads or ropes of straw. Davis & Son's Collars are all put under a powerful shaper or press before finished, which solidifies them into a perfect shape, which allows the collar to set with its whole face against the shoulder. When a wad-stuffed collar is brought under this force it shows the old wad-stuffed collar to be merely a Puff Ball. Send or bring in to our factory in this city any collar and see this done, and see what a Pan Cake you have been selling to the people for collars. Our Boston Team long straw collars have no wads. The Rod of our Great Machine is supplied with small teeth on its lower surface like a fine saw. It picks up and carries with it as it flies through the straw a long straw in each tooth, all of which are deposited in the collar, one behind the other, with more precision and regularity than human skill could ever accomplish, thus avoiding all lumps and wads, not even two straws crossing each other.

HAME ROOM.

No Collars on this Coast or elsewhere have as good Hame Room as the Davis & Son's Collar.

410 Market St., San Francisco.

**ENGRAVING—SUPERIOR WOOD AND
Metal Engraving—Electrotyping and Stereotyping
done at the office of this paper.**

The Markets.

(Continued from preceding page.)

buying material above special wants. Supplies are moderate, but there is plenty to come forward if the market took a spurt, or if dealers could widen the lines of advances. The Madison Woolen Mills, the largest in Maine, has shut down. The output, not first-class, will be sold at auction. Sales at New York were 22,000 pounds domestic, mainly unwashed. Territory and Spring Texas ranged 11@16c. Philadelphia reports little outside of coarse wool selling, range at 10@16c, a few selections at 17@18c. Boston sold only 867,000 pounds domestic, mainly unwashed. Territory sold at 11@16c; Texas, 15@16c; 110,000 pounds California spring in total, private terms; sales of foreign 55,000 pounds Australian at 31@37c. Honey—One car light amber sold here at 5c free on board.

Lima Beans—Market lower; close, 22 for spot. Most of the recent arrival of 13,000 bags went upon and weakened the market.

Tomatoes—Canned California tomatoes sold at \$1.17½@20. Hops—Country pressure to realize softened the market for a time, but at the close it worked back to 19@20c for Pacific and State, with fair export inquiry. Exports for the week, 867 bales; receipts at New York for the season, 114,200 bales. For the same time in 1892 the receipts were 114,900 bales. Exports for the season, 56,500 bales; for the same time in 1892, 50,725; receipts of foreign hops to date, 6533 bales; same last year, 6725 bales. Canned Salmon—Buyers get what they need at \$1.12½ for Red Alaska.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per cwt. for the past week:

	July	Aug.	Sept.	Oct.	Nov.	Dec.
Thursday	56 7/8 d	56 9/8 d	56 10 d	56 11 d	56 12 d	56 13 d
Friday	56 9/8 d	56 10 d	56 11 d	56 12 d	56 13 d	56 14 d
Saturday	56 10 d	56 11 d	56 12 d	56 13 d	56 14 d	56 15 d
Sunday	56 11 d	56 12 d	56 13 d	56 14 d	56 15 d	56 16 d
Monday	56 12 d	56 13 d	56 14 d	56 15 d	56 16 d	56 17 d
Tuesday	56 13 d	56 14 d	56 15 d	56 16 d	56 17 d	56 18 d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	29 3/4 d	30 3/4 d	29 3/4 d	.....
Friday	29 3/4 d	30 3/4 d	29 3/4 d	.....
Saturday	29 3/4 d	30 3/4 d	29 3/4 d	.....
Sunday	29 3/4 d	30 3/4 d	29 3/4 d	.....
Monday	29 3/4 d	30 3/4 d	29 3/4 d	.....
Tuesday	29 3/4 d	30 3/4 d	29 3/4 d	.....

To-day's cablegram is as follows: LIVERPOOL, July 12.—Wheat—Firm but not active. California spot lots, 56 11/16 d; off coast, 29 3/4; just shipped, 30 3/4; nearly due, 29 3/4; cargoes off coast, steady; on passage, steadily held; Mark Lane wheat, very slow.

Eastern Markets.

The following shows the closing prices per bushel of wheat the past week at

Day	New York	July	Aug.	Sept.	Dec.
Thursday	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2
Friday	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2
Saturday	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2
Sunday	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2
Monday	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2
Tuesday	71 1/2	71 1/2	71 1/2	71 1/2	71 1/2

The following is to-day's telegram—per bushel: New York, July 12.—July, 71 1/2; September, 71 1/2; December, 71 1/2.

Chicago.

Day	Chicago	July	Sept.	Dec.
Thursday	61 1/2	61 1/2	61 1/2	61 1/2
Friday	61 1/2	61 1/2	61 1/2	61 1/2
Saturday	61 1/2	61 1/2	61 1/2	61 1/2
Sunday	61 1/2	61 1/2	61 1/2	61 1/2
Monday	61 1/2	61 1/2	61 1/2	61 1/2
Tuesday	61 1/2	61 1/2	61 1/2	61 1/2

The following is to-day's telegram—per bushel: CHICAGO, July 12.—July, 61 1/2; September, 61 1/2; December, 61 1/2.

Local Markets.

WHEAT.

	New	Dec.
Thursday, highest	1 19 1/2	1 31 1/2
" lowest	1 18 1/2	1 29 1/2
Friday, highest	1 19 1/2	1 31 1/2
" lowest	1 18 1/2	1 29 1/2
Saturday, highest	1 19 1/2	1 31 1/2
" lowest	1 18 1/2	1 29 1/2
Sunday, highest	1 19 1/2	1 31 1/2
" lowest	1 18 1/2	1 29 1/2
Monday, highest	1 19 1/2	1 31 1/2
" lowest	1 18 1/2	1 29 1/2
Tuesday, highest	1 19 1/2	1 31 1/2
" lowest	1 18 1/2	1 29 1/2

The following are to-day's recorded sales on Call: Wheat—Morning—Informal Session—December, 100 tons, \$1.34; 100, \$1.30; 1200, \$1.34 per cental. Regular Session—December, 400 tons, \$1.34; 800, \$1.30; 1100, \$1.30; 2200, \$1.31 per cental. Afternoon Session—December, 500 tons, \$1.31; 100, \$1.31; 1500, \$1.31; 600, \$1.31. Seller 1893, new, after August 1st—20 tons, \$1.20; 100, \$1.19; 100, \$1.20. Seller 1893, new—100 tons, \$1.19 per cental.

BARLEY.

	New	Dec.
Thursday, highest	83 1/2	92 1/2
" lowest	83 1/2	92 1/2
Friday, highest	83 1/2	92 1/2
" lowest	83 1/2	92 1/2
Saturday, highest	83 1/2	92 1/2
" lowest	83 1/2	92 1/2
Sunday, highest	83 1/2	92 1/2
" lowest	83 1/2	92 1/2
Monday, highest	83 1/2	92 1/2
" lowest	83 1/2	92 1/2
Tuesday, highest	83 1/2	92 1/2
" lowest	83 1/2	92 1/2

The following are to-day's recorded sales on Call: Barley—Regular Session—Seller 1893, new—100 tons, 83 1/2; 300, 83 1/2. October—100 tons, \$1.04; 1900, \$1.04 per cental. December—80 tons, 92c per cental. Afternoon Session—December—100 tons, 92 1/2c. No. 1 Brewing, October—100 tons, \$1.03 per cental.

Fruits and Vegetables.

Choice selected, in good packages fetch an advance on the quotations, while very poor grades sell less than the lower quotations. JULY 12, 1893.

	Extra choice fruit for special purposes sells at an advance on outside quotations
Strawberries, chest	5 00 @ 8 00
Sharples, chest	3 50 @ 5 00
Goosbries, lb	2 @ 3
Raspberries, chest	3 00 @ 4 50
Blackberries, 3 00 @ 5 00	
Cherries, box	30 @ 50
Black, 25 @ 50	
Royal Ann, 30 @ 50	
White, 40 @ 50	
Limes, Mex, 4 00 @ 4 50	
Do Cal, 75 @ 1 00	
Lemons, box, 1 50 @ 3 00	
Do Santa Bar, 4 00 @ 5 00	
Do Sicily choice, 5 00 @ 5 50	
Green Apples, bx, 25 @ 35	
Red Apples, bx, 50 @ 1 00	
Oranges, chest, 3 00 @ 5 50	
Apples, box—	
Royal, 25 @ 50	
Plums, 25 @ 50	
Pears, hkt, 20 @ 25	
Pears, Bart, bx, 1 00 @ 1 25	
Peaches, box, 25 @ 50	
Peaches, hkt, 20 @ 40	
Figs, Black, box, 25 @ 1 00	
Beets, sk, @ 1 25	
Jarro, sk, 85 @ 1 25	
Jkra, dry, lb, 15 @	
Parasps, chl, 25 @ 2 00	
Peas, lb, 5 @	
Europe, chl, @ 1 00	
Cabbage, 100 lbs, 65 @ 75	
Garlic, lb, @	
Onionflower, 87 @ 70	
Celery, 60 @ 60	
Tomatoes, box, 50 @ 75	
String Beans, 2 @ 2 1/2	
Rhubarb, bx, 30 @ 65	
Asparagus, box, 50 @ 1 25	
Cucumbers, doz, 25 @ 60	
Artichokes, doz, 50 @ 80	
Eggplant, lb, 8 @ 10	
Summer squash, box, 25 @ 60	
Green corn, dz, 10 @ 12	
Corn, field, sk, 75 @ 1 00	
Corn, bay, doz, 20 @ 2 1/2	

Worth Noting.

W. E. Hampton, 27 Beale street, San Francisco, makes a patent non-shrinkable water tank that is attracting considerable attention. It is worth noting, and any one contemplating such a purchase, as well as those who have had trouble with their tanks, would do well to write to Mr. Hampton, the patentee and manufacturer, at the above address, for catalogue and information.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. JULY 12, 1893.

BEANS AND PEAS. Bayo, chl, 2 40 @ 2 50 Butter, @ 2 50 Peas, 2 75 @ 3 00 Pink, 2 75 @ 2 85 Small White, 2 55 @ 2 65 Large White, 2 55 @ 2 65 Lima, 2 70 @ 2 90

BUTTER. Cal, poor to fair, lb, 15 @ 17 Do g'd to choice, 16 @ 17 Do Giltedged, 19 @ 20 Do Creamery, 20 @ 21 Do do Giltedged, 20 @ 21 Cal. Pickled, 21 @ 22 Cal. Keg, 19 @ 21

CHEESE. Cal. choice cream, 8 @ 9 Do fair to good, 7 @ 8 Do Giltedged, 9 @ 9 Do Skim, 5 @ 6 Young America, 8 1/2 @ 10

EGGS. Store, 17 @ 19 Ranch, @ 25 Eastern, 18 @ 19 Outside prices for selected large eggs and inside prices for mixed sizes—small eggs are hard to sell.

FEED. Bran, ton, 16 50 @ 17 00 Feedmeal, 23 50 @ 24 50 Gr'd Barley, 19 00 @ 19 50 Middlings, 20 50 @ 22 00 Oil Cake Meal, @ 35 00

HAY. Compressed, 7 00 @ 11 00 Wheat, per ton, 9 00 @ Do choice, @ 12 00 Wheat and oats, 8 00 @ 11 50 Wild Oats, 8 00 @ Cultivated do, 7 00 @ 10 00 Barley, 7 00 @ 9 00 Alfalfa, 8 00 @ 11 00 Clover, 8 00 @ 10 00

GRAIN, ETC. Barley, feed, chl, @ Do good, @ Do choice, 82 1/2 @ Do brewing, 90 @ 1 02 1/2 Do Oatmeal, 90 @ Do do Giltedged, 175 @ 2 00 Ruckwheat, 175 @ 2 00 Corn, white, 110 @ 1 15 Yellow, large, 97 1/2 @ 1 03 1/2 Do small, 102 1/2 @ 1 07 1/2 Oats, milling, 40 @ 1 45 Feed, choice, 135 @ 1 50 Do good, 125 @ Do fair, 125 @ Do common, 120 @ Surprise, 147 1/2 @ Black feed, 115 @ 1 20 Gray, 125 @ 1 30 Eye, milling, 107 1/2 @ 1 10

Wheat, milling, Giltedged, 120 @ 1 25 Shipping, choice, 174 @ 1 20 Off Grades, 105 @ 1 12 1/2 Sonora, 110 @ 1 15

WOOL. California, year's fleece, 9 @ 10c Do, 6 to 8 months, 9 @ 12c Do, Footlock, 10 @ 13c Do, Northern, 12 @ 14c Do, extra Humboldt, 14 @ 16c Do, and Mendocino, 14 @ 16c Nevada, choice, light, 12 @ 14c Do, heavy, 12 @ 14c Oregon, East's choice, 12 @ 14c Do, Eastern, poor, 9 @ 10c Do, Valley, 14 @ 16c

Manhattan Egg Food (Red Ball Brand) in 100 lb. Cans, @ 11 50

PROVISIONS. Cal. bacon, @ 13 Medium, @ 13 1/2 Light, 14 @ 18 Lard, 9 1/2 @ 13 Cal m'd beef, 10 @ 11 Hams, Cal, @ 14 1/2 Do Eastern, @ 15

SEEDS. Alfalfa, 9 @ 10 Clover, Red, 15 @ 10 White, 30 @ 10 Flaxseed, 24 @ 3 Hemp, 4 @ 5 Do brown, 5 @ 5 1/2

HONEY. White comb, 2 lb frame, @ Do do 10 lb frame, 12 @ 13 Do do 10 lb frame, 54 @ 8 Amber do, 5 @ 8 Dark do, 5 @ 8 Beeswax, lb, 22 @ 23

Live Stock.

BEEF. Stall fed, extra, @ 6 1/2 Grass fed, extra, @ 6 1/2 First quality, @ 6 1/2 Second quality, @ 5 1/2 Third quality, @ 4 1/2 Bulls and thin Cows, @ 3 1/2

VEAL. Range, heavy, 4 @ 6 Do light, 5 @ 7 Dairy, 6 @ 7

MUTTON. Wethers, 8 @ 9 Ewes, 6 @ 8

HOGS. Light, 7 @ 8 Medium, 7 @ 8 Heavy, 7 @ 8 Soft, 6 @ 7 Feeders, 6 1/2 @ 7 Stock Hogs, 9 @ 9 1/2 Dressed, 9 @ 9 1/2

The Cunningham Dipper.

California generally, and Santa Clara county particularly, promises this year a large yield of prunes, and it is well to suggest to intending driers one of the latest as well as one of the most economical inventions, and that is the dipping machine invented by Luther Cunningham of Saratoga, California, and patented December 8, 1891. The machine is more especially adapted for dipping prunes, but can be used equally well for other varieties of fruits. Some idea may be gained of the immense advantage this machine has over all other methods by the fact that the capacity is ten (10) tons of prunes per hour, and the self-spreading alone saves about 90 per cent of the cost of spreading the fruit. A few of its many advantages may be enumerated as follows: It is easily operated. It can be used either with hand or steam power. It is the only dipper that can be attached to a grader, thereby enabling the grading, dipping and spreading to be done in one operation. The use of it reduces the cost of handling more than one-half. There is no disagreeable work over hot lye water. There is no friction on the fruit, consequently the fruit is not mashed in the process of dipping. The fruit is fed into the machine evenly and gradually, and coming into immediate contact with the hot lye, is more thoroughly scalded than is possible by dipping in any other way. A large number of testimonials have been received from well-known fruit-driers where they are in use expressing great satisfaction with the results obtained. Any one who wishes to dry prunes will do well to communicate with Mr. Cunningham in good time.

San Jose Agricultural Works.

This great manufacturing plant is pushed with orders on appliances for fruit-gathering, chief of which is the celebrated San Jose Fruit Wagon. A new device for gathering prunes is being manufactured, which Mr. Adell, the manager, thinks will save over one-half the expense. It is a huge umbrella placed on a cart and run under the tree, the trunk of the tree being the handle for the time. With a small hook the operator shakes the limbs and the fruit rolls into the baskets, leaving the leaves on the inner surface of the umbrella. We expect to give an illustration and fuller description soon, as two of these devices are now in use and the third one being built.

FRUIT GROWERS' MACHINERY.

The New California Fruit Grader

GRADES ALL KINDS OF FRUIT, Oranges, Lemons, Limes, Apples, Pears, Peaches, Plums, Prunes, Apricots, Cherries and Grapes; also Potatoes, Onions and Walnuts.

FRUIT GRADED IN CAL. GRADER

RIDES ON RUBBER BELTS.

Which carry it along smoothly until reaching the proper space, it slides into the boxes waiting to receive it. The Roller keeps the Fruit gently revolving until it is perfectly assorted according to size. Gravity no longer depended upon, but perfect, accurate and rapid grading secured.

Write for Description and Price List.

The Latest Development We Offer

IS THE PATENT AUTOMATIC

FRUIT WRAPPING MACHINE

Wraps 50 fruits automatically per minute in wrappers cut and printed by the machine.

Of great importance to large shippers, and sure to come into general use.

AUTOMATIC REVOLVING

FRUIT PITTE!

For Peaches, Plums, Prunes, Apricots, Etc.

A SIMPLE, PRACTICAL MACHINE.

The fruit is simply placed into the two cups as the machine revolves and the pitting is done automatically. QUICK, EFFECTUAL WORK AND LOT OF IT. Well made, very simple and durable. Will save its cost every day used. Sent cheaply by express. Order at least a sample. Price complete only \$5.

is neat and clean to run, and does not spatter the operator from head to foot. They want a pitter that will separate the apple cores and skins, leaving the apples on the trimming table and dropping the cores and skins in separate barrels; one that will pare 100 bushels of apples a day. The pitter that meets the wants best is the SUN PARET, will pare the greatest amount in the shortest space of time.

The SUN PARET is the only practical lever machine made; it will pare as fast as the operator can pick up apples and put them on the fork. So draw your own conclusions as to the quantity it will pare in a day. Price \$18.

THE SUN APPLE SLICER

Gives the best satisfaction of any slicer on the market. It is the most rapid hand Slicer in use. For cost of labor and quantity of work done with it, we challenge comparison with any Slicer made. A number of users state that it takes a little longer to slice the apples than with the foot-power machines, but it does it with so much better that they gain four times the difference of time in drying.

Price \$5.00

ALSO—

OIDER MILLS AND PRESSES.

Send for Horticultural Pamphlet and Testimonials.

STEAM ENGINES AND BOILERS.

Strong and Reliable Steam Driving Power furnished with the Most Economical Consumption of Fuel.

PERFECT SAFETY ASSURED.

IMPROVED PATTERNS AND CONSTRUCTION

Especially Adapted for

Agricultural and Farm Purposes.

We Build Seven Sizes with Vertical Steel Boiler from Two to Nine-Horse Power.

These Engines are Suitable for any Purpose Requiring Cheap and Reliable Power.

Automatic Boiler Feed, Automatic Pop Safety Valve, Steel Boiler. Cost of running guaranteed not to exceed five cents per horse power per hour. Nothing equal to it ever before offered for the price.

WRITE FOR INFORMATION AS DESIRED.

G. G. WICKSON & CO.,

8 & 5 Front St., S. F., Cal.,

221 So. Broadway, Los Angeles, Cal.

141 Front St., Portland, Or.

California Crops.

[Summary of Report of Observer James A. Barwick for Week Ending July 8, 1893.]

The continued heat deficiency in connection with the cold northwesterly winds in the San Joaquin valley during June and up to present time have retarded the rapid ripening of fruits and had to a considerable extent injured the first crop of raisin grapes in Tulare county, and also caused the prune and peach trees to drop considerable of their fruit, but the trees being so heavily loaded they could stand the loss very well. A correspondent in the Visalia Delta says the extraordinary cool northerly winds have effected a loss of at least 60 per cent of the first crop of raisin grapes. The second crop is likely to be as large as needed.

The heat deficiency in the Sacramento valley though small has had a tendency to retard the rapid ripening of fruit also, but assisted late grown in filling out.

Sutter County.—From the fields of wheat and barley which have been harvested the returns per acre are very good considering the year, and when the crop is all in there will be the greater portion that will be choice shipping or good milling, the kernel being plump and of good quality.

Placer County (Newcastle)—Weather favorable for orchardists. Hale peaches being harvested. Crop good.

Colusa County (Siles)—Harvesting continues and the whole valley is about ready for the thresher.

Yolo County (Winters)—The fruitmen have almost ceased Eastern shipments, especially for apricots, and are now drying the remainder of their crop. The apricot crop is nearly all gathered, and the peach season is at its height. (Guinda)—The fruit shipments from this place have been quite large for several days. A field of winter-sown grain east of this town, which was harvested by the Hamilton Bros. on the third of July, yielded an average of 8½ sacks to the acre.

Solano County (Vacaville)—Apricot crop about all shipped; prunes dropping again; plums are being shipped and will finish in about a week. Peas looking well and weather cool.

Sonoma County (Petaluma)—A little foggy weather is wanted by the hop-raisers to bring their product to the highest perfection. The fruit-growers throughout the county are making extensive preparations for drying fruit this season. (Stony Point)—The cherry trees are idle once more for the latest cherries are very scarce now. It is a very rare occurrence for the apple crop to be a failure in this part of the county, and if all could see the Woodworth and Hamilton orchards they would pronounce it an exceptionally fine outlook for the fall gathering. (Blucher Valley)—Mowing was finished some time ago, and field after field of hay is stacked, or left in the shock to be baled. Two presses are busy. The grain outlook is fine and no one can complain about the yield, especially the oat crop. Wheat is good but not so heavy a yield.

San Benito County (Tres Pinos)—35 bags to the acre, is what is estimated for the barley yield in Panoche this year. (Mulberry)—Hot weather for several days, but grain will not suffer, unless some that is latter. Hay about all stacked or housed, and in good shape. Heading will commence now soon. The grain is well filled, and the grain will no doubt be good.

San Luis Obispo County (Oak Park)—The ever-welcome fog has been rolling in among the hills, from which cause the growing crops are showing the best of prospects.

Monterey County—Threshing is already under way in the lower Salinas valley.

Sacramento County (Sacramento)—Hops are growing finely with a prospect of a big yield.

San Joaquin County (Lodi)—The weather for the past week has been pleasant, westerly winds prevailing. Wheat harvest under way; output light, but the berry is plump and of excellent quality. Grapes are doing well and promise a full crop.

Tulare County (Visalia)—Apricots are pretty well marketed. The cool weather of June caused them to ripen slowly, and gave the growers an opportunity to ship their crop east, where it has been bringing tip-top prices. This county has had a pretty fair apricot crop. June has been a hard month on prunes and peaches generally. The nights have been cold, and these fruits have dropped considerably. The trees were so heavily loaded they could stand it. The prospects are good now for an excellent crop of both fruits. The cold northwest winds prevailing in June have affected our raisin-grape crop; 60 per cent of the first crop of grapes is about all the vineyardists can count on this season. The dropping of the berries, leaving the branches ragged and irregular, will preclude the possibility of our raisin growers furnishing any very large

quantity of clusters. The second crop is likely to be as large as needed. The "red spider" has come again.

Orange County (Tustin)—The apricot crop turning out much better than at first expected, the fruit being so much larger than usual.

San Bernardino County (Chino)—The foggy weather of late is keeping the beets fresh and growing.

Educational.

Belmont School.

BELMONT SCHOOL, most delightfully and advantageously located 25 miles south of San Francisco, prepares for any college or school of science. The consolidation of the Hopkins Academy with it brings \$56,000 to the \$100,000 already invested, and so greatly adds to the resources of a school already well equipped as to place its permanence and its ability to offer the best and the broadest instruction beyond question. Twenty scholarships invite earnest and able young men of sient means. A gymnasium and athletic grounds, unsurpassed by those of any secondary school in the entire country, under the direction of the present physical instructor in Williams College, insure unexcelled physical training. The school invites inspection. References required. For Catalogue address, W. T. Reid, A. M. (Harvard), Head Master, Belmont, California.

Bowens Academy,

University Ave., Berkeley.

BOARDING AND DAY SCHOOL For Boys and Young Men.

Special university preparation, depending not on time but on progress in studies.

T. S. BOWENS, M. A. Head Master.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,

Surveying, Architecture, Drawing and Assaying,

728 MARKET ST., SAN FRANCISCO, CAL. Open All Year.

A. VAN DER NAILLEN, President. Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. ESTABLISHED 1864. Send for circular.

HEALD'S BUSINESS COLLEGE,

24 POST ST., S. F.

FOR SEVENTY-FIVE DOLLARS THIS College instructs in Shorthand, Type Writing, Book keeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business for six full months. We have sixteen teachers, and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR.

E. P. HEALD, President

C. S. HALEY, Secretary.

THE Burrell Prune Machine!

No Lye!

No Fire!

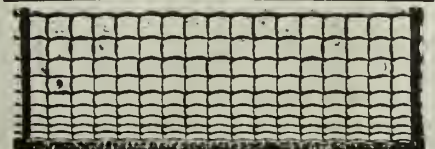
No Water!

CLEANS, PERFORATES AND SPREADS THE FRUIT.

This machine prepares the fruit for drying at one operation, by sifting out the leaves and trash, perforating the skin with hundreds of fine holes and delivering the prunes ready spread on the trays. The fruit thus prepared dries quickly and evenly; is cleaner, heavier and of finer flavor than if dried by the lye process. The machine is simple, portable and durable. It will save enough in a week to pay for itself. Capacity one and a half tons per hour. For further particulars apply by letter or in person to

J. B. BURRELL,

359 West Santa Clara St. - San Jose, Cal.



An Elastic Currency

Is thought by some to be the remedy for all financial troubles. Our unparalleled success with Elastic fencing is no doubt largely responsible for this feeling. We control Nature's bulls and bears. Why not those of Wall Street?

PAGE WOVEN WIRE FENCE CO. Adrian, Mich.

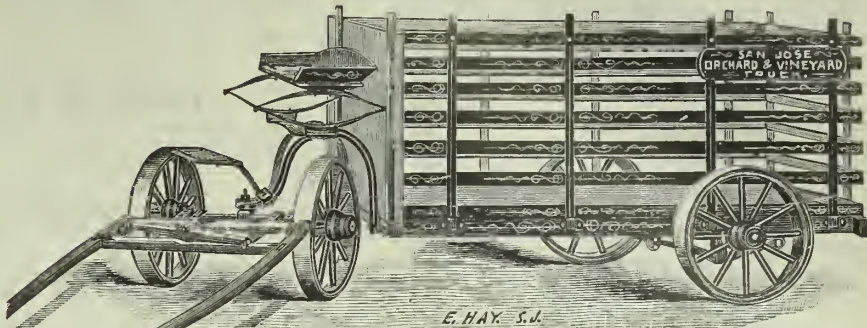
DIVIDEND NOTICE.

THE GERMAN SAVINGS & LOAN SOCIETY 526 California Street.

For the half year ending June 30, 1893, a dividend has been declared at the rate of five and one-tenth (5 1-10) per cent per annum on Term Deposits, and four and one-quarter (4 1/4) per cent per annum on Ordinary Deposits, payable on and after Saturday, July 1, 1893. GEO. TOURNEY, Secretary.

San Jose Agricultural Works,

On the Alameda, Near Narrow Gauge Depot, SAN JOSE.



SAN JOSE FRUIT TRUCKS

ALL SIZES.

SAN JOSE CULTIVATORS—Seven Kinds of Teeth.

WEED CUTTERS, PULVERIZERS, AGRICULTURAL IMPLEMENTS.

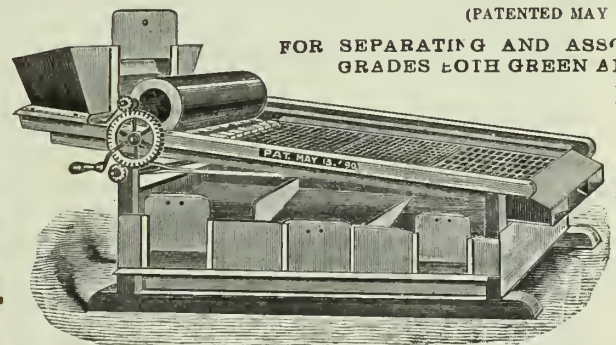
BALL'S PATENT YOLO FRUIT GATHERER!

Two men do the work of ten. Send for prices.

HAMILTON FRUIT GRADER.

(PATENTED MAY 13, 1890.)

FOR SEPARATING AND ASSORTING IN DIFFERENT GRADES BOTH GREEN AND DRIED FRUITS.



It is Simple, Durable and Efficient.

It has become the leading Fruit Grader of California. Col. Hersey has ordered three of these Fruit Graders this season. Send for catalogue and testimonials.

A VARIETY OF—Fruit Cars, Transfer Cars, Turntables and Dipping Baskets ALWAYS ON HAND.

MANUFACTURED AND FOR SALE BY

W. C. HAMILTON,

SAN JOSE..... CALIFORNIA.

TELEPHONE 1318.

Golden Gate Machine Works,

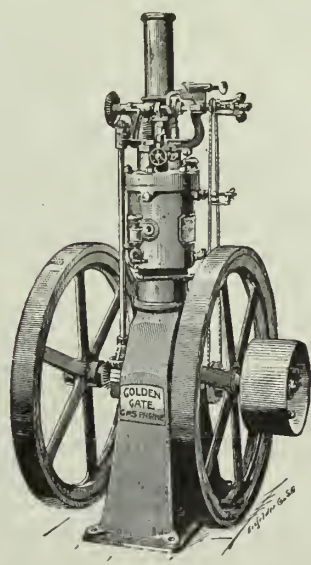
— MANUFACTURERS OF THE —

Golden Gate Gas Engine.

ADAM SCHILLING & SONS,

PRACTICAL MACHINISTS & ENGINEERS,

211 & 213 MAIN ST., SAN FRANCISCO.



FRUIT PAPER!

RAISIN WRAPS, SWEAT PAPER

FROM THE MANUFACTURER DIRECT AT LOWEST PRICE.

Raisin-packers are advised that we will make and carry in stock the "Azure Blue" "Top Wrap," which has been used for years by the packers of Spain

S. P. TAYLOR PAPER CO.,

414 & 416 CLAY STREET.....SAN FRANCISCO.

BARGAINS IN REAL ESTATE!

\$6500 FINE NEW RESIDENCE, N. W. COR. 19th avenue and 17th street, East Oakland. Nine rooms Lot 40x130. Send for photograph.

\$200 EACH—7 LOTS IN TOWN OF BELMONT. Average 50x250. Level land. Easy terms. Two minutes walk from station.

JOHN F. BYXBEE.

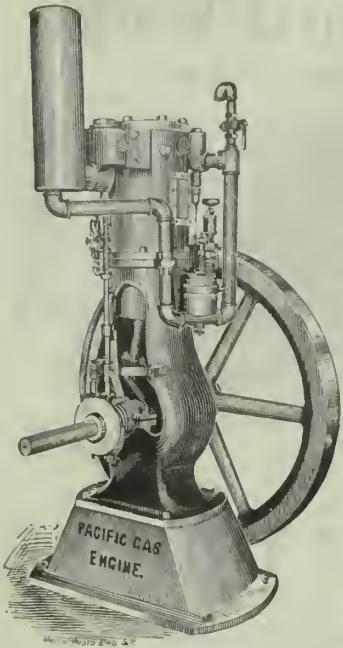
No. 42 Market St.....San Francisco.

FOR SALE!

One Thoroughbred Jersey Bull. One Thoroughbred Cross Jersey and Holstein.

H. B. KING.....Hollister, Cal.

WELL MACH'Y All Kinds, Water, Gas, Oil, Mining, Ditching, Pumping, Wind and Steam, Heating Boilers, &c. Will pay you to send 25c. for Encyclopedia, of 1500 Engravings. The American Well Works, Aurora, Ill. Also Chicago Ill.; Dallas, Tex.; Sydney, N. S. W.



BETTER THAN EVER.

1400 IN OPERATION ON THE PACIFIC COAST.

Our Recently Patented Vaporizer the Greatest Improvement
Made on Gasoline Engines Up to Date.

OUR NEW
"UNION."

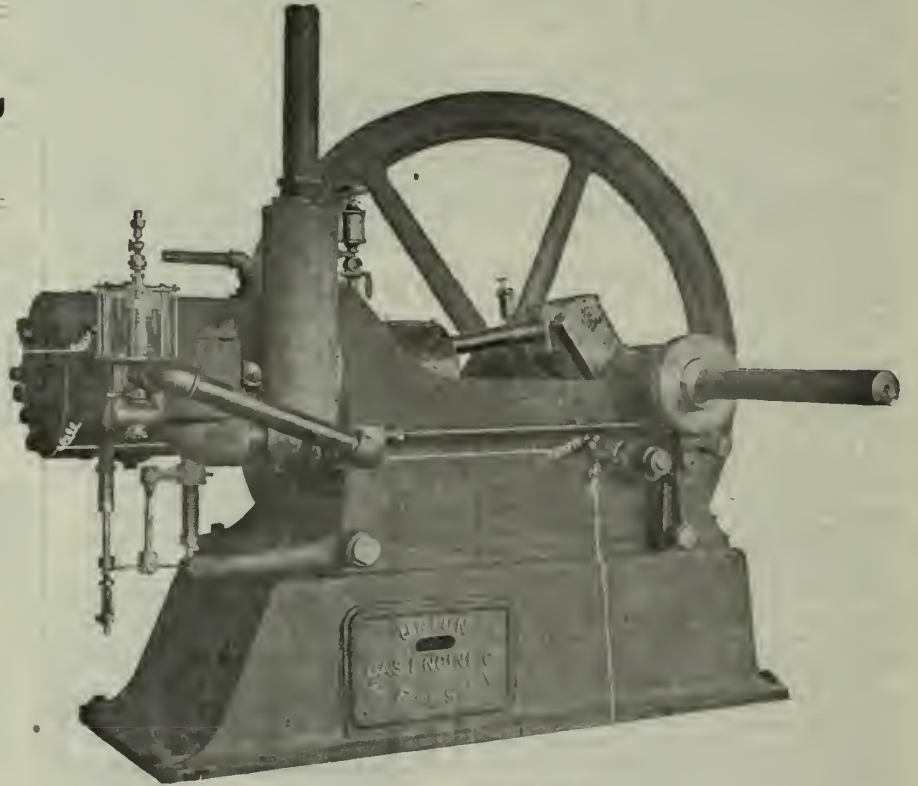
The Most Perfect Engine Made Anywhere.

MADE IN SIZES FROM 6 H. P. TO 20 H. P.
EITHER GAS OR GASOLINE.

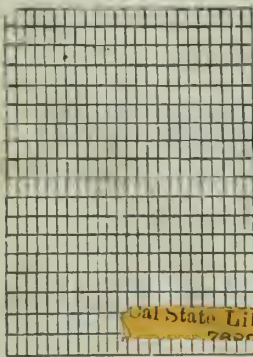
SEND FOR CATALOGUE.

UNION GAS ENGINE CO.

221-223 FIRST STREET, SAN FRANCISCO.



UNION GASOLINE ENGINE.

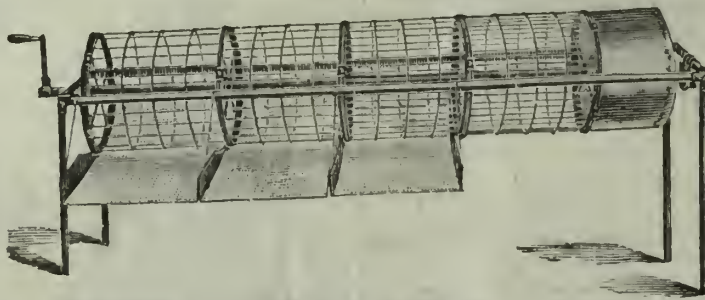


PRUNE SCREEN.

IMPORTANT TO FRUIT-GROWERS

WIRE WORK
OF ALL KINDS.

WINDOW GUARDS.
WROUGHT IRON
FENCING.
BANK, STORE AND OFFICE
RAILING.
STORE AND WINDOW
FIXTURES.
ORNAMENTAL WIRE
WORK.
ROOF CRESTING AND
FINIALS.
GALVANIZED DIPPING
BASKETS.
AND PRUNE SCREENS.



FOR GRADING
ORANGES, PRUNES,
OLIVES, WALNUTS,
PICKLES, ETC.

WILL GRADE GREEN OR
DRIED FRUIT EQUALLY
WELL.

IN USE BY PROMINENT
FRUIT-GROWERS.

PAYS FOR ITSELF QUICK-
LY IN SAVING TIME
AND MONEY.



DIPPING BASKET.

THE CYLINDER GRADER

IS THE MOST RAPID WORKING MACHINE FOR GRADING PRUNES, BOTH GREEN AND DRIED, that has ever been introduced. Wherever it was used last season it gave perfect satisfaction, both in the quantity of fruit graded and the way it did the work. The capacity is practically unlimited, as it will grade the fruit perfectly as fast as it can be fed into the machine.

I MAKE THREE SIZES OF THIS GRADER, from the large 30-inch cylinder down to a small hand machine for use of growers who so cross are small.
I FURNISH THE GRADER MOUNTED COMPLETE, OR THE CYLINDER ALONE, if, as is often the case, the purchaser prefers to mount it to suit himself. Send for circulars and prices.

D. D. WASS.

141-143 FIRST STREET.

SAN FRANCISCO, CAL.

AMERICAN CLING-STONE PITTING CO.

JOHN A. LEDDEN, Manager; E. M. LEDDEN, Secretary.

OFFICE: 126 DAVIS STREET, ROOM 20.

San Francisco, Cal., June 7, 1893.

Gentlemen:—We take the liberty of calling your attention to the following testimonials, from some of our leading canneries, and a number of others we could offer if necessary. Besides being awarded the SILVER MEDAL at the Mechanics' Institute during their exposition of 1893, regarding our Cling-Stone Peach Pitter. If you are interested in CUTTING AND PITTING CLING-STONE PEACHES would be glad to hear from you. All communications will receive our prompt attention.



THE J. M. DAWSON PACKING CO.

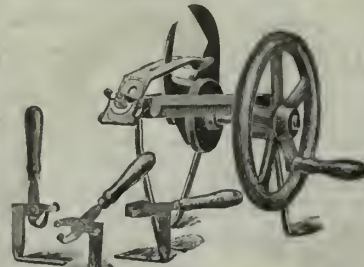
SAN JOSE, CAL., Dec. 30, 1891.

Gentlemen:—In reply to your favor of Dec. 3d, in which you request an expression of opinion from us as to the merits of your Cling Peach Pitters, would say that we have operated the Pitters quite extensively for the past two seasons, and we found them to be all that they were claimed to be, and can recommend them as being the most rapid and practical Cling Pitting Machine we have ever known of. Yours very truly,
E. L. DAWSON, Manager.

THE R. HICKMOTT CANNING CO.

OAKLAND, CAL., April 29, 1893.

The American Cling-Stone Pitting Co., San Francisco—Gentlemen:—I can cheerfully recommend to canners and others having cling-stone peaches to pit the pitting machine made by you. I have used them for the past two seasons and found them to do



the work for which they are intended far better than any pitters I have heretofore used. I will give you an order for quite a number of them this season.

THE J. H. FLICKINGER COMPANY ORCHARD AND CANNERY.

SAN JOSE, CAL., May 12, 1893.—Gentlemen:—We used your Cling Peach Pitter this last season and can say that it does all you ask of it. Very truly,
J. H. FLICKINGER, per H. A. FLICKINGER.

W. F. BECK & CO., COMMISSION
MERCHANTS.

112 CALIFORNIA ST., SAN FRANCISCO, April 12, 1893.

The American Cling-Stone Pitting Co., San Francisco, Cal.—Gentlemen:—We have used your pitters some three years in our cannery at Los Gatos, where they have given perfect satisfaction. We have tried a great many others previous to these, and yours are the only ones that we have ever seen that we are willing to "tie" to. Take this opportunity of cheerfully recommending them to any one who has occasion to pit cling-stone peaches. We expect to use your pitters this year, just how many will depend on the number of orders we take for this grade of goods. Yours truly,
LOS GATOS CANNING CO., E. B. Beck, Pres.

OAKLAND PRESERVING CO.

OAKLAND, April 29, 1893.

The American Cling-Stone Pitting Co., San Francisco, Cal.—Gentlemen:—It gives us pleasure to say that we have used your Peach Pitters in our Cannery for the past two years, and they have given entire satisfaction. We have seen no machine that will do the work as well and economically as yours, consequently it is an indispensable article to us in our business. You may look forward to receiving our orders for more of your machines for the coming season. How many we shall need we cannot state at this writing; everything depends upon the volume of business which we may do in cling peaches. Yours respectfully,
OAKLAND PRESERVING CO., per Nelson.





Vol. XLVI. No. 4.

SAN FRANCISCO, SATURDAY, JULY 22, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market St.

Lessons of a Failure.

The failure of Senator De Long, a prominent fruit-grower, with liabilities amounting to more than half a million, seems to need a remark which will be made in all kindness and for the public good.

In the first place, such a failure may be given undue significance in one direction, and in another direction its lessons may go unheeded. The line in which the fact may be harmfully expanded will be through the jump at a conclusion, chiefly on the part of distant people, perhaps, that California farming and fruit growing are not upon a good basis, but are inflated on the bubble plan and liable to collapse at any moment. Although many of our fruit-growers are carrying mortgages more or less heavy, the failure in mind does not reflect at all upon the fruit growing and farming situation as a whole. Evidently the unfortunate gentleman who was forced to make an assignment for such liabilities had indulged in speculations and other risks which are no part of the legitimate production, and thus incurred debts which he could never hope, of his own strength, to meet. The failure was in the course of the man, not in his calling.

But we do not fear such a reflection upon the soundness and security of California farming so much as we do that the lesson in the present case may go unheeded. Evidently the lesson of the failure is that a man who has an important producing enterprise in hand and has handsome capital involved in his business should have nothing to do with outside ventures of a speculative character. We have no doubt that this gentleman's attention was so largely given to other affairs that he could not conduct the agricultural enterprise with the care, acumen and conservatism which such interests demand. According to the published reports he indulged too largely in recreations and sports, as well as in commercial speculations, and was also prominent in politics, which are too often a demoralizing and distracting agency in a man's life. Evidently too much was undertaken in business lines and too much time given to outside issues which also called for money to go with the time.

Now the lesson to all who have not yet entangled themselves in too many diverse and expensive ventures, associations and recreations is, do not do it. During the years

when obligations hang heavily upon the shoulders of the producer he should brace himself upon economy, industry and self-denial in the way of dissipation or recreations until he swings his enterprise clear of debt. Probably having formed habits during this course of behavior he

In the Redwoods.

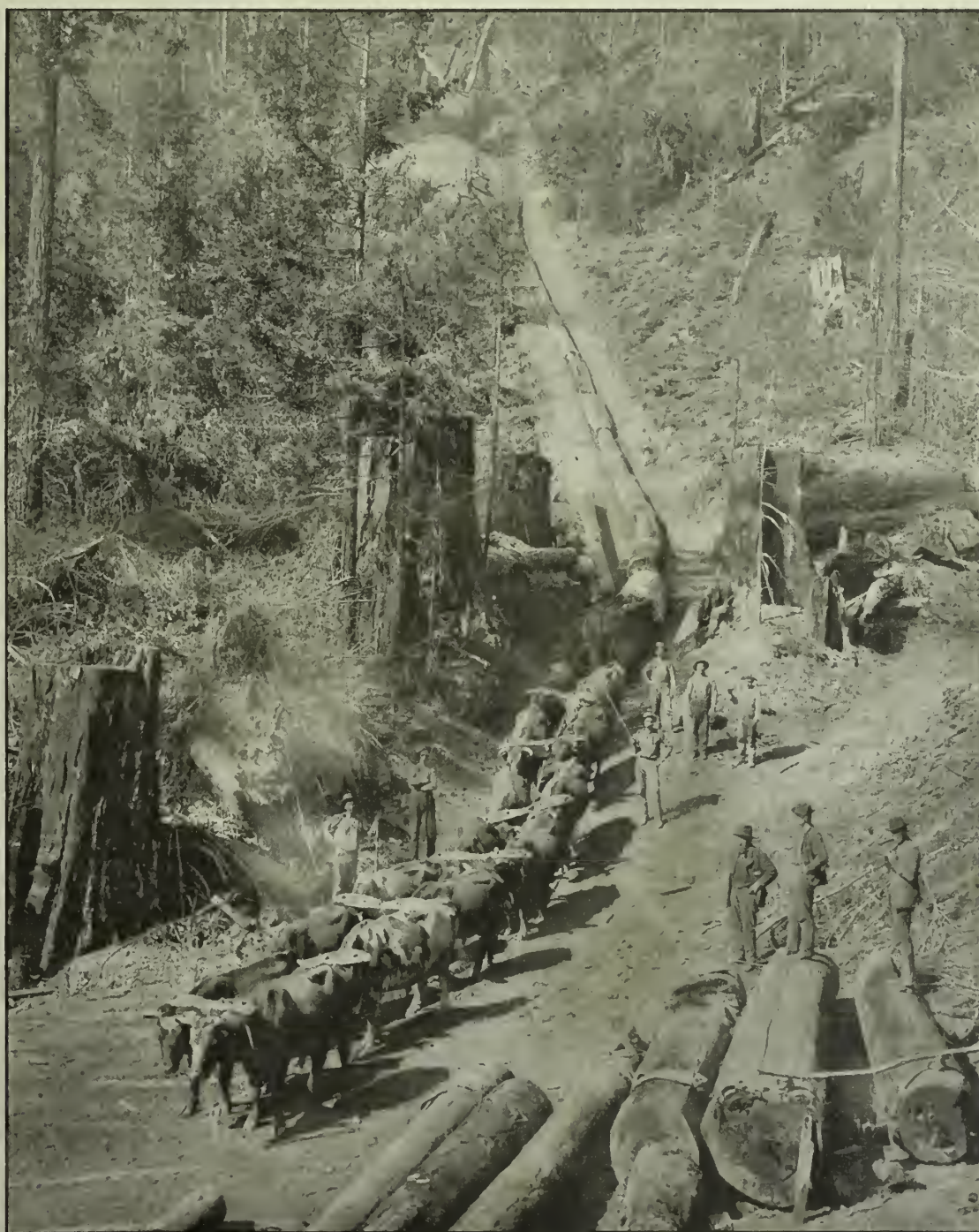
Such scenes as that upon this page can now be seen at various points in the great lumbering counties of our upper coast region. It represents the movement of a train

of logs from the slopes upon which they grew, either to the sawmills below or to the railways which run to the mills from various points accessible over a working grade. After the trees have been felled and cut into proper lengths, the logs are hauled by oxen to the landings on sides of the railway tracks where they are placed upon cars for transportation to the mills. In some localities where there are no railroads the skids run direct to the mills, but this is impracticable for long distances. At most of the places on the northern coast the mills are at the mouths of the rivers and the logging is carried on some miles back from the coast. The skid roads are then used to haul the logs to the trains. These skid roads are made of small logs or limbs placed a foot or two apart. Along the center of the top a rounding groove is soon worn on which the log lies. This grooved part of the skid is usually greased with some cheap lubricant so that the log will slide easily.

Of course these skid roads are down hill, the trees being cut on the ridges and sides of the canyons and dragged over the skids to the railroad at a low point. All the way from three to a dozen or more logs are hauled in a string, being connected by chains. These skid roads may be seen extending in all directions in the timber which is being worked up. On the steep hillsides they are not used as the logs move too freely and can be hauled down more easily on the bare ground. In some places it is not necessary to use lubricants and in others men go ahead with buckets and

dippers wetting the skids. In the picture the train has evidently been stopped at the base of a steep grade for the convenience of the photographer.

THE ORANGE SEASON has practically closed, and it is proper just now to sum up results. The season, as a whole, has not been as profitable as in most past years, but, nevertheless, we think the majority of growers have made money. They might and should have made more, even in the face of adverse conditions. Effective organization of growers has been the great want.



HAULING LOGS IN THE REDWOOD REGION OF THE UPPER COAST OF CALIFORNIA.

will go forward after that thirsting for no excitements, but calmly investing surpluses in enterprises which commend themselves to his judgment, full of energy and enterprise, and with a strong hand for the public benefit in building up needed undertakings, but not likely to become so encumbered, distracted and involved that relief can only be found in an assignment. Fortunately we have few cases like that which calls for these remarks. Fortunately, also, there is ample time for this estimable man to fully retrieve his fortunes and take the same lesson from his ill fortune that we urge for others profit.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco., Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half inch (1 square).....	1.00	2.50	6.50	22.00
One inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager

San Francisco, July 22, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—Hauling Logs in the Redwood Region of the Upper Coast of California, 65.

EDITORIALS.—Lessons of a Failure; In the Redwoods, 65. The Week; The Freest Distribution Essential; Miscellaneous, 66. From an Independent Standpoint, 67.

CORRESPONDENCE.—Concerning Pensions, 67.

MISCELLANEOUS.—Trouble with the Prunes; Carrots as Horse Feed; Wine Yield of France; Gleanings, 68.

HORTICULTURE.—Fruitmen and the Tariff, 69. The Olive-Growers' Convention; An Apricot Postscriptum, 70. New Fruit-Driers; Grafting the Apple on the Pear; Picholine vs. Mission; A Sonoma County Prune Method; Work of the Ladybug, 71.

THE DAIRY.—Economic Dairy Appliances, 71.

POULTRY YARD.—To Foster Poultry Interests; Turpentine for Roup; Object-Lessons to Beginners; Money in Small Things, 72.

WORLD'S FAIR.—California at the Fair; San Diego's Silk Exhibit, 72.

THE HOME CIRCLE.—74.

YOUNG FOLKS' COLUMN.—75.

AGRICULTURAL NOTES.—77.

PATRONS OF HUSBANDRY.—From Worthy Master Davis; From New Hampshire; From San Jose; From Grimes Grange; Field Day at Petaluma; From Two Rock Grange; National Grange Meeting, 78.

Secretary's Official Circular, 79.

MARKET REPORTS.—81-2.

BUSINESS ANNOUNCEMENTS.

(NEW THIS ISSUE.)

	PAGE
Buggies, Carts, Harness, Etc.—Deere Implement Co.....	84
Sulkies—Truman, Hooker & Co.....	84
Wagons—Parsons "Low-Down" Wagon Co., Earlville, N. Y.....	84
The Pullman Hotel, Chicago.....	84
Mortgages Bought and Loans Negotiated—Lindsay & Craig.....	83
Sheep—C. H. Dwinelle, Fulton, Cal.....	80

See Advertising Columns.

The Week.

The rural resorts are lonely this year. The attractions at Chicago are too large for the average California spring or seaside outfit to compete with. The result is that the delightful camp grounds and the shady piazzas are well-nigh untenanted. No doubt the greater establishments will receive patronage from the unusual foreign visitation which is expected after the World's Fair, but the little nooks will have to nestle down for another winter's rest without a summer's activity. It is too bad, but it happens so sometimes.

Rural affairs are quiet and proceeding in due course. Some inconvenience is being experienced because of difficulty of securing loans for crop-gathering, but it is hoped losses will not ensue. California has a glorious climate for the harvester who has to work slowly and under difficulties, though even the climate seems dull when a man has a payroll to meet and the bank is out of funds. But nothing permanent or serious seems afloat, and time will cure most present ills.

THE ATTORNEY-GENERAL of the State is of opinion that it is not within the power of the State prison directors to sell grain-bags on credit to farmers. The provisions of the law governing the sale of bags are specific, and cannot be deviated from, even in a case so meritorious and at a time when a lenient construction of the statute is much needed. The Attorney-General suggests that "the farmers may yet take advantage of the State's manufacture of jute bags if some bank or banks will advance the prison directors money on the notes that the farmers may give for the jute bags purchased." The State would thus be paid cash, though the law would be technically violated, or, rather, its provisions would be avoided. We fail to discover the value of the Attorney-General's recommendation. Banks which refuse to loan money on a staple like grain will hardly make a gracious exception in favor of grain-bags. The Attorney-General's suggestion would be all right if it would work, but it seems it will not.

OF HONORS TO HORTICULTURISTS we know of none more worthily bestowed than that given a few weeks ago to Prof. Thomas Meehan by his fellow-citizens of Philadelphia. Prof. Meehan has rendered so many public services that it is difficult in a few lines to specify any, but when it is said that more than 20 parks have been

established in the city by his exertions, some idea of his enthusiasm in municipal horticulture can be gained. The *Ledger* says: "He has earnestly striven to carry out the wish of William Penn that Philadelphia should, with whatever progress is made in wealth, commercial importance or size, remain a 'green country town and always wholesome.'" The token given to Prof. Meehan was very properly a splendid silver plaque upon which were engraved the original charter granted to William Penn.

The Freest Distribution Essential.

We alluded last week to an issue arising between certain associated fruit-receivers and dealers in Chicago and certain other fruit merchants not within such association. The careless reader might conclude that the conflict is probably the result of local trade jealousy or rivalry and not of wide significance. We regard it very differently. In our view the issue in Chicago involves the whole question of the free and adequate marketing of California fruits and fruit products at the East. For this reason we are prompted to refer to the affair at greater length and we trust with such emphasis as its important bearings demand.

It has been seen for years with increasing clearness that our future in fruit-growing will be measured by the degree to which the products command general patronage from the millions of eastern consumers. If we were to produce food for the eastern epicures and wealthy purchasers we should have stopped planting trees and vines ten years ago. We long ago passed the amount of production which such gilt-edged demand could possibly require. It has been wisely urged, time and again, that we proposed to produce fruit foods for the whole eastern people, that we would endeavor to secure the highest possible price for such fancy goods as appealed to the select trade, but at the same time we would send forward fruit for the million, of good wholesome quality, well grown and cleanly handled, but so manipulated by the aid of system and labor-saving devices that it could be furnished cheaply—just as cheaply as anticipated reduction of transportation charges make possible. It is upon this basis that the vast expansion of our orchard area has proceeded and its products are now being realized. It is just now of momentous importance that nothing interfere with the freest possible access to the consuming population of the East.

But there is interference, and it is of a kind most difficult to overcome. All Californians who have looked about at the East to inform themselves of the progress California fruit is making among the masses agree that the millions of consumers are very slowly becoming acquainted with our products. They say that considerable centers of population are practically unreached; that in cities where the finer stores have the fruit on sale, the miles of back streets and thousands of corner groceries have none of it. In short, the distribution is faulty and inadequate, and the people, as a whole, are still ignorant of California fruit, or, if they know it at all, look upon it as a luxury which is beyond their reach. How shall the throng to whom our products must come, if our vast product is to be disposed of, be reached, pleased and supplied? This is the problem which our producers are earnestly attacking. Various missionary efforts are discussed, and some of them have been carried forward with gratifying success, but the great East is still out of reach.

And now comes the Fruit-Dealers' Association of Chicago, advocating auction sales at which members only can bid and buy fruit—aiming apparently at holding the fruit shipments within their own control, securing supplies which they will dole out to vendors who shall be presumably owners of avenue fruit stores with marble-fountain attachments, carrying on a fancy trade with rich purchasers—a race of merchants who wear boiled shirts and big watch chains and are acceptable companions for the swell merchants' clubmen who propose to make the California fruit trade a sort of a social affair and its participants a mercantile four hundred. Does it require argument to show that such a conception of the Eastern trade in California fruits is diametrically antagonistic to the producers' interests? Can the grower who has carloads of fruit in sight and hundreds of acres coming into bearing have any patience with a fruit-dealers' monopoly in Chicago which plans to limit and restrict and enjoin, when the very necessities of the case are for unlimited, unrestricted and frictionless movement of the greatest possible amount of fruit at such reasonable prices that all can patronize it?

From such information as is now at hand of the ambitions, plans and purposes of the Chicago combination, we hold that the California fruit-growers should make short work of it. There seems to be merely a geographical shift of the same old ambition and purpose. Those who seem prominent in the effort to control the California fruit

trade in Chicago are the same gentlemen who did their utmost to control it here. Failing to hedge it in California, they dug a last ditch in Chicago and hope to pull the fruit into it there. They will fail there as they failed here. The California fruit trade is too large to be controlled by any set of men for restrictive purposes. That idea has had its day. The broadest freedom to run its commercial course to the uttermost parts of the consuming world is the only policy on which the business can prosper and go forward.

We do not imagine that the California growers will have much tolerance for the claims of the Chicago dealers that they should not be compelled to do business on the same basis as the crowd of unwashed foreigners who gain a livelihood by driving their spavined steeds and ramshackle vehicles through alleys hawking fruit to the lowly dwellers in cottages and tenements. We do not expect our swell Chicago dealers to make boon companions of these vendors. We do not object to their social resort where they can turn a part of their great profits on California fruit sales into perfumed Havanas and sparkling wines. They have a right to such association if they pay their bills, and they can make their doors into guillotines which shall chop the heads from all intruding Greeks and barbarians if the Chicago criminal code permits, but when these merchants go so far as to combine for the purpose of saying that their coterie alone shall buy California fruit, they overstep their rights and privileges and take position which California cannot tolerate.

A few years ago, after special investigation in which the RURAL PRESS bore honorable part, and which the same prominent Chicago dealers studiously discouraged, California fruit-shippers appealed to the auction-room as the broadest, freest platform known to commerce. The appeal was successful. California fruit moved into trade channels more widely and freely than ever before. And now we have a combination of reputable merchants apparently invading the freedom of the auction-room and closing its doors to all save their own set. It seems to us this is a sort of commercial crime. Of course, as an exchange, this body of merchants can sell what property they had control of and restrict buyers as fully as they see fit; but when they attempt to put a gag in the mouth of the public auctioneer, they are guilty of commercial misdemeanor. It would not serve their purposes to organize an exchange, because the California fruit-grower would not make shipments to such a concern. Their plan is to lead on the California producer with the idea that he is shipping to a public auction sale, and at the same time so operate the auctioneer that he shall close his ears to all voices save those which come from beneath high-rolling collars and polished shirt fronts. This is commercial misrepresentation; it is a matter of false pretenses which we should suppose an auction-house with any reputation as a public institution would refuse to engage in.

Probably enough has been said on this matter to show the fruit-producers that there is something going on in Chicago which needs their attention. Movements for personal advantage and against the public interest have been quietly checked when their dangerous nature was brought to light. If this should be such a movement the growers should know it. They really hold the key to the situation. They can ship their fruit to be sold at a really public auction if they see fit, and possibly even a threat to do so would so discourage the enterprise now brought to light that its projectors would abandon it. We advise investigation. We do not advise any one to change his Chicago receiver until the whole matter is more clearly understood. There might be such a thing as going from a bad condition to a worse if the grower should fall into the hands of irresponsible receivers. It is quite feasible, as so many fruit-growers are going to Chicago this summer, for each to look into the Chicago method of sale and form his own opinion of efficiency and value. If a number of those interested do this there will be abundant data upon which the growers' convention this fall can proceed with whatever measure seem necessary and desirable.

THE ORANGE-GROWERS of Riverside have perfected their organization for handling next year's crop. A final agreement and contract has been entered into, and signed by ninety-five per cent of the Riverside growers, thus making the union practically unanimous. The essence of the compact is that growers shall deal directly with consumers, avoiding the middlemen. The experience of the past year was unprofitable from a financial view, but it has not been without value. It has taught the necessity of co-operation. The growers of Riverside have had a practical demonstration of the manner in which a sensitive market may be demoralized by lack of organization and unity of action; and now they propose to return to the other method. They ought to be nearly as successful in future as they were in seasons previous to 1893, notwithstanding the heavy increase in volume of the crop.

From an Independent Standpoint.

The convention held in this city last week to consider the rights and promote the interests of California fruit-growers under the tariff policy of the country, got off on the wrong foot and chiefly gave its time to demonstrating what everybody knew before, namely, that the horticultural interests of the State are largely bound up in the protective tariff. Not the *protective principle* but the *tariff situation* was the proper theme of the meeting; and if this fact had been remembered there would perhaps have been less talk, but more to the purpose. The importance of protection to the fruit interests of California is a thing established and beyond dispute. Our olive industry, our prune industry, our fig industry, our wine industry—not to mention others relatively important—could not live without protection, and anybody who has any knowledge of the State ought to know it. It was upon this assumption that last week's meeting was called.

Although the convention wasted much of the day in proving a fact already familiar, it chose so wisely in naming Gen. Chipman as the representative of our interests before Congress that it deserves the approval and thanks of all whose fortunes are in anywise related to the prosperity of horticulture in California. It will be Gen. Chipman's mission (or that of Mr. Frank A. Kimball as alternate, if Gen. Chipman cannot act) to put into digested and effective form the facts which illustrate the necessity for protection to the California fruit industry. He will be able to show that our products, as compared with the importations with which they compete in the Eastern market, are purer in quality and more wholesome; that the California grower pays from two to five times as much for labor as does his European competitor; that the California packer pays from one and one-half to three times as much for his materials as does his European competitor; that the California shipper has to pay from two to ten times as much for freight as the European shipper; that horticulture in California is locally the paramount industry and, broadly speaking, essential to the completeness of our national life; that to destroy it would involve industrial retrogression and that to reduce its conditions to correspondence with the conditions of horticulture in Europe would be a serious blow to the dignity of American life and character. Our people do not ask for protection in such degrees as to give them the American market at arbitrary prices; all they want is such protection as will allow them to compete upon equal terms. Give them a fair chance and they will take care of themselves. Our people do not ask for protection as a gratuity, but as a right. They cheerfully pay protected prices for manufactured goods, prices which make a good twenty per cent of the cost of their living, and they demand in return nothing more than a fair share of the advantages of the protective system.

As matters stand in the political world it is the part of prudence to lock to this matter; but in our judgment there is really little danger of such modification of the tariff as will seriously affect us. The dominant party is pledged to tariff reform but it will not be required to accomplish the impossible; and we cannot see how free trade or anything even remotely approaching it is possible at this time. To explain: The Government needs annually between four hundred and five hundred millions of dollars and cannot do with less, since the pension list alone calls for two hundred millions. It has only two sources of income, namely, the tariff and the internal revenue. Now since it is impracticable to increase the latter, it is impossible to do away with the former, for to do so would put the Government in a position where it could not meet its current obligations. True, it is possible to exchange the *protective tariff* for a *revenue tariff*—for example, to take the duty from wool, fruit, etc., and restore the duty on sugar, coffee and tea—but this would be a grave political blunder and it is safe to say that it will not be done. In our judgment the tariff will for the present be left practically where it stands to-day; and its final limitation will follow—follow, mind, not lead—the gradual decline in the annual charge for pensions. Security for the present tariff policy or for something like it for many years to come, rests safely, we believe, upon the necessity for a large annual revenue to meet the obligations of the Government to its pensioners; and in this view of it the great pension expense does not seem so serious a matter as we are sometimes disposed to regard it. Whatever may be said against it we shall hardly be willing to condemn as wholly ill a wind which fills the sails of the California orchardist.

We would not, in view of these facts, omit taking such steps as will protect our interests in case tariff revision should be forced through Congress without respect to the conditions of the treasury. It is right to take every precaution, to be prepared for any emergency; and we cordially approve the project to send Gen. Chipman to Washington.

There is, however, comfort in the belief which we do not conceal, that he will find the situation favorable to our interests.

All of Colorado, Nevada, Idaho, Montana, and the mining part of California, persist in regarding the silver question in its local phase only. They base their theories of money legislation not upon world-wide financial conditions, but upon their own special and local necessities. Times are hard with them because the price of their chief commodity is low; therefore, they demand that the Government buy silver in such quantities as will raise its value. It would be just as reasonable for the farmers of California, because times are hard with them, to demand that the Government buy wheat in such quantities as to advance its price to a dollar a bushel. The Government owes nothing more to the producers of silver than to the producers of wheat, or the producers of hops; and its policy should be and must be based upon the broad interests of all the people rather than upon special and local necessities. In other words, the policy of the Government, if it is to have a sound and permanent basis, must deal solely with general and financial as distinct from local and industrial considerations.

The interest of the silver-producers, fortunately for them, is bound up with the interest of the world of commerce; both rest upon the concurrent, universal use of silver and gold as mediums of exchange—in brief, upon bi-metalism. Not because it will help the special and local interests of Colorado, but because it will give the world a just standard or measure of values, is the right and the reason of bi-metalism.

Instead of demanding arbitrary and tentative legislation for private advantage, the so-called silver States should join in the bimetallic effort to restore to silver its old-time money character. In the failure of the Bland measure and of the later enactment called the Sherman law, to hold up the price of silver, they ought to see how unsubstantial is any success based upon compromise or upon anything save sound principles of finance. If they—the silver States—are going to help their own cause they must quit pleading their local necessities, let go the idea that the American money policy can be arranged for their private benefit, quit talking about "fighting" for questionable "rights," and join in the effort to reorganize the world's finances upon a bi-metallic system.

The more deeply we study this question the more we become fortified in the judgment that the United States cannot alone uphold the value of silver and that our true policy is to take such a course as will force England to join us in a bi-metallic league. And the first step should be the repeal of the *purchasing clause* of the Sherman law. The operation of that clause steadily weakens us by draining our treasury of its ready gold. While England, broadly speaking, gains through the shrinkage of values due to enforcing the single gold standard, many of her people are suffering terribly, notably the manufacturers, the agricultural classes and the wage earners. If we repeal the purchasing clause of the Sherman law, the immediate effect will be to force down silver still further and create such a situation in England and India as will make the British Government cry "Hold, enough!" It is the judgment of an able bimetallicist who has just returned from Europe that if we quit buying silver in August, England will be found in November at the reassembling of the Brussels Monetary Conference, ready to join in bi-metalism.

A temporary adjustment of this currency question is in reality no adjustment at all. It is like paying an old note with a new one bearing an increased rate of interest. Such a settlement is to pile up wrath against a day of wrath—to make matters easier now at the cost of deeper sacrifices in the end. Nothing short of an adjustment upon the sound principles of bi-metallicism will suffice, because any other arrangement will not cure the injustice which the single gold standard imposes upon the seller, the debtor and the producer.

The San Francisco money market continues tight, so tight that securities which would have been entirely satisfactory as collateral six months ago are now valueless for the purposes of credit. Not one of the city banks is letting out money except to its regular customers; and to them only in limited amounts and subject to special arrangements. Local merchants find it impossible to get usual accommodations; and the farmer, to borrow the slang of the day, isn't "in it" at all. The Grangers' is the only bank that is avowedly putting up money on warehouse receipts, and even here there is discrimination against all excepting regular customers. In the interior the situation is equally tight. At Stockton favored customers get advances of seven to ten dollars per ton from the local banks; but only five dollars is nominally allowed. The banks are doing a little better by the fruitmen than by the grainmen, owing to the greater urgency of their de-

mands; but none of the canneries are running up to their full capacity, and probably none of them will be able to during this season.

For this condition of affairs you can get about as many explanations as there are bankers. One says one thing and another something else, but all are together in declining to let go of their cash. All deny that there is concert of action on the part of the banks, and, technically speaking, this denial is no doubt true enough; but they are practically acting together and to one end; namely, to force an early sale of the season's crop. It is very plain that if the farmers of the United States let go of their crops early in the season, it will bring a vast amount of foreign money into the country and so ease up the money situation; and this is what the banks want. If the usual door of accommodation—the local bank—is kept tight-shut, then the farmer will be forced to early sales to raise funds for his fall payments. It is hard luck, indeed, that the grain-grower is not to have even his usual poor chance for better prices later in the season, but must sell for what he can get. However, there may be a little negative comfort for him in the fact that, in these trying times, the merchant, the shipper and the banker, as well as himself, are "in the hole."

Concerning Pensions.

TO THE EDITOR:—Your editorials are so timely, interesting and able that I appreciate and commend them.

Underlying your remarks on pensions is, I believe, a mistaken idea of the pension law and its execution, and I take the liberty of calling your attention to the principles involved. The pension law granting a pension for life to a soldier on account of disability entered into and became a part of the contract between the soldier and the Government on enlistment, as much so, indeed, as the law authorizing payment for services.

The contracting of a disability in the service fixed the absolute and continuing liability of the Government, under the contract of enlistment, without any conditions whatever, to pay a pension to the soldier during the continuance of his disability, even for life. The right of the soldier to a pension, and the obligation of the Government to pay the pension, rest in contract, and the pension money due, and to become due, is the absolute personal property of the late soldier, and cannot be taken from him by the Government. A pension is not a gratuity or a charity, but a payment of money by contract.

I entered into two such contracts myself and served out my terms of enlistment and know whereof I speak. The pension legislation of this country has been based on right, and not charity, and therefore no attempt has been made to pauperize the pension roll by making pauperism a condition precedent to the payment of a pension.

In the Senate debates, Hon. John Sherman, a cold financial calculator, never questioned the right of a soldier to a pension for a disability, irrespective of whether he was rich or poor, and never based the claim of a pension on charity.

The obligation to pay a pension is higher and more sacred than to pay a Government bond, as the sealing with red blood is above the sealing with red wax. Suppose upon presentation of Government bonds at the U. S. Treasury by Secretary Gresham, Senator Manderson and Governor Beaver for payment, the insulting question should be asked by the Government official, "Are you in such destitute circumstances that you have to apply for payment of this bond, even if your bodies are dismembered and health shattered, have not you brains enough to make a living?"

It is enough to say that the bond contract of the Government to pay has no conditions attached, neither had the soldier's pension contract presented by these patriot soldiers, and it is not within the power of the Government to attach any such humiliating condition as poverty and pauperism. You are mistaken in saying that a pension should be really *needed* as well as rightfully earned—the pension laws have never raised the question of need, only that of right. All honor to the brave men who take from the Government their just dues for services rendered during the war and thus make the pension roll a "Roll of Honor" rather than to relegate it to the mean and ignoble position of a roll or squad of unfortunate paupers to be pitied for serving their country, not honored. It is fair to presume that pensioners now on the rolls are rightfully there for the execution of the pension laws and regulations have been almost cruelly strict and hard with nothing presumed in favor of the claimant, not even common veracity and honor that govern men in life.

The medical examinations and reports upon which the rate of payment is fixed have frequently been so ungenerous and false in fact that a majority of pensioners are allowed the paltry sum of two and four dollars per month to live upon.

The statute of limitations set up by the Government against the payment of pensions from date of discharge for wounds and disabilities contracted in the service and line of duty according to contract of enlistment, is a wrong that only might in the stronger could make right. Hundreds of millions of dollars, the property of disabled soldiers, by solemn contract have been confiscated and withheld under a statute that pension claims made since July 1, 1880, shall not be paid from date of discharge, as all others had been, but only from date of application. The soldier who delayed making claim for pension and banked his money with the Government till he wanted it, lost it all and had to be content with future payments. It is some satisfaction to know that rebel property confiscated has been returned or paid for, notably Arlington Heights, General Lee's property near Washington, so there is some hope for confiscated pension money.

In closing I desire to assure your readers that no pension laws will be repealed or regulations much changed as long as a generous people pay twelve dollars per month to Mexican war soldiers, without disability, a majority of whom were probably Confederates.

Your thoughts have recalled mine from prunes to pensions, so I write.
W. H. AIKEN,
Wrights, July 10, 1893.

TWO DIFFICULTIES are reported in the way of a more profitable marketing of California fruits in New York; viz, slow railroad service and the financial stringency. It may be impossible to remove wholly the latter trouble for the present year, but it is possible to expedite railroad service. The Southern Pacific railroad, it would appear, is quite as much interested in the profitable sale of California products as any one. Profitable sales mean a direct increase of shipments and freight receipts, to say nothing of the beneficial effects of the general prosperity of the people of California. Prompt railroad service is an indispensable factor in reaching the Eastern markets in season. The railroad companies have done much in the past; but we hope they will do more in the future.

Trouble With the Prunes.

General Chipman, of Red Bluff, is in receipt of the following communication from Dr. R. B. Blowers, of Woodland, in relation to the trouble which is now being had with prunes in Berendos and St. Mary's Park. Dr. Blowers writes under date of July 8th:

"Yours of July 6th at hand, containing prune. On consultation with Mr. Bowman, my foreman, he tells me that my own trees have suffered slightly from the same cause. And we agree that the cause is a suddenly increased heat. It is usually worse after a cold spring. Then suddenly a hot north wind comes on, raising the temperature to a high degree. This heated air, propelled by the north wind, injures the shaded fruit almost but not quite as much as the fruit exposed to the direct rays of the sun. Fruit is frequently blackened at the pit, while it does not show on the skin. Apricots are sometimes rendered unfit for shipping from this same cause. Today grapes are also injured in a like manner. I do not think the disease will spread much after this time, unless we have exceedingly hot weather. The apparent spread of the disease is because the scald does not appear immediately on the surface after injury. The only remedy I know for this condition is a vigorous flow of sap through the leaf and fruit, caused by thorough cultivation or irrigation. A great evaporation from the leaves thus provided for reduces the temperature and lessens the injury."

Carrots as Horse Feed.

The virtues of carrots as a food for horses are not fully known to many people, says Henry Dahlman of Petaluma. Carrots fed to horses contribute to their strength and endurance, and, in the case of indisposed horses, they aid materially toward recovery.

The way I feed carrots is to slice and mix with chaff or cut straw. A half-bushel is a good daily allowance. When first given, the feed is slightly laxative, but horses soon come to relish it and all bad effects from it cease. Carrots tend generally to promote a sound, healthy condition, whether the animals are at work or standing idle in barn or pasture.

To grow carrots, select a sandy soil and plow deep, and sow seed in drills; cover about a half an inch deep. The rows should be about two and a half feet apart to permit of cultivation. Cultivate as soon as possible and keep the ground loose.

When ripe, and sufficient rain has fallen to prevent the roots from shrinking when dry, pull the crop and cut the tops off. The roots may be piled and covered with the green tops or straw. It is better to store under cover, as the roots should be kept dry. Carrots can be kept fresh from three to four months after harvest. I like the long yellow Belgian best.

Wine Yield of France.

The following comparative tables will give an idea of the total wine yield of France, the total yield of wine in the Gironde and the extent of land planted with vines, together with the average yield per acre of certain departments lying in the immediate vicinity of Bordeaux. It will be seen that the year 1892 is one of ordinary yield:

TOTAL YIELD OF FRANCE DURING THE LAST TEN YEARS.			
Year.	Yield, Gals.	Year.	Yield, Gals.
1883.....	792,998,290	1888.....	662,543,314
1884.....	735,529,810	1889.....	511,150,819
1885.....	628,089,681	1890.....	663,426,160
1886.....	551,644,223	1891.....	663,068,000
1887.....	533,575,581	1892.....	640,094,820
TOTAL YIELD OF THE GIRONDE DURING THE LAST TEN YEARS.			
Year.	Yield, Gals.	Year.	Yield, Gals.
1883.....	41,104,973	1888.....	58,690,435
1884.....	29,438,427	1889.....	47,288,837
1885.....	23,683,991	1890.....	35,082,641
1886.....	24,401,156	1891.....	51,869,058
1887.....	25,077,467	1892.....	40,682,148

Experiment With Sisal Hemp.

A. Barnett writes as follows to the *Nuevo Sentinel*:

"Sisal hemp comes principally from Central America, but large quantities are grown in Florida, where it is said to be a profitable crop. I understand it to be a large variety of the Spanish bayonet, which grows so abundantly in all the southern country, thrives on poor, dry soil, needs cultivation only two years, and then he crops can be cut for years without further cultivation. It is said that \$12,000,000 worth of binding twine was sold in the United States last year. This, and nearly all of our rope, is made from sisal hemp. They have improved in the process of preparing the material and in manufacturing it, and it is thought by some that farmers will soon make their own twine, and if we can grow it in southern California to a profit it will be a big thing. I intend to get some plants to experiment with and hope others will do the same."

Eucalyptus Leaves vs. Lice.

Under this head, Mrs. Scarborough, in the *California Cultivator*, tells her experience in testing the popular belief that eucalyptus leaves were a preventive against chicken lice and mites. She positively asserts that the popular belief is totally unfounded, and that the eucalyptus affords breeding places galore, and that the mites rather seek than avoid the eucalyptus.

HORTICULTURAL COMMISSIONER UPTON, of Fresno, is engaged in the highly commendable work of distributing gratis colonies of *vedalia cardinalis* among the orchardists of that region. The cottony cushion scale must go and the *vedalia* will assist the work of removal in very effective shape.

AN INTERNATIONAL IRRIGATION CONGRESS is to be held in Los Angeles in October. It is expected that the meeting will be of great value and importance. Preparations for a large attendance are being made.

Gleanings.

THE CHICAGO *Inter-Ocean* says the crowning glory of California's exhibit is its display of fruits and vines.

THE PENNIMAN FRUIT COMPANY'S CANNERY at Santa Maria is about to start up. It takes more than hard times to scare the Penniman people.

IT TOOK A VERY LITTLE JAG OF SILVER to make money tight, but the gold cure is coming is the sobering reflection of the Santa Maria Times.

TWO CARLOADS OF PEACHES arrived at Chicago last Friday (July 14th) from Georgia. They were the first solid shipments from Georgia for the season.

IT TAKES MORE THAN GOOD GRAPES and plenty of sunshine to make good raisins; it takes a thorough knowledge of how to cure them properly, says an exchange.

THE MOVEMENT is becoming widespread. The Oregon State Horticultural Society had a meeting last week and discussed co-operation. Nothing co-operates like co-operation.

NEW JERSEY HAS RECENTLY SENT some greenhouse figs to the New York market which sold for \$1 a dozen. They are said to have been of excellent quality and delicious flavor.

THE FRUIT-GROWERS OF SONOMA COUNTY have organized and are ready for business. We are not organizing this year, remarks the Santa Maria Times. We need one more year's experience.

LATE STATISTICS SEEM TO PROVE that about 3,500,000 acres are devoted to coconuts in the world at large. The acreage in Ceylon is given at 500,000, and that of South America at 1,200,000 acres.

SAN MIGUEL HAS FORMED A STOCK COMPANY to erect and put in operation a \$25,000 cannery at that place. That's good. There won't be hard times, financial stringencies and such things every year.

THE SONOMA COUNTY HOP-GROWERS' ASSOCIATION will hold a special meeting on the last Saturday in July for the purpose of discussing matters pertaining to the industry, establishing price of picking, etc.

THE RECENT HIGH PRICE OF POTATOES has some embarrassing consequences. It has, for instance, prevented the operation of the starch factory at Petaluma. But preparations are now being made to operate just as soon as the crop matures.

GOOD, EARLY, SWEET CORN is hard to get in some parts of California, and when it may be so easily produced as an interculture in young orchards it is strange that so little is grown. Many a family could thus easily take in a neat little sum by supplying the local market with this needful article of food.

THE CO-OPERATIVE FRUIT COMPANY of Newcastle is about to open a branch fruit-shipping house at Penryn, and proposes to extend to their customers in that section the same facilities in the marketing of their fruit as are enjoyed by those who find it more convenient to do business through the present house at Newcastle.

"JOHN SONTAG LAID TO REST" is one of the sorrowing newspaper headlines over a recent mournful event. Mr. Evans is also taking a long-needed vacation in the Fresno county jail, and the people of Tulare find it impossible to escape an impression that the time is now at hand when they may sleep a little of nights themselves.

N. W. BLANCHARD OF VENTURA is trying the experiment of shipping a carload of lemons to Chicago in a refrigerator car properly packed with ice. This is the first trial of shipping lemons to Chicago by Mr. Blanchard, and, if successful, it will open up a new way of disposing of the lemon crop. The lemon must be handled with much care.

THE EARL FRUIT COMPANY sent a carload of grapes to Chicago from Palm Springs, July 12th. The grapes were of the Lady de Coverley variety, and were grown on H. F. Wheaton's place. Another carload from the Palmdale vineyard went the first of this week. They were Muscats. They were the first grapes shipped out of this State this year.

SO FAR AS KNOWN, the first carload of watermelons for the season was shipped from Lodi, July 14th, by Sprague & Gillespie. California may be a little behind Georgia on this thing, but then we have no large colored population, and the necessity of catering to a 120-horse power demand for watermelons at the earliest possible moment is not so pressing.

C. M. BLOWERS HAS AN ORCHARD of 49 prune trees near Hanford, and he will wager hard coin that it will out-yield this season any prune orchard of like extent in the territory of Kings or Tulare counties. When a man offers to wager coin and exhibits the collateral these times as Cash does, he certainly is "blooded," says the Hanford Sentinel.

IT SEEMS NECESSARY to repeat to some of our valued contemporaries that no such law exists in California as the "Wide Wagon-Tire" ordinance, allowing rebate of tax for using tires of certain width. What is alleged to be the full text of the law is being widely circulated in the State. Who started it? It is the mere figment of some one's disordered fancy. Stop it.

CHINO IS TO HAVE A BARREL FACTORY in connection with its beet factory. The barrels are to be made of strawboard obtained from San Francisco (most probably hoard from the Corralitos mills), and are to hold 250 pounds of sugar. They will be used for the shipment of the crude sugar to the San Francisco refinery. The Chino factory has abandoned the refining of sugar.

FRUIT MAY BE GROWN without irrigation, but not without cultivation, says the Ontario Observer. Whether irrigated or not, trees must be properly cultivated in order to produce satisfactorily. Frequent stirring of the soil will keep the ground moist throughout the summer months, but cultivation has other virtues. It aerates the soil, promotes the formation of plant food, kills the weeds and discourages the squirrel and gopher.

THE LATEST PHASE of the differences between raisin-growers, packers and brokers at Fresno is the meeting of packers at Fresno, last week, at which half the pack of the State was represented. The recently framed agreement for growers and packers, adopted by the California State Raisin Association, was submitted and discussed, but no action was taken. The sentiment of the packers, however, was clearly against the

agreement. A committee of three, representing the commission, growers' and brokers' packers, was appointed to arrange a plan of action, and the meeting adjourned to meet in San Francisco one week from next Monday.

SONOMA COUNTY HAS BEEN ASKED to appropriate \$2000 for an exhibit at the Midwinter Fair, and other counties are expected to take similar action. Judging from the activity of people of California, and the enthusiasm of San Francisco particularly, the fair is a "go." Work on the site has begun, and canvassing for subscriptions is proceeding with a fair measure of success. It will be the greatest event of the kind ever on the Pacific coast.

THE NATIONAL SWINE-BREEDERS' ASSOCIATION will hold its annual meeting in Assembly Hall, World's Columbian Exposition, on Friday, October 13. This meeting, occurring during the last and most important week of the swine exhibit, will be largely attended. The program, consisting of papers from leading breeders and prominent scientists, and treating on practical rather than theoretical matters, will be interesting and instructive.

THE LUCERNE VALLEY HORTICULTURAL SOCIETY has passed the following resolution: "Resolved, That it is the sense of this society that wages for saving the present fruit crop should be: For cutting apricots, 20c per hundred pounds; for nectarines 15c, and peaches 10c to 15c per hundred according to size; for picking grapes, 22c per tray of 20 pounds, or \$1 per day and board; for day labor, \$1 per day and board or \$1.50 per day without board."

GEORGE HUSHMAN, in the *American Agriculturist*, has the following to say concerning the California raisin: "California raisins now compete with the choicest foreign importations, even driving them out of American markets. This may be ascribed to better methods of cultivating, grading, drying and packing. Fresno is the banner county, leading all others, but Tulare, Kern, Merced, San Diego, Stanislaus, Yolo, Sutter and Yuba all grow raisin grapes."

C. J. BERRY, HORTICULTURAL COMMISSIONER of Tulare county, has a remedy for the common pumpkin or "stink" bugs, which are destructive to pumpkin and cantaloupe vines, eating them off at their roots. The remedy is: One-quarter pound of common soap dissolved in two quarts of water made hot. Add one pint of kerosene and stir it very violently for five minutes; then add 12 gallons of water to the above mixture and put it on the vines at their trunk or base of their stalks.

IN THE PAST TWO MONTHS over 100 colonies of the Australian ladybug have been distributed through southern California. The white scale has been so well cleaned out at Los Angeles that the breeding station is having trouble obtaining enough white scales to feed the ladybugs. If conditions were to become such in California that the ladybug would be in danger of death by starvation, we could hardly regard it as an unmixed calamity, though out of common gratitude we might try to devise some substitute that would suit her ladyship.

A REPRESENTATIVE OF THE CUDAHY PACKING COMPANY, in conversation with a Santa Ana Blade representative, stated that the packing-house was not supplied with nearly as many hogs as could be used, and that the worst feature of the matter was that the porkers were not to be found in the county. "There will always be a heavy demand for hogs," said he, "and I cannot see why the farmers here do not engage more extensively in raising them. Money in the business? Of course there is. There is a very fair profit in raising hogs for market."

EUGENE BOLTON, of hen-plucker notoriety, comes to the front with another hen story, says the San Benito Advance. He has 11 hens and a rooster, and in three days he gathered six dozen and three eggs. He accounts for the remarkable yield by the fact that he purchased a sack of blue grass from the county, and fed it to the hens by force. His brother Frank, however, says that Gene plays roosts on the hens. As soon as it is dark Gene turns on the electric lights and shoos the hens off the roost, making them believe it is daylight. This accounts for the poultry doing double duty.

TIPTON IRRIGATION DISTRICT has called an election for August 2d upon the question of issuing additional bonds of the district in the sum of \$20,000, says the Tulare Register. Tipton district has done a large amount of hustling and has worked to good purpose. There was much at stake. They tried dry farming to their satisfaction and finally concluded it was either water or emigration. They decided in favor of water, as that is a fine section. Prosperity will follow the introduction of water. The people there cannot afford to go back. They will make their system complete if it does cost money.

N. W. MOTHEBOLD SOLD HIS APRICOTS last week to Charles King for 8½ cents per pound, says the Hanford Sentinel. On actual investigation, he found that 8½ cents at the date of the sale was better than 9 cents a week later, as the fruit would shrink in weight more than that difference. He has two acres of ground in apricots, but a few trees are lacking to make it a complete stand. From this he got 4500 pounds of dried fruit which, at the price, brought him \$382.50, or \$191.25 per acre. He says it cost him about \$20 per ton to pick and dry it, which leaves a net profit of \$170 per acre, which is good enough, indeed.

FROM THE NEWCASTLE NEWS we take the following summary of fruit shipments from Newcastle for the first six months of 1893:

January.....	73,205 lbs.
February.....	45,275 "
March.....	8,406 "
April.....	5,256 "
May.....	274,678 "
June.....	1,720,393 "

Total..... 2,127,187 "
The June shipments for this season exceed those of last year by 777,955 pounds.

THE ORANGE AND LEMON SHIPMENTS from Ontario for the past seven months have been as follows:

	Boxes.	Carloads.
December.....	1,839	7
January.....	3,119	11
February.....	3,265	11½
March.....	9,457	34
April.....	24,110	86
May.....	10,820	38½
June.....	2,690	9½

Totals..... 55,400 197½
The shipments this month will bring the total up to 200 carloads.

HORTICULTURE.

Fruitmen and the Tariff.

A Convention of Fruit-Growers of California was held in this city last Thursday, July 13th, for the purpose of discussing the tariff duty and its relation to California fruit products and preparing information relative to the value, extent, income, etc., of the industry, for presentation to the California delegation in Congress, that they might make an effort at the coming session to retain the present tariff on fruits and secure protection for certain products now unprotected. The horticulturists of the State had been fully advised of the purpose of the meeting, and had been requested to furnish in tabulated form facts and figures relative to the expense of fruit production, including original cost of land, nursery stock, care, replanting, etc., for a period of five years. They responded readily to the call for a convention, and the result was not only a representative attendance of the horticulturists of the State, but the presentation of a variety of statistical and other information of a most complete and valuable nature.

The place of the session was Pioneer Hall and the time was 10 o'clock. Shortly after that hour fruitmen from all parts of the State and representing every branch of the industry were assembled in Pioneer Hall. Among them were noticed the following: A. T. Hatch, Suisun; Frank A. Kimball, National City; A. T. J. Schulte, San Luis Obispo; Elwood Cooper, Santa Barbara; Geo. T. Ditzler, Biggs; P. J. Hayne, Santa Barbara; F. Sanderson, San Jose; J. T. Bouge, Yuba City; Wm. Johnston, Courtland; L. Mosher, San Jose; H. W. Hathaway, San Lorenzo; Geo. Husmann, Napa; J. J. Morrison, Loomis; J. L. Howland, Pomona; B. M. Lelong, San Francisco; C. H. Allen, San Jose; Alfred Holman, San Francisco; E. W. Maslin, San Francisco; Philo Hersey, San Jose; R. C. Kells, Yuba City; I. H. Thomas, of Visalia, and a number of others.

The convention was called to order by Hon. Elwood Cooper, President of the State Board of Horticulture, who read the call for a meeting, heretofore published in these columns. Upon motion the following were appointed a Committee on permanent organization: Wm. Johnston, J. L. Howland, J. T. Bogue, H. W. Hathaway, C. H. Allen. A short recess was taken in order to give the committee time to prepare its report. It recommended the following as the permanent officers of the convention: Elwood Cooper, president; A. T. Hatch, vice-president at large; J. L. Howland, C. H. Allen, vice-presidents; R. C. Kells, treasurer; B. M. Lelong, secretary.

The report of the committee was unanimously accepted and the new officers immediately installed. In assuming the gavel, President Cooper took occasion to make a few remarks regarding the tariff and its effect upon the California fruit industry. Said the president: "We want to protect our fruits and have them on the same footing as fruits from the Mediterranean. The tariff on some of our products is insufficient, on others we have none at all. We want the raisin, the prune, the almond and the walnut left where they are. The tariff on olive oil is too low; on the olive pickle there is none at all. The citrus fruits must not be forgotten. If we can secure such a duty that we can land our fruits in New York at the same expense as fruits are produced and shipped from Europe to New York, we shall have accomplished our purpose."

There was some discussion as to the method of procedure for the day, and it was decided to appoint a committee of nine to prepare a program which should select and assign leaders in discussion on the various topics to come before the assembly. The following committee was named: Elwood Cooper, A. T. Hatch, R. C. Kells, I. H. Thomas, J. L. Howland, Mr. Hammond, Frank A. Kimball, J. T. Bogue, F. E. Owen. The committee was instructed to prepare a program to be followed out during the afternoon session. A letter to the convention from Gen. N. P. Chipman was then read. It was in part:

There is another view worthy to be considered. You have asked for detailed statements of the cost of land, of planting and caring for orchards, of gathering and marketing fruits. This involves also the productiveness of our orchards. If we make a showing from which very small profits are shown to be in the business, it will discourage fruit-planting. If we make a showing resulting in large profits to the grower, it may furnish an apparent reason for the removal of duties from that class of fruits which we produce, and that are imported.

On the whole, it seems to me that your convention will have accomplished the purposes for which it was called when you have had a full comparison of views and full report upon the points suggested in your circular, and these have been, or their results have been, placed in the hands of the committee which you may appoint to lay the subject before Congress, leaving with this committee full discretion to use the data in the most effective way.

From what I have recently seen of published estimates covering the points you suggest, I am persuaded that a good deal of revision will be necessary to be made by a conservative committee in order to arrive at the approximate truth. For example, my recollection is that the recently published statement of the cost of producing an orchard to the end of the fifth year, as stated by two such eminent fruit-growers as General Bidwell and Mr. A. T. Hatch, differs nearly 100 per cent—that is to say, Mr. Hatch's estimate is nearly double that of General Bidwell's. An examination of General Bidwell's figures will show that he is manifestly wrong, and greatly below the actual cost under most favorable conditions, and that he has omitted some essential factors. I mention this to emphasize the point I am making. There is much to be said in the direction of upholding the present rates of duties, viewing the subject from a broad and patriotic standpoint, and in the interest alike of the consumer and producer; but I will not venture upon the discussion, for it really belongs to the duty of the committee which I have suggested.

However, should my views not be found to be in harmony with those of your convention, I shall be glad to co-operate in any way I may be able.

Very sincerely yours,
N. P. CHIPMAN.

A recess was then taken. The first business at the afternoon session was the report of the Committee on Program. The following were the topics and speakers assigned to open the discussion in each:

Prune—Col. Philo Hersey.
Grape and Raisin—A. B. Butler.
Olive and Olive Oil—Elwood Cooper.
Nuts—A. T. Hatch.

Citrus Fruits—F. A. Kimball.

Fig—B. M. Lelong.

Deciduous Fruits—R. C. Kells, J. L. Mosher and H. A. Brinard.

The report was adopted.

The first topic considered related to olive culture and the tariff on the olive. The principal speaker, Mr. Cooper, said in part: "I have been requested to furnish a statement of the difficulties we encounter in cultivation of the olive tree. There is no trouble in planting the tree, for it is one of the easiest to plant and to grow, if proper care is taken; but the great difficulty in olive culture is the olive scale, known as the black scale, which is so prolific that destruction is certain to follow its presence if its ravages are allowed to continue. I have seen trees 20 years old which have never grown an olive. But this is not our chief trouble. After we have grown, picked, dried and crushed the olive and filtered the oil, and then paid the freight to Eastern markets, we find that we are undersold. I have tried to sell oil in New York at \$12 a case (which I really ought to receive f. o. b. in California), and I find European oils offered there for \$7.50 a case. Their oil is not so good nor so pure, but people will not pay \$1.50 per bottle when they can get the same quantity for 75 cents. The cost of labor in Europe is one-fourth what it is in America. The cost of labor here is so great, and so much is necessary to be used in the production of the olive and olive oil, that we absolutely are unable to compete with the foreign product. There is such a difference in the cost of freights between the Mediterranean and New York and California and New York (it is \$1 a gallon) that the tariff should be at least \$1.40 or \$1.50 to place us on an equal footing with foreign growers. We ask no more. If the cost of our production and marketing can be equalized with that of foreigners, we are willing to rely on the merit of our article to invite its sale. We have no fear of the result. The tariff is now 35 cents per gallon for olive oil. It was \$1.

"The production of the olive and olive oil is a rising industry in California. The State is especially adapted to its growth. It is a health-giving product; it is a good food product; it has a great future. We do not want to be depressed, but encouraged. We don't want to ask special favors, but we do want to be able to reach the Eastern market as cheaply as do the people of Europe."

Mr. Frank A. Kimball said: "I believe it is the duty of the country to place us on an equal basis with the foreign product. If we could compel all producers of olive oil to label the exact contents of the bottle on the outside, we would ask no more. Then you need not put any duty on it for me. But we can't do it. We tried for ten years to get such a bill through Congress. Our only recourse is a tariff duty. Besides olive oil, there should be a tariff duty of 25 cents per gallon on olive pickles, and we must ask that olive oil 'foots' now entered free be put on the list."

Taking up the subject of citrus fruits, Mr. Kimball declared that the same laws which apply to olive oil also cover citrus fruits. The chief item of difference between the cost of production at home and abroad is labor. If we can secure labor in the United States as low as in Europe, we will ask no odds. "But," continued Mr. Kimball, "when the American people are willing to degrade labor from its present reasonable standard down to a range of from 7 to 25 cents per day, then they shall be in shape to allow foreign oranges and lemons to come in free of duty; but as long as we desire to pay our labor living prices, then we must have a duty. That's all there is to the question."

The subject of figs had been assigned to Mr. B. M. Lelong, and he devoted much of the time assigned to him in the discussion of the cost of labor in Europe and America. He produced a variety of statistics showing that the range of orchard and fruit labor in the old countries was from 17 cents a day to \$4 a week, while in California the average is \$1.50 a day. "This item alone," said Mr. Lelong, "makes a very essential difference in the cost of fig production, and the present tariff of 2½ cents per pound seems to be just about what is necessary to equalize conditions at home and abroad. Ten years ago there was not a pound of figs shipped in California, except a few of the old Mission variety. Four years ago a quantity of white figs, first shipped from Fresno, was sold at eight cents per pound, which left a very small margin for the producers, but served to introduce the fruit. If we consider wages, prices, freight, boxes and so on, we can understand why the producer getting eight cents a pound does not realize as much profit as the European who sells for half as much. Our freight charges are ten times as much as they are in Europe. So far the production of figs in California has been small. We hope it will be much larger, for the market is wide, and, if properly encouraged, the industry can reach large dimensions."

When Mr. Lelong had finished, he called upon Mr. E. W. Maslin, secretary of the State Board of Trade, to furnish a more exact statement of the extent of fig production in California and of its market in the East, and of the necessity of a tariff to give it adequate protection.

Mr. Maslin responded, as he said, very reluctantly, for he was not in sympathy with the object of the meeting, or rather, he thought the fruit-growers were not pursuing the right course. He announced himself as an absolute free-trader, and declared that it should be the effort of California fruit-growers to produce such a quality of fruit that a tariff even of ten cents a pound on figs could not make the slightest difference in the price. "I don't care," said Mr. Maslin, "if there is not a cent of duty on figs. The pauper labor of Europe is more than offset by the intelligence of our labor, the superiority of our machinery, the excellence of our appliances, and the thoroughness of our methods. When we produce and pack a superior brand of fruit we shall have settled the question of market." Mr. Maslin made further statements in the same vein and said in conclusion that California people should buy where they can buy cheapest and sell where they can sell dearest.

Mr. Maslin's assertions did not meet with favor in the convention, and were combated by several speakers.

The first to speak in criticism of Mr. Maslin's remarks

was Mr. Alfred Holman, editor of the RURAL PRESS. Mr. Maslin, he said, appeared not to understand the purpose of the meeting. It was not to discuss the principle back of the protective policy, but to establish the interest of California under that policy. Protection was, he declared, the practice of the country, and since California was taxed to support protection she ought to have her share of its advantages. This was a proposition which the most extreme free-trader ought to approve. Speaking for himself, Mr. Holman thought protection at this time the true policy of the country. The prosperity, in fact the very existence of our fruit industry was bound up in it. Take away the advantages which protection gives us, he said, and the olive and prune trees of California are worth only their value as firewood, while the land upon which they grow would be worth fewer dimes than it is now worth dollars. If this convention were to approve the ideas set forth by Mr. Maslin, if it were to be given out that the fruit-growers of California did not want protection, it would do us incalculable damage. The duty of this convention, he said, to represent the true interests of the California orchardists, was not to wrangle over principles which it could do nothing to change, but to devote itself to getting for California a legitimate share of the benefits of that policy which is the settled practice of the country, and which—no matter what politicians or party platforms may say to the contrary—must continue the practice of the country for a long time to come. Our representatives in Congress have asked us for primary information illustrative of our necessities. Let us give them what they ask and waste no time in discussions which can do no good, but which may do harm.

Mr. Maslin explained that he had not intended to speak on the question at all, and had not intended to obtrude his views upon the notice of the convention, but being called upon to speak, he had considered it right to state his position.

Mr. Cooper remarked that inasmuch as it was necessary to raise five hundred millions of dollars a year by tariff duties, California wants a part of that duty imposed on products that come in competition with ours.

Mr. Lelong declared it to be simply the purpose of the convention to prepare arguments for the use of our Congressmen at Washington.

Discussing the subject of nuts, Mr. A. T. Hatch said that our distance from market and the cost of labor in Europe made it necessary to have a tariff on that article. If we want to employ an increased number of people in the industry here at fair wages, we must not be discriminated against. A fair tariff is needed to equalize conditions. The almond and walnut both require the best of our land and are two of our most expensive products.

Mr. Cooper remarked that years ago we obtained 12 cents a pound for English walnuts in the Eastern market. "One year the product of my walnuts was \$12,000; last year it was \$4,000. Even with a duty on English walnuts of three cents a pound, the industry is not profitable, and I have destroyed 128 acres of trees because they did not pay. If you take the duty off there will not be 300 acres of walnuts left in California. Free trade in walnuts means no nuts for us. I have made an investigation of the nut industry in California, and find that before almonds were produced here they were never sold for less than 20 cents a pound. Now, with a tariff, the price is one-half that, showing that the consumer and producer have both been benefited. Remove the tariff, and the industry is killed here. Outside producers will combine and the price go back to where it was before."

Mr. Hatch remarked, just now there seemed to be an effort to wipe out all our important industries. Silver is nearly killed, wheat is down to the lowest notch, and now our Democratic friends want to wipe out our fruit and nuts.

Col. Hersey talked at some length in a very interesting manner on the subject of prunes. He said in part: "Unless we have a prune tariff, we might as well cut down our trees and go into some other business. This is a great country, and it costs something to ship our prunes across the continent. The freight is \$1.50 per hundred, and in boxes it is 15 cents more. If we are to contend with foreign producers, we are handicapped by a difference in reaching the market amounting to nearly \$28 or \$30 per ton. The freights from the Mediterranean are from \$3.50 to \$5.50 a ton. If we are to be put on an equal basis with them, we must have a difference in tariff equal to the freight. The present tariff of two cents a pound for prunes is not too high. Without it we shall be compelled to sell prunes for one cent a pound less in California than the French producer gets in France. He produces an article inferior to ours, that sells for less than ours and is in all respects cheaper than ours. If we receive less for the prune, where will we be? I repeat that we must then cut down our trees. The present tariff has cheapened the cost of prunes in the East from 22 to 10 cents a pound. It has therefore worked no hardship on the consumer, but has been an actual benefit. Let us have a statesmanship equal to the breadth of the country, and then we can use all parts of the country for the producers of the country."

The colonel then talked about the present condition of the prune market, and declared that even with the present tariff the price had reached the minimum. "We are now offered 4½ cents for prunes; if the two cents tariff is taken off, what happens? We will give up our markets to some other country, and allow them to remain rich and us to be poor."

Mr. Hatch added that conditions always have been against the producers of this country, and if they did not work for themselves, he did not know who would.

In discussing deciduous fruits, Mr. R. C. Kells said that it had not been proposed to place these products on the tariff list, but he thought they should be included. Present conditions favor the importer. We ought to be able to present such an array of facts to Congress that they will think it necessary to give us protection. We are young people and need encouragement. One way to encourage us is to compel foreign producers to label their preserves, jellies and jams (which have a tariff) with their proper titles. They are sent here as pure products, but they are

adulterated. If they were properly labeled we would be all right.

J. L. Mosher, of San Jose, spoke of the necessity of a tariff for deciduous fruits. He dwelt on the market phase of the question and also upon the matter of immigration. If the industry is to be crippled, then desirable immigration will be stopped.

Prof. Allen, of San Jose, gave a very intelligent and interesting review of the policy of the tariff. He contended that it should be so distributed that it will do the greatest good to our producers and consumers both. Certain interests need to be fostered. If a tariff can do good to the producer and no harm to the consumer, the point is shown where the duty should be placed. "When I began to raise prunes," said the professor, "I received 20 cents a pound; now I get 6. Nevertheless, the producer has been protected, and it is clear that the consumer has also been benefited. The industry has been fostered and the price reduced." Prof. Allen continued at some length in the same vein, and declared in conclusion that the ideal American citizen should be a land-holder. There is no hope in any other country that the laborer can become other than what he is. Here there is well-founded expectation that industry, integrity and a fair amount of intelligence will bring position, influence and property even to the humblest. If we degrade our labor, we destroy his hope of better things.

Col. Hersey added that the policy of this country should be so shaped that we can market our own products in our own country. "Fifty years from now, when our population has enormously increased, let us hope that every inch of available land in California will be utilized in raising fruits for our own people in America. Then it may be necessary to call on France to supply a deficit. Till then there is no special reason for giving France an advantage over our own producer." This concluded the discussion. It was ascertained that the statistical information presented by the various growers was so comprehensive and so extensive as to need reduction and revision before presentation to our Congressmen. A committee consisting of Messrs. Kimball, Hatch and Hersey was appointed for that purpose.

It was thought also to be expedient to send an agent to Washington during the session of Congress to present the needs of the fruit-growers in a proper manner and to assist our delegation in securing proper legislation. Gen. N. P. Chipman, of Red Bluff, was unanimously selected for the mission, with Frank A. Kimball, of National City, as alternate. A finance committee of three to raise necessary funds was then appointed, and the convention adjourned sine die.

The Olive-Growers' Convention.

Following the Convention of Fruit-Growers, the third annual meeting of California Olive-Growers met at the rooms of the State Board of Horticulture Friday, July 14th. The interest in the convention was made manifest by the large and representative attendance of growers of the olive and producers of olive oil from all important sections of the State. Among those present were the following:

Eben Bolt, Palermo; J. L. Mosher, San Jose; Frank A. Kimball, National City; Wm. C. Parker, Kenwood, Sonoma Co.; Mrs. Parker; Capt. E. Kellner, Berkeley; Alfred Roncovieri, San Francisco; B. F. Walton, Yuba City; H. Pastsch, San Francisco; A. H. Coombs, Cloverdale; Mrs. H. E. Van Winkle, San Francisco; Mrs. L. P. Slocumb, San Francisco; Mrs. A. M. Sherman, Oakland; Mrs. Louis Mel, Livermore; R. Jordan, San Francisco; R. Jordan, Jr. Napa; J. H. Bowman, Suisun; Adam Douglas, San Francisco; Dr. O. V. Thayer, San Francisco; Solomon Sweet, San Francisco; Arthur P. Hayne, Berkeley; Edward E. Goodrich, Santa Clara; J. L. Howland, Pomona; E. M. Thompson, S. Helena; Fred H. Busby, San Francisco; Jos. H. Wilcox, Napa; C. A. Aiken, San Francisco; Geo. Turrell, Lincoln; S. C. Frayner, Marysville; J. S. W. Schulte, San Luis Obispo; Fred C. Miles, Penryn; P. S. Cliffe, South Africa; Wm. P. Edwards, Petaluma; J. T. Bogue, Marysville; R. L. Blowers, Woodland; C. P. Howes, Mountain View; D. M. Pyle, Bakersfield; L. P. Benchley, San Francisco; W. D. Lawton, Sacramento; E. W. Maslin, Loomis; R. C. Kells, Yuba City; Mrs. M. A. Van Schaick, Gilroy; Leigh Overman, Hanford; W. C. Fitzsimmons, San Francisco; G. A. Putnam, Walnut Creek; Mrs. G. A. Putnam, Walnut Creek; I. H. Thomas, Visalia; W. P. Hammond, Biggs; E. J. Pringle, Jr., Oakland; E. C. Sessions, Jr., Oakland; J. M. Sweet, Bakersfield; G. P. Rixford, San Francisco; Henry A. Brainerd, San Jose; George F. Ditzler, Biggs; A. H. Butler, San Francisco; Fred C. Smith, South Australia; F. C. Clarence, San Francisco; H. F. Bickel, San Francisco; T. F. Giblen, Yuba City; L. Barzellotti, Santa Clara.

The session was most interesting. A number of valuable papers were read, and the discussions which followed were timely, instructive and profitable. Many were present who have either just begun the production of the olive or who are about to begin, and they had many questions to ask of those who are experienced in its culture. Mr. Cooper, Mr. Howland, Mr. Kimball, Mr. Goodrich, Mr. Lelong and several others admitted the assembly into several "inside" secrets relative to olive-growing and preparing for market. There was nothing about the occupation, they said, which they desired to keep from the public, and they were very glad to spread information which might be of assistance to others.

Elwood Cooper of Santa Barbara presided. The president, in his opening address, paid particular attention to the Act of the last Legislature which superseded the previous law regulating the sale of olive oil. He explained its purpose and provisions. It was obligatory on any one placing an impure oil on the market to give it its proper label of "imitation olive oil," with the name and address of the manufacturer or compounder, and also the names and percentages of the ingredients contained in each bottle or vessel. A further preventive against fraud is provided in Section 7, wherein it is required that oils made outside of the State shall not bear any design or label conveying the impression that such oil was manufactured in the State. Hitherto no action has been taken toward the enforcement of the Act, but it was the sense of the convention that steps be taken in the future to protect the interests of the State. Nothing but common honesty is demanded by the terms of the Act. Much of the oil for sale when tested has alleged contained only ten per cent of olive oil.

Mr. Arthur P. Hayne of Santa Barbara, a graduate of

Berkeley and a student of the National Agricultural School at Montpellier, France, read a paper wherein was given the result of four years' study in all European countries except Russia. Mr. Hayne's observations, which were careful and thorough, led him to the conclusion that the olive-growers of California are superior in methods, skill and intelligence to those of Europe. The RURAL PRESS will, at some future time, make more extended mention of Mr. Hayne's address.

Dr. A. E. Osborne, superintendent of the State Home for Feeble-Minded Children, at Glen Ellen, contributed a paper on the value of olive oil in disease.

Mr. J. L. Howland, a well-known oil-maker and grower of Pomona, then read a paper on percentages of oil to be obtained from different varieties. Mr. Howland's paper is in full as follows:

At the request of Mr. Lelong I have prepared the following statements of my experiments in finding the percentages of oil in different varieties of olives. While I used an old-fashioned beam press and could not get all of the oil out of the pomace, I used the same pressure in each experiment, and the most careful and exact weights and measures. My percentages are only comparative, and with the new press which I shall use this year I shall be able to get a larger percentage in each case, but they will rank in the same order. While I understand that the percentage of oil issued by the Berkeley Experimental Station in Bulletin No. 92 was only from chemical analysis, mine are the results of actual pressure and show the average quantity of oil that any one might expect with a press of ordinary power.

After two years' careful experimenting with the different olives, for bearing quality and percentage of oil, I find them as follows:

My trees were planted five years ago the 17th of last April, and were two years old when planted. The Pendulina, Oblonga, Uvaria, Columella, Rubra, Regalis and Precox commenced to bear the second year and have borne regular and steady crops ever since. The Manzanillo and Nevadillo Blanco bore the first time last year, though they were planted out on the same days as the others. In regard to size of pit, the Pendulina was the smallest.

My Rubra and Pendulina trees averaged a gallon of oil to the tree last season, of the very finest quality. After fully one-third of the crop had been picked off the Columella trees, the balance was picked and weighed and averaged 51 pounds to the tree. The Uvaria is not so large a tree as the others but a very heavy and regular bearer, and the earliest to ripen of all—in October. The Uvaria, Oblonga and Pendulina trees are the most even ripeners, so that all the fruit on the tree can be gathered at one picking. All the bearing part of my orchard five years old returned me over \$400 per acre last season, the fruit being made into oil; the Pendulina, Rubra and Columella about \$75.50 per tree.

The following is the per cent of oil of two years' tests which each variety yielded: Pendulina, 21; Rubra, 18½; Oblonga, 18; Mission, 17.9-10; Uvaria, 17½; Nevadillo Blanco, 16½; Columella, 16½; Precox, 14; Picholine, 10; Manzanillo, 8½.

In my orchard, situated at Pomona, they ripen in about the following order: Uvaria, first of October; Polymorpha, Macrocarpe, Atro-Vialacea, Manzanillo, last of October or first of November; Rubra, Columella, first of December; Regalis, Precox, middle of December; Mission, last of December or first of January.

There was a short discussion following Mr. Howland's paper and then a recess was taken until afternoon. Upon reassembling, Mr. Frank A. Kimball of National City read an exhaustive treatise on the subject "Why Americans Should Cultivate a Taste for Olive Oil as a Food." The author of the paper was P. C. Remondino, M. D., of San Diego.

Upon the conclusion of Dr. Remondino's paper, the convention was thrown open to general discussion. One of the first questions asked was as to the best olive to plant and grow. Mr. Edward E. Goodrich was called upon to answer the question. "I can only give my experience on my place in Santa Clara county," said Mr. Goodrich. "A few years ago I sent to Italy for grafts of high grades, and I find that the variety that seems all in all to be the best at my place is known as the Corregio." Other varieties tried by Mr. Goodrich are Morinola and Grossajo, the Frantojo and Intrantojo. The chief test of the value of the olive for oil was, in Mr. Goodrich's opinion, the ease with which the oil could be extracted. On his place he found some difficulty with the Mission olive. He considered that the question of varieties depended largely upon locality and soil. The soil on his place is light and rich, but he thought that for foothill land experience would probably prove that the Mission was the best. There ought to be a point between foothill and valley lands where the Mission would begin to do better than other varieties.

Mr. Cooper gave his experience as to different soils. He said, "I have six orchards at various elevations above the sea level and on different varieties of soil. The lowest is probably 60 feet above the sea level and is in black adobe soil. Another is 100 feet higher in black adobe. One is in sandy loam, one in the red lands, another in black adobe and the last in sandy loam 400 feet above the level of the sea. I make their products into olive oil as soon as they ripen. The oil I made two years ago I had in seven different tanks. In six of these, no living man could tell that there was any difference in the quality of the article. I use the Mission olive. When I began I got the Mission from various orchards in different localities and where they appeared to grow and ripen under different conditions and circumstances, but, on my places, they have developed into an olive of uniform quality, and I have made up my mind that the differences in olives come from different climates, for the various olives in the several soils on my place are just the same."

Mr. Hayne told of the olive oil exhibit at the World's Fair. It was one of the most attractive and most talked about exhibit there.

In giving his experience of the olive, Mr. Kimball said he had no success with any variety in size, shape or quality of oil except the Mission. One orchard on his place in San Diego county averaged one gallon of oil to 43 pounds of fruit. The general average throughout was about 62 or 63 pounds.

In answer to a question, Mr. Howland declared that the black scale had made no choice of varieties when it began its ravages on olive trees. Some people claim some varieties were more or less exempt; but he saw no difference.

Some discussion followed as to the value of irrigation for olives. Mr. Kimball said that a good test for determining whether the olive would grow in arid land is to take a handful of soil two or three inches below the surface, press it hard and then drop it, and if it is damp enough to stick together while falling, there the olive will grow.

Being asked as to his method of pruning, Mr. Cooper said that he had formerly pruned heavily, but since the introduction of parasitic insects he found that his method had to undergo a change. In order to secure the multiplication of ladybirds, he allowed the brush to hang down on the ground in order to protect the eggs and early stages of the larvæ.

Mr. Lelong then gave the convention the results of five years' careful experiments in pickling the olive. The great desideratum, said Mr. Lelong, is to prevent scum rising on the liquid in the bottles. In the first place, he said, the berry must be perfect. It must be picked from the tree, not knocked or removed by any other process. If it is, it will be found afterward that a spot will develop in the berry. The tree should be gone over several times and the fruit taken when ripe. Pick in small baskets lined with burlap, and when half or nearly full drop contents into barrel containing water. The olives do not need to be assorted at this time, and the pickling process can be then begun. The liquid for pickling is prepared as follows: One pound of potash in ten gallons of water. The potash used is powdered Greenbank, 98 per cent. It is best to boil the lye in about two gallons of water; then the liquid should be poured in the vats containing the remaining eight gallons, which should be shallow, say about 30 inches deep. These vats should be arranged in tiers, one above the other, with faucets so that as the lye is drawn from one it can be emptied directly into the lower one, and so on through the series of vats. Each vat is filled with water as the lye is drawn therefrom. The olives are left in the solution only four hours and the lye is removed by being taken successively through the various vats until the last is reached, where, after remaining four hours, it is removed altogether. As the liquid is drawn from the vats it is replaced with pure water run through the casks in the same manner as the lye once or twice every day. It will be found that the water is at first very unclear, and the process should be repeated until it is absolutely clear and it is evident that there is no more lye on the olives. After this the olive should be allowed to remain a week or ten days in water, changing the water every day. Then try the olive. If it is white near the pit it will be found to be still bitter and it is not perfectly pickled. Try the solution again, keeping the lye in motion through the various casks and pulling the plug every 15 minutes. Then let the water follow again. When this process is complete and the bitterness of the olive seems to be gone, they should be placed in brine—a solution of 14 ounces of salt to one gallon of water.

After the solution is prepared, place in a barrel; then drop in about one-fourth of a pound of alum, dissolved. Stir and leave standing. The alum will clarify the solution, and cause all floating particles to settle. Dip from top.

In the first place, however, this solution should contain only four ounces of salt, then eight and then fourteen. After that comes the assorting. The cheapest way is to secure girls for this purpose. Throw the soft and spotted berries aside.

The liquid for the bottles should be carefully prepared, containing 14 ounces of salt to a gallon of water. The brine should be put in hot (but not boiling hot), and, immediately after corking, the bottles should be plunged into cold water.

The convention tendered a vote of thanks to Mr. Lelong for his generosity in furnishing his recipe. Shortly after, adjournment sine die was taken.

An Apricot Postscriptum.

TO THE EDITOR:—I wish to make a little further explanation of one point in Mr. Towner's article on drying apricots in the RURAL PRESS of July 15th, with regard to what is said there about his method of having the fruit gathered. In writing for him I did not give his method quite correctly. The fruit on the lower limbs that can be reached from the ground is picked; that on the higher limbs is shaken by taking hold of them, limb by limb, with a forked stick. The dropped fruit is kept closely picked up. Cheap help does for this.

Another correction: In my article on "Apricot Aliases" I was made to speak of the mushy flavor of the late Moorpark. It was the fault of my poorly-scribbled *k*, for I meant *mushy* flavor. It is very distinctive and delicious to the educated taste.

The Apricot in England.—Since writing my article I have had a visit from an Englishman, who has for the first time been enjoying the California-grown apricot. He told me how the apricot is grown in England. I wonder how many of the readers of the RURAL PRESS know this. It made me appreciate "our climate." In England each apricot tree is trained flat against the south side of a brick wall. Each tree has a curtain with attachments for letting the same up and down at the times necessary to protect the tree from frosts or any inclemencies of weather. The trees are carefully thinned, so that the fruit grows very large and is very fine flavored. My guest spoke highly of the California apricot. In this region this year, owing to the small crop, I suppose the fruit is wonderfully large and fine.

Root Knot on the Apricot.—I saw a letter not long since, in an agricultural paper, speaking of trouble with root knot on the apricot tree and asking for methods for treating this disease. In our orchard, when the tree is small and young, a very successful method has been to scrape the dirt away from the diseased root, cut off the excrescence and rub salt on the place, leaving it exposed to the light and air for a time. Some of the finest, largest trees in our orchard were treated so when young and cured. Mr. Towner thinks that root knot is caused by too much water in the nursery and other poor treatment there. His imported stock has been free from this much-to-be-dreaded disease. Mr. Towner believes that every very successful fruit-grower will get in the way of having his own private nursery to replenish his stock or set out new. It is surprising how much healthier and more vigorous are the trees one raises from seed than that bought at the nurseries. This is particularly true of the nut tree.

Peach on Apricot.—Are there any readers of the RURAL

PRESS who have tried budding the peach in California on apricot root? The peach is a short-lived tree; the apricot is long-lived. In certain regions in southern California where the apricot thrives, and seems perfectly adapted, the peach seems rather delicate and acts as though the climatic conditions were not exactly right for it; but a peach on peach root comes into bearing quicker than on apricot root. This must be the reason why in the nurseries it is generally, if not always, so budded. As the sum of advantages, however, seems to be in favor of getting a hardier, longer-lived tree, we have determined on our ranch to henceforth have peaches on apricot stock. Does Mr. Editor know whether this has been done much anywhere in the State? It may be an old idea, for all it is something experience has suggested to us as the best thing to do. [The peach root is a splendid root on good peach soils, and on such soils it not only carries good peach trees, but good apricot, plum and prune trees. It is not the peach root which is short-lived, unless it be where subject to special peach root borers. The peach root is longer-lived than the top, unless a renewal system of pruning is constantly practiced. We know of apricot trees on peach root which are 40 years old and still in good bearing. The apricot root may endure a moister soil than the peach, but it is subject to more enemies than the peach root, and conspicuous among them is the gopher. This pest will keep an owner of an apricot-root orchard in constant worry. The apricot root is, too, usually a slower grower than the peach root, and would produce a smaller peach tree in the same number of years. We should expect also the peach top to overgrow the stock. We believe some such considerations influence nurserymen in the use of the peach root. Apricot seedlings are easily grown and nurserymen can readily furnish them if the demand runs that way.—EDITOR.]

The Ladybug's Voracity.—Here is another question for Mr. Editor. Can the ladybug eat fruit, and does it? [The true ladybirds, which are commonly of reddish or yellowish colors, do not eat fruit enough to speak of, but a greenish insect, something of the ladybird size and form, does eat fruit grievously. It has black spots on its green wing-covers, and is a *diabrotica*, and not of the ladybird family.—EDITOR.]

For the first time in our experience, at least to any appreciable degree, apricots have this year shown a tendency to rot on the trees. The fruit shows small rotten spots, which seem started, not by the peck of a bird's bill, but by something which has eaten tiny, round, shallow holes in the fruit. Ladybugs are exceedingly plentiful here. They have apparently devoured all the scale they could find, and the guess is made that it is they who have made these punctures in the fruit. Is this likely? Can they do it, or have they been known to? AUGUSTA E. TOWNER.
Santa Ana, Cal.

New Fruit Driers.

TO THE EDITOR:—One of the most opportune improvements being erected this season is the fruit drier. The "hard times" make it very advantageous for private individuals to have some way to dry their fruit and hold it for an advance if desired, and not be forced to dispose of it green. Mr. T. G. Hume of Los Gatos is having a building 50x177 erected on his Glen Una ranch, and will put in an elevator, steam boiler, etc., and have a double track down to a level basin as it were, containing 10 acres, where he will dry his fruit. There are 400 acres of bearing prunes on this ranch.

The fruit-growers of Evergreen and the section lying east of San Jose have combined, and, after a few meetings, have incorporated as the East Side Fruit-Growers' Union, and will have, by the 20th inst., expended \$10,000, as follows:

Twenty acres of land.....	\$ 4,000
Two buildings, 30x60; tank, 15,000 gallons; 6,000 feet single track, etc.....	3,000
Trays, 10,000.....	3,000
Total.....	\$10,000

They anticipate handling the following amount of fruit for the coming season:

	Tons.
Apricots.....	300
Peaches.....	300
Prunes.....	1500
Total.....	2100

They have already disposed of about 275 shares of stock, and at present will not sell more than 500 shares at \$25 per share. The capital stock is 4000 shares, or \$100,000. They prefer to only sell sufficient stock to equip the plant, and to borrow money during the few months when needed to market fruit rather than have the money lying idle from about October to next fruit season. I understand this to be the prevailing practice. Only fruit-growers are admitted as stockholders, at the rate of two shares to every five acres of fruit the drier handles. The different driers generally seem to be working in harmony and aim to make the Santa Clara Fruit Exchange the common head, and to keep the fruit out of the hands of speculators as much as possible.

The following shrinkage is estimated for the present season: Green prunes, 2.6; green apricots, 5.5; green peaches, 5.5. Some parties around East Side think the shrinkage on prunes will be less.

Following are the directors and officers for this year of the East Side Fruit-Growers' Union: H. L. Stevens, president; H. S. McClay, vice-president; A. H. Stinson, treasurer; T. H. Derby, secretary; G. H. Hensill, H. W. Cate, H. H. Remington and G. A. Bean, board of directors.

Alfalfa at Hillsdale.

Mr. Fuller planted about an acre of alfalfa a year ago this June. He planted it late on account of the advice of some of his neighbors, who claimed that the frost would kill if planted before May or June. After having tried it he is satisfied that the frost will not kill if planted in any month in the year. Mr. Fuller took a waterspout about five

inches in diameter and cut it in the middle lengthwise, then put a piece of wood to fill up each end of the pipe. Then he made small holes in the bottom of the pipe, probably about one-third of an inch apart. He laid the pipe down on the ground, then filled with seed and fastened the pipe around his neck with a rope, and steadied some with one hand and with the other took a small stick and beat the pipe so as to shake out the seed as thick as required.

Care should be taken to lap enough when seeding this way. The alfalfa looks very well and has been cut already this season. Judging from the way this piece of alfalfa looks, there must be many places in this valley that would grow alfalfa to advantage. This land has not been irrigated and the gophers are getting very thick; whether they will destroy the alfalfa or not, time alone can tell. Sufficient water could be pumped to drown out the gophers if necessary. E. R.

Grafting the Apple on the Pear.

The following has been printed in several Sonoma county papers:

In March, 1891, the writer grafted 63 Winter Nelis to Bartletts. The trees were eight years planted and averaged six grafts to the tree. Thinking if we could grow apples on pear stocks we might head off the woolly aphids, also sun-scald the borers, I put two apple grafts in each tree, 30 trees receiving grafts of an unnamed seedling of much promise, 19 to Newtown Pippin and 19 to Golden Russet. By actual count on the 22d of June this year there was living 38 of the seedlings, 30 Newtown Pippins and 25 Russets, nearly all well loaded with apples, many of them having to be thinned. About 95 per cent of them grew, but a few got broken off in plowing and the wind blew out about a dozen. I should have put them in smaller limbs, but put many in stumps two or more inches in diameter. All those of 1½ inches or less are grown over the stump now. Of course there is no graft safe from blowing out until entirely grown over the stump. This summer more have blown out than heretofore, probably because they are well loaded with fruit. A few pear grafts have also blown out of the same trees, but they have no fruit on them. So far as I can see, the apples have made as good a union with the stock as the pears have.

As the first attempt was so encouraging, in March, 1892, I grafted 45 Easter Buerre trees of the same age but much larger to Buerre Clairgeaus, putting four to six apple grafts to a tree, mostly Arkansas Blacks, this time cutting no limbs larger than 1½ inches in diameter. All grew but about half a dozen and many of them are now full of fruit. Many had to be thinned. But two have blown out as yet, but some had to be tied. In July and August, 1892, I put in about 500 buds of Arkansas Black, Sawyer, Hoover, Bellflower, Newtown Pippin, Gravenstein and Russet into Bartletts and Easter Buerre. They have all done well so far. Upon the whole it is encouraging, but cannot say it is a success. It will take two or three years more to demonstrate it, but it is well worth experimenting with. If any fruit-raiser has had experience in the above line he will confer a favor by publishing his results. Facts are what the fruit-raiser wants. Apparently the Arkansas Black, Newtown Pippin and seedling are doing the best, and the Easter Buerre and Winter Nelis seem to be the best stocks. I shall keep on with these experiments and hope others will try it. J. H. H.

Picholine vs. Mission.

TO THE EDITOR:—Much has been written about the Redding Picholine olive and but little in its favor, for, with the exception of an article read before the second meeting of the State Olive Growers' Convention, held under the auspices of the State Board of Horticulture at San Francisco, July 21, 1892, by Mrs. Emily Robinson of Auburn, which speaks very favorably of said variety, all the testimony seems to be against it. Now, I wish to add a few words in favor of the little olive. In my father's orchard, situated in the upper Ojai valley, Ventura county, are 300 Redding Picholine olives, also about a dozen of the Mission variety. The Picholine are nine years old and for the past two years have had full crops, and again this season they are full of young olives. The Mission on the contrary (they are twelve years of age) have never had a full crop. By the results obtained I am convinced that the Picholine in the upper Ojai is much more profitable than the Mission and were I now to plant an olive orchard in this locality, I would give the Picholine a place before the Mission.

The oil, too, is of excellent quality and fully up to that of the Mission.

Like Mrs. Robinson, we spread canvas on the ground and let the olives fall on it using a common fanning mill for the leaves and dirt. We experience but little difficulty in picking the olives as we simply strip them off, though I have no doubt a coarse comb would be better. To sum up I would say that if one is after an oil olive, I see no reason why the Redding Picholine will not compare favorably with other varieties, though, perhaps, my experience will not hold good in other localities. It seems to me that the Redding Picholine has been condemned before it has had a fair trial. C. W. ROBINSON.

Nordhoff, Ventura Co., Cal.

A Sonoma County Prune Method.

Mr. E. W. Hayden gives to the Sonoma Farmer the following as his method of handling prunes:

To a kettle holding 75 gallons of water, add 4 pounds of concentrated lye, adding in that proportion as the mixture gets low. Use a perforated bucket holding about 5 gallons, and dip the prunes in the boiling fluid till their skin cracks. A 3x3 foot square slat bottom tray made of shakes is handy for one man's use. After using this mixture set your prunes out in the sun seven or more days, according to the heat of the sun until two-thirds dry, then heat up well in the drier to kill insect eggs and give a nice fresh color, then pile on the floor of your fruit room about three

feet deep, shovel over every other day only. They will sweat and thoroughly cure in two or three weeks, then they are ready for market.

Work of the Ladybug.

The Anaheim correspondent of the Los Angeles Times writes: "H. Krueger reports that the common ladybug, which is found nearly all over the State, is making fierce war against the red-scale pest in his orchard on Broadway. Mr. Krueger has devoted some time to the study of the habits of this bug, and pronounces it a strong friend of the fruit-grower. There are three varieties of the insect in his orchard, a red bug, a black and red bug, and a yellow one with black spots, all being about half the size of a pea. The bugs move from one tree to another in colonies, feasting upon the scale with avidity. Their mode of attack is to tear open the scale and eat the soft interior, and in the course of a few days nothing can be seen of the scale except a small whitish spot where the scale had been attached to the leaf or branch. The bugs make a 'clean sweep.' If this ladybug, which is found in almost every section of the State, continues to develop a fondness for the destructive and much-feared red scale, it will prove a great boon to the orange-growers of southern California."

THE DAIRY.

Economical Dairy Appliances.

TO THE EDITOR:—Mr. C. S. Wilson, of Sanger, solves a very important problem, likely to yield important results in making the ten-acre farm self-sustaining from the start and settling the irrigated lands with prosperous homes. For \$5 he makes a milk-rack for his ten-cow dairy that brings such good results, without ice, as to enable him to make butter during the hottest summer months selling readily at 50 cents per roll. A current of pure air and evaporation of water are the principles involved. His method shows a very practical and economical application of well-known laws of nature.

Construction of the Milk-Rack.—Build a water tight box 3½ feet square supported by 2x4 posts six feet long and make a round gudgeon at each end. The lower end of this should be supported by a plank with a hole to fit the gudgeon, and the upper end is kept in place by cleats on the lower side of the water box. At intervals of six inches, 36 strips, each three feet long and one inch square, are nailed to the post in pairs, so that they make revolving shelves for 36 eight-quart milk pans. These hold three milkings from the ten cows. The cooler is now completed by tacking to the box two curtains, each made of a 40-cent wool sack. Gimlet holes in the side of the box are so arranged and regulated with plugs as to keep the sacks all the time damp. The hotter the day and the stronger the breeze the faster the water is allowed to drip.

Location of the Cooler.—For the successful operation of this device it is essential that it be set in some place where it will be shaded from the sun and have a good circulation of pure air. Under those conditions Mr. Wilson has not noticed much difference in results whether the mercury stood at 90° or at 115° outside. To granulate the butter in the churn, prepare it for working and carry it to town, his ice bill is about \$5 yearly. To enable him to carry the butter to market in good shape at any time of ever so hot a day, he has a double box with ice packed between. The inner box is 12x15 inches and 7½ inches deep, inside measurement, and the outer box is large enough to allow two inches space for ice around the sides. [Probably it would be still better if he had a like space on top.—ED.] This cooler and box take a little less than 50 feet of lumber, 80 cents worth of sacking and two old boxes from the store. It takes half a day's time to rig them up. The total cost is about \$5.

The other dairy fixtures are a lever worker, a crank churn with zinc bottom, etc. Only the cooler and butter box deserve to rank as improvements. Nothing else is entitled to any share of the credit, save that the cows are from a well-graded dairy and the butter-maker understands and follows the principles involved in successful butter-making and marketing. He began to market butter from four cows in April and his books show sale and delivery of 58 rolls in April, 104 rolls in May and 51 rolls up to June 17th. The curtains on this form of cooler rot out from being kept constantly wet so as to require about two sets per year, but they inclose the milk rack so thoroughly that no wire cloth is needed to keep out flies.

Bearing of This Improvement Upon Colonization.—In traveling through these colonies we find that whatever disappointment results is in large measure due to underestimates regarding the time and expense necessary to bring a place into profitable bearing. The cost to Messrs. Hatch, Buck or Coates, who have had the experience of scores of years and many enterprises to enable them to economize in cost and to choose such soil and conditions as will yield best results at least expense, are only a faint criterion of the cost to one who enters upon a new business with only such advantages as kind fortune may have thrown in his way. Often we find them enduring privations to which they have hitherto been strangers, while waiting for the time, that they have almost despaired of seeing, when their fond hopes may be realized. Cramped for means, these people, who need every advantage that can be given them, fall an easy prey to the greed of those who deal in the commodities they produce upon the principle of "all the traffic will bear." Raisin-growers are now feeling the heaviest pressure, but it is bound to come to most communities between the time when there is too much for home consumption and too little to attract competitive buyers. To bridge over the time when a young orchard is all outgo and no income, and the period before there is an established market, the colonist needs something for which there is a home demand and ready sale, and some industry that will give him constant occupation. The dairy and poultry yard supply these conditions, and everything that contrib-

utes to efficiency or economy in these directions deserves especial attention from all journals interested in the development of our State.

With so little encouragement for manufactures, we look for the subdivision of the large holdings and intensive farming as the principal hope for increased population, trade and general prosperity. Now, alfalfa land that is fairly worth \$75 to \$100 per acre should keep one of these ten-cow dairies upon five acres with such help as pumpkins, beets, etc., raised between the rows of trees can give.

To fit up a ten-cow dairy on this plan would take three dozen pans \$9; cooler and butter box, \$5; churn, worker, mold, \$20. Good dairy cows without other feed than can be grown upon the ranch should produce 100 rolls of butter each year, which easily retails to steady customers at 50 cents per roll.

Besides this \$50 per cow, the careful farmer will realize a handsome sum from calves sold; also from hogs raised upon the skimmed milk and pasture. We almost feel inclined to apologize for our former criticisms upon the literature that advised a dependence for a family upon the two-cow and 20-hen income, in the conviction that more than an average living for a family can be made with 10 cows and 100 hens upon a ten-acre ranch while half of it is in growing orchard.

FRANK S. CHAPIN.

POULTRY YARD.

To Foster Poultry Interests.

TO THE EDITOR:—The following preamble and resolutions were unanimously adopted by the Los Angeles (California) County Poultry Association at its regular meeting, held April 8, 1893:

WHEREAS, It is estimated (approximately) that the value of the egg product of the United States for 1892 reached fully \$200,000,000, and the value of poultry about \$100,000,000; and

Whereas, the National Government of the United States, through its Department of Agriculture, expends vast sums of money annually in fostering and encouraging nearly every branch of industry connected with an enlightened agriculture and horticulture, the lines of investigation and scientific and practical research being divided into special divisions, viz.: The division of vegetable pathology, of entomology, of pomology, of forestry, of animal industry, etc., each under the charge of a competent chief and a corps of experts in their special lines; and

Whereas, The poultry interests of the United States, equalling in magnitude any branch of rural industry, and exceeding others in no way so represented; therefore be it

Resolved, By the Los Angeles County Poultry Association in regular convention assembled, that the secretary of the National Department of Agriculture at Washington is hereby earnestly petitioned by the poultry interests represented in this association to establish a subdivision in connection with the Bureau of Animal Industry, to be known as the division of poultry, said division to be in control of thoroughly scientific and practical poultry breeders, and to have for its objects the advancement of the poultry interests generally, to the end that the most economical and effective means for eradicating pests and disease may be ascertained, and the best results secured at the minimum of cost in the rearing, mating, breeding and managing of fowls.

Resolved, That the secretary of the Los Angeles County Poultry Association send copies of these resolutions to the Secretary of Agriculture at Washington, to the California representatives, to the secretaries of kindred and sister poultry associations, and to the poultry papers generally.

We hereby certify that the above is a true and correct copy of resolutions adopted by the Los Angeles County Poultry Association, April 8, 1893.

JOHN C. STEDMAN,
Secretary.

C. T. PAUL,
President.

Turpentine for Roup.

Experiments made show that the germs of roup are destroyed when brought in contact with spirits of turpentine. Turpentine, however, is a severe dose to give, even if effectual, and, if too much is given, it may do damage of itself. To properly prepare it, mix one part of spirits of turpentine, one part kerosene and three parts glycerine in a sewing-machine oil-can, and always shake well before using. With the point of the oil-can, force three drops of the mixture in each nostril and five or six drops down the throat of the fowl twice a day. Roup is a disease that is almost incurable, being contagious, and gradually exhausts the bird instead of causing instant death. If it appears in the entire flock, the labor of handling the sick birds is often more than the value of the flock, and, as roup cannot well be treated on the wholesale plan—that is, without handling the fowl—it is cheaper to clean them out, burn the carcasses, thoroughly disinfect and begin anew. The building should be very warm and dry.—Poultry Keeper.

Object-Lessons to Beginners.

Every beginner who contemplates keeping poultry should begin at the bottom, with a few hens, says the *Poultry Keeper*. He will then have an opportunity of studying their habits and of noticing those details so essential to success. In other words, as no beginner can expect to make a success from the start, it is cheaper for him to suffer a loss from a few hens and a small flock than to incur risk with more. Another object-lesson is the management of a small incubator.

Nothing will assist in teaching a beginner how to manage a flock or how to raise early chicks for the market so well as the careful and daily observation of an incubator, in which every process of hatching is revealed; and, by the handling and personal management of the brood in a brooder, all the methods of feeding will be resorted to, and, even if failure results, the information gained will not only be valuable, but a pleasure will be derived therefrom in the knowledge gained.

Money in Small Things.

J. J. Fulgham, who lives between Visalia and Goshen, was in the Visalia *Times* office the other day, and he had no trouble in convincing us that there is money in the chicken business in this county. He had the figures to bear him out in what he said. Mr. Fulgham has about 300

hens on his farm, and he says their feed costs him little or nothing. To clear \$90 a month from eggs alone is not bad, and yet that is what Mr. Fulgham is doing. He sends his eggs to San Francisco. For the last lot he netted 28 cents a dozen. There is no reason why any one cannot make money in the chicken business. It takes but a small capital to start with and the risk is very small. It is, in fact, a poor man's chance to get a start.

WORLD'S FAIR.

California at the Fair.

NUMBER 1.

TO THE EDITOR:—My first overland trip occupied just 13 days between Boston and San Francisco. That was 15 years ago, when many changes of cars were made and connections were so poorly arranged that we had to stay all day or all night at quite a number of places. How different it is now, when the distance between the Pacific and the Atlantic coasts is bridged in six days, without change of cars on some of the routes! No wonder that foreigners express unbounded admiration of the luxury and speed with which Americans travel over their great country.

Arriving June 21st, I went immediately to the Exposition grounds, and, like every one who "bails" from the Golden State, sought the California building first of all. It has been fully described in the *RURAL PRESS*, so I need not give the details of the exterior at the present time. It suffers, as do all the State buildings, from a lack of sufficient space around it to fully bring out its picturesqueness; still, it is more fortunate than most of them, in facing upon what we would term a plaza and standing at the end of a long, broad walk, from which it is effectively seen a half mile away, with its rounded turrets and bell-towers. Its old Mission features are in striking contrast to the elaborate architecture of numerous State buildings, and make it far more conspicuous. The form, and next the size, are commented upon by people generally; and when they enter and find this, the largest State building on the grounds with the exception of that erected by Illinois, is full to the doors with home products, giving but little space to reception rooms or parlors, they say "wonderful! wonderful!"

How shall I give you an idea of the interior arrangement in the space at my command? It is no easy task to give even a bare outline. Entering at the south end, where it faces the promenade leading from the center of the grounds, which is always full of people, we notice first the graceful decorations of Miss Mary Bates, of San Francisco. She has made use of pampas plumes, date and fan palm leaves, moss-draped branches of trees, pine cones and a beautiful shrub from Mill valley whose name I have not yet discovered, in a very pleasing manner. I do not see how so large a building could be more effectively decorated.

The first exhibit one sees is a bridge of natural woods 26 feet long and 13 feet high holding two tons of fruit in glass and dried fruit in cases. One end of the bridge rests upon the Occident and the other upon the Orient, in token of the fact that the fruits embrace those grown all over the world. Under the bridge is a mineral display, and tables at each side are covered with grain and fresh fruit. This is Kern county's display, and a handsomely fitted up reception-room under the gallery alongside completes a very creditable representation.

The other exhibits in this part of the building are by the Southern California Association, which consists of Los Angeles, San Bernardino, San Diego, Orange, Ventura and Santa Barbara counties. They have combined forces, and no locality displays are made, although the name and residence of each exhibitor are written upon the labels attached to every article.

Mr. Wiggins, the general manager, states that he has endeavored to create six distinctive features in the arrangement of the lower floor; namely, oil, fruit, beans, raisins, citrus fruits and grasses. The whole exhibition is as a State, to give visitors an idea of the magnitude of these productions.

The Southern California Association has spent no money on elaborate showcases, yet the display is sufficiently handsome. A Cleopatra's needle, 35 feet high, made of bottles of olive oil, mostly from Elwood Cooper's manufactory, has on its pedestal glass globes containing olive branches and fruit both green and ripe, bearing the cards of Santa Barbara and Pomona growers. A Palace of Plenty rises 30 feet long almost to the height of the gallery, and shows in tiers a beautiful lot of fruit preserved by what was called "the new French process" at the Colton fair. The date blossoms and green dates among these seem very curious to visitors.

Next comes Ventura county's work of art—for it amounts to that—the bean pagoda. Eighty-three varieties are used in the ornamentation of the structure, and the redwood frame encloses a good-sized room where seats are provided for visitors, and they are requested to register.

Dr. Archer of Santa Barbara exhibits honey in one hundred shapes. It is said that when he wants to make something choice, he goes to Ventura county and feeds his bees on Lima bean blossoms, which are unexcelled for making a clear, white honey. Camulos, famous for its almonds as well as for being the home of Ramona, shows 21 varieties of the soft-shelled nuts, and Ventura county has a large display of walnuts whose perfection people are invited to test, also of sun-dried fruit. San Diego county is on hand with a big pyramid of choice raisins in boxes and a display of silk produced, spun and woven by the ladies of San Diego county. Then comes the great orange tower, which of course belongs to Orange county, resting on a large table covered with oranges.

The walnut pagoda of the Los Nietos Association claims our attention next, then we join the crowd hovering around a revolving stand of Los Angeles county views. There are several of these stands, and they are freely used.

Tables of dried fruit in boxes, orange marmalade and "processed" fruit are passed, and then we come to a white

pavilion filled with fruit in jars, its glass columns showing different varieties of beans and grains, also silk cocoons, and its panels composed of dried fruit. This occupies one corner of the central court, in the middle of which stands San Diego's stately palm, 123 years old, surrounded by a fountain.

In a reception room on the ground floor the southern California papers are kept on file, and many photographs may be seen, also polished slabs of the native woods. On one side of the room is a large collection of preserved fruit and ostrich eggs; on the other side is a stand of jelly in glasses.

Across the main aisle, the mineral exhibit of the State occupies nearly all the space between Kern county's bridge and the central court. It is a very handsome collection of ores, arranged in cases around a Herculean bronze figure of a miner of the early days.

Fresno county has a large pagoda of redwood, thatched with grain, in which fruit and nuts in glass are shown, also several tables of fruit and seed grain, and a case of minerals. A room under the gallery is decorated with pampas plumes and sheaves of grain and filled with cases of dried fruit and numerous photographs.

Tehama county, under the gallery, invites you to pass under an archway curtained with tall wheat, shows fruit in glass and dried in boxes, and announces on placards that the county is 600 miles north of Los Angeles, fruit is grown without irrigation, the average temperature is 64°, and the average rainfall is 28 inches.

Continuing under the gallery, there is a succession of booths in which are exhibited walnuts from Los Nietos, almonds from the Suisun valley, jellies from San Diego, pickles of all kinds imaginable, catsup, etc., made by the Sonoma Preserving Co., Los Angeles county oranges, Riverside county oranges and lemons and San Bernardino county, same.

Starting again at the central court, we observe several crimson silk banners of the San Francisco Produce Exchange, bearing statistics calculated to impress readers with the magnitude of its business. A circular reception room is in its every detail a work of art. The redwood walls are beautifully carved; the doors especially are in elaborate designs. The panels of the room have portraits upon them, two full-length pictures representing Miss Sibyl Sanderson and Mlle. Emma Nevada. The furniture and draperies, even the ornamental covers of the books by California authors, carry out the esthetic design of the ladies who conceived the idea of the room. Close by this is a birds'-eye view of San Francisco in a circular basin, which is always surrounded by people.

Another corner of the court is occupied by the pampas palace constructed by Mrs. Strong of Whittier. It is a beautiful creation in white and yellow, with interior walls of light blue on which a frieze of pampas demonstrates what may be done with the feathery fronds when stripped from their stems. The inlaid octagonal floor was made by the students of Throop University, at Pasadena. The fourth corner is the beginning of Santa Clara county's great exhibit. No expense has been spared here. Massive redwood counters and structures for bearing an extensive collection of wines, fruit and vegetables in glass and crystallized minerals, nuts, etc., occupy a large floor space. The grapes in immense jars are superb. Very interesting to many people are the almonds preserved on their branches with the green coverings bursting open. A fine display of dried fruit has for its crowning feature the celebrated prune horse and rider, which, I assure the public, is entirely completed now. The ferns and wild flowers of the county are shown, and three booths under the gallery are filled with a seed exhibit.

Humboldt county has an elegant redwood booth of generous proportions filled with sections of trees, urns, polished slabs, minerals, a small lot of fruit and grain, photographs, and a genuine bear's den with a big cinnamon bear just coming out of it.

Butte county has a room under the gallery beautifully decorated with pampas and grain stalks. Large pictures of the Goddess of Plenty and of deer, made of Egyptian corn, buckwheat, wheat, beards, etc., attract much attention. The doors are inlaid with beans, corn, peanuts and grains in mosaic style. The outside of the room simulates the brickwork of a house in small fancy boxes of grain and silk cocoons. Windows and cornices complete the illusion, which is much admired. Butte's fruit display is under an archway that shows the same painstaking work.

Chicago, July 5, 1893.

CLARA S. BROWN.

San Diego's Silk Exhibit.

TO THE EDITOR:—California silk culture! Do you know what a showing it makes? San Diego county must receive the credit for putting her exhibit into a form that attracts every passer-by. It is hard to get into the booth to ask a question, for it is always full of people who are seeing what they never saw before, and consequently are in no hurry to move on. So many things beside the silk are displayed that the exhibit as a whole merits a separate description.

Outside the wall space is a glass case containing the first silk made in the county and a banner made of silk. Inside is a most graceful and decorative portiere made, not simply of silk, but of cocoons strung together. The idea is a pretty one, and attracts more attention than it could in any other form. The samples of silk, both of floss and fabric, show what can be done in this line.

While San Diego receives high praise from those who are acquainted with it geographically, the exhibit is a wonderful recommendation for the whole State to those who think California is "all one" and gather it into one little space as the woman did who asked, "Is California healthy?"

Such a display, arranged in this attractive manner, tells its own story, and will help to hasten the time when we shall have our own city of Lyons in southern California.

ADAH FAIRBANKS BATTELLE.

Chicago, July 6, 1893.

THE CALIFORNIA STATE FAIR

Of 1893 will be held at SACRAMENTO,
SEPTEMBER 4th to 16th :::::::::: TWO WEEKS.

\$20,000 IN CASH PREMIUMS \$20,000
FOR CALIFORNIA PRODUCTIONS.

FARMERS AND HORTICULTURISTS!
As well as MECHANICS AND ARTISANS!

Should make preparation to exhibit at THE ANNUAL FAIR as the opportunity is specially given to show CALIFORNIA'S CAPABILITIES.

INVITE INVESTMENT of capital by showing the products of your section.
INQUIRIES AS TO LOCALITIES are being constantly made. We reply by sending reports of exhibits, which speak for themselves.

OBJECT LESSONS are valuable, and when written upon and their description heralded, they become a standing advertisement.

SHOW WHAT YOUR COUNTY can produce, and capital will flow in the direction thereof.

LANDS HAVE BEEN IMPROVED by the hundreds of acres in tree and vine planting through capital attracted by exhibits made at the State Fair.

MECHANICAL PLANTS HAVE BEEN ENLARGED by means of extra capital attracted by exhibits made at the State Fairs.

THE STATE FAIR is the stimulating agent of progression.

THE STATE FAIR is the medium that brings the two electrical currents—labor and capital—together each year.

THE STATE FAIR aids all classes. It is the recreation ground of the farmer, the school of information for the breeder, the point of observation for the mechanic, and the period of investigation for capital.

FAILURE TO EXHIBIT is an acknowledgment of weakness.

KEEP YOUR PRODUCTIONS before the people, and the people will always keep your locality in view.

THE USUAL EXTRA ATTRACTIONS for entertainment of visitors at the State Fair of 1893 will be furnished in keeping with the occasion, that exhibitors may benefit thereby.

Information furnished upon application to the Secretary, at Sacramento. Send at once for premium lists.

JOHN BOGGS, President.
EDWIN F. SMITH, Secretary.

STEEL OR WOOD WINDMILLS.



Be Happy While You Live, for
**You Will Be A Long
Time Dead**

To Be Happy Buy a

**DANDY STEEL
MILL**

AND A

Dandy Steel Tower.

With graphite boxes the
Dandy Wind Mill Re-
quires No Oil for Years.

therefore

No More Climbing Towers
No More Tilting Towers

to break down
and injure you or your cattle.

Needs no attention and is
warranted to last longer than
other mills that are oiled, and

Will Be Sent to Good Par-
ties on 30 Days Test Trial

If not satisfactory freight will be
paid both ways. The Dandy

Steel Tower is a Four
Corner Tower, the corners

being made out of heavy angle
steel. The girts and braces

are very strong and substan-
tial, and of the very best steel

made. It is the most graceful,
strong and durable tower on

the market, and can be erected
in one-half the time of a

wooden tower. We will not
allow ourselves to be under

sold.



TRY OUR

GRAPHITE BEARINGS
ON DANDY MILLS.

PUMPS, PIPE,
Pipe Fittings,

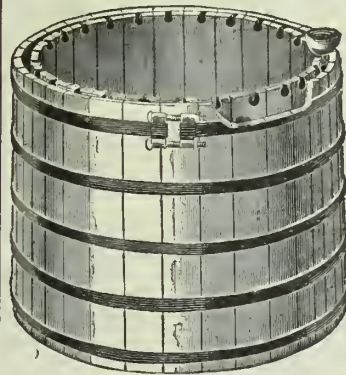
Tanks,
Brass
Goods
—AND—
Hose.



PACIFIC MANUFACTURING CO.

575 MISSION STREET, SAN FRANCISCO.

Patent Non-Shrinking Water Tanks.



WILL NOT LEAK OR DRY OUT.

THE BEST TANK NOW MANUFACTURED.

EVERY ONE GUARANTEED and cost no more than Common
Tanks.

IF YOUR DEALER DOES NOT KEEP THEM, buy no other
kind.

WRITE FOR ILLUSTRATED CATALOGUE AND PRICES.

W. E. HAMPTON,

SOLE OWNER OF PATENT AND MANUFACTURER.....27 BEALE ST, SAN FRANCISCO, CAL.

HAMILTON FRUIT GRADER.

(PATENTED MAY 13, 1890.)

FOR SEPARATING AND ASSORTING IN DIFFERENT
GRADES BOTH GREEN AND DRIED FRUITS.

It is Simple, Durable
and Efficient.

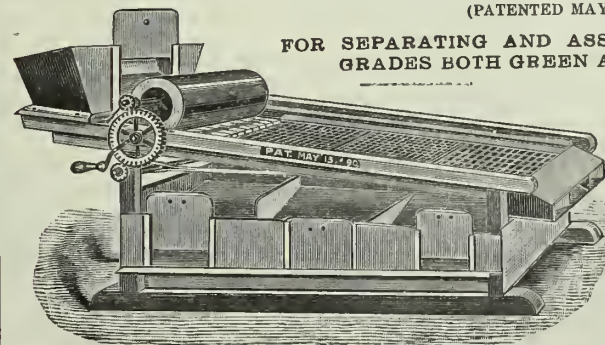
It has become the leading
Fruit Grader of California.

Col. Hersey has ordered three of
these Fruit Graders this season.
Send for catalogue and testimo-
nials.

—A VARIETY OF—

Fruit Cars, Transfer Cars, Turn-
tables and Dipping Baskets

ALWAYS ON HAND.



MANUFACTURED AND FOR SALE BY

W. C. HAMILTON,

SAN JOSE.....CALIFORNIA.

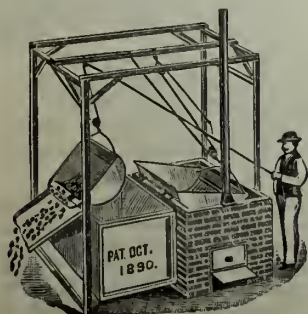
BETTER THAN EVER!

P & B Fruit Dryer

RAPID—SAFE—CHEAP.

WRITE FOR SAMPLES AND CIRCULARS.

PARAFFINE PAINT CO., 116 Battery Street, San Francisco, Cal.



The Anderson Prune Dipper

W. C. ANDERSON, Patentee and Sole Manufacturer.

THIS WELL-KNOWN DIPPER is in use in almost every plum-growing
section of the State and has given perfect satisfaction wherever tried.

WE HAVE MADE SEVERAL IMPROVEMENTS THIS SEASON in ad-
ditional heating capacity, facility for spreading the fruit, etc., which
makes the machine indispensable both for the factory and the farm.

We also keep a full line of FIELD CARS, TURNTABLES, TRANSFER
CARS, Etc.

For further information address the Manufacturer,

P. O. BOX 970, SAN JOSE, CAL.

THE HOME CIRCLE.

The Outcast's Dream.

Strange dreams of what I used to be
And what I dreamed I would be, swim
Before my vision, faint and dim
As misty distances we see
In pictured scenes of fairy lands;
And ever on, with empty hands,
And eyes that ever lie to me,
And smiles that no one understands,
I grope adown my destiny.

Some say I waver when I walk
Along the crowded thoroughfares,
And some leer in my eyes, and talk
Of dullness, when I see in theirs—
Like fishes' eyes, alive or dead—
But surfaces of vacancy—
Blank disks that never seem to see,
But glint and glow and glare instead.

The ragged shawl I wear is wet
With driving, dripping rains, and yet
It seems a royal raiment, where,
Through twisted torrents of my hair,
I see rare gems that gleam and shine
Like jewels in a stream of wine;
The gaping shoes that clothe my feet
Are golden sandals, and the shrine
Where courtiers grovel and repeat
Vain prayers, and where in joy theat,
A fair prince doffs his plumed hat,
And kneels, and names me all things sweet.

Sometimes the sun shines, and the lull
Of winter noon is like a tune
The stars might twinkle to the moon
If night were white and beautiful—
For when the clangor of the town,
And strife of traffic softens down,
The wakeful hunger that I nurse,
In listening, forgets to curse,
Until—ah, joy! with drooping head
I drowse, and dream that I was dead
And buried safe beyond their eyes
Who either pity or despise.

—James Whitcomb Riley.

Warnings for Woody Walks



OW is the season when people begin to wander in the woods and little children to romp in the fields. Everybody, whether a naturalist or not, likes to see the beginning of spring, with the green blades pushing up through the ground, and the buds bursting from the boughs. Little children, particularly, love to gather such early green things as they see, and bring them home to mamma.

This is all very well if they confine themselves to pussy-willows and anemones, but the little things are too ignorant to know the difference between a poisonous and a non-poisonous plant. It would appear very unnatural to them if they were told that some of these freshly budding things would hurt them. In their infant minds all fruits and flowers were meant to pick. Nevertheless there are some fruits and some flowers which they cannot handle with impunity.

Rough old New England has her poisonous shrubs as well as the tropics, although they are not so many nor so violent. Very few of them can produce death unless eaten in very large quantities, and, fortunately, such poisonous fruit as New England has is not appetizing. Most of the so-called poisonous plants merely cause a local irritation on the surface of the skin. Some of the stronger poison many people violently, and others not at all. This peculiar circumstance is connected with those that act only on the skin.

The species of plants found most abundantly in New England, which have a so-called poisonous action upon the skin of the persons touching or approaching them, are the poison ivy and the poison sumach or dogwood. The first is familiar to everybody, and is found running over stone walls and along waysides or climbing trees to a considerable height. Many people are poisoned by it in taking it for the common woodbine or Virginia creeper, from the manner of its growth, locality and the brightness of its tints in the autumn.

The poisonous sumach or dogwood grows in swamps, where its fine, smooth leaves give it an air of a tropical shrub or tree. Both plants exert about the same peculiar action upon the human skin, though their effects differ with different individuals. The poison sumach is considered more virulent, however, and it is supposed to leave more after effects. The parts of a person's body which come into contact with either of these plants generally swell up and vesicles form under the skin generally, yet many people are able to handle the ivy with impunity who are easily poisoned by contact with the other. It is evident that cases of poisoning would be much more frequent and severe were the poison sumach as common occurrence about dwellings as the poison ivy. As it is, cases occur very frequently.

As a rule, the poisoning takes place in the

following ways: By plucking leaves while walking along fences and roadsides, in ignorance of their nature; by brushing against the plants while strolling through the woods; in processes of husbandry, clearing away vines from walls, etc., digging up roots, mowing, chopping wood and the like; by going in swimming and passing through plants while naked, and by gathering the most brilliant autumn foliage that occurs in New England's flora.

Great quantities of poison ivy are gathered for medical purposes in all parts of the United States. A dealer in North Carolina offers in his stock of native drugs over 300 pounds of poison-oak leaves, and a wholesale manufacturer of medical preparations in Boston says that the workmen in his laboratory are often poisoned by the fumes.

With regard to the influence of season upon the virulence of the poison, there is an impression that it is most active in the flowering season, and the emanations at such times may be especially so, while the skin on hot days, and when perspiring, may be most ready to absorb it. This may be correct; it is, however, sufficiently powerful at all seasons. Many people are poisoned in the autumn while collecting leaves, and every winter boys are poisoned by cutting straight branches of the dogwood for hockey sticks. Thus, not only the leaves, but the wood and the bark, contain the virulent principle at all seasons, and the fruit also possesses poisonous properties when swallowed.

A great many remedies have been recommended for the treatment of persons poisoned by these plants. Among the domestic ones, vinegar and solutions of carbonate of soda are widely and highly esteemed. At any rate, those parts known or suspected of having come into contact with the plant should be thoroughly washed or bathed for a considerable time with water.

Of the fungi which grow in the New England woods those which have the following traits are poisonous: A warty cap, heavy fungi with an unpleasant odor, moist on the surface, those which grow in tufts or clusters from the trunks or stumps of trees, an astringent, styptic taste, blue on being cut. The treatment of poisoning with the fungi does not call for any special observations. Emetics are of primary importance. No antidote is known.

The mountain ash has lately been added to the list of plants which are poisonous. Many parts of these trees, such as the flowers and the bark of the trunk and branches, contain more or less hydrocyanic acid. The root yields a distilled water which holds fully as much acid as that procured from an equal weight of cherry-laurel leaves.

Of the deadly night shade so common about the woods, the root is the most active part. The juice of the leaves and the berry are also poisonous. The plant contains a peculiar alkaloid, atropia, in which all the active properties reside. The berries ripen the latter part of summer and are of a beautiful black color. Their beauty has often tempted children, and even others, to eat them.

The poke produces great prostration and convulsions when eaten raw, as is often done by mistaking it for horseradish. The juice of this plant is acrid, and is a violent emetic and purgative.

There are other plants, such as the nettle, the jack-in-the-pulpit and the skunk cabbage, which are often called poisonous, but there is very little truth in the assertion. Some people with extraordinary sensitive skin have felt some irritation when their hands have come in contact with these plants. No severe case has ever come from handling them freely.—New England Exchange.

Taking Cold.

A person in good health with fair play easily resists cold. But when the health flags a little, and liberties are taken with the stomach or the nervous system, chill is easily taken, and according to the weak spot of the individual assumes the form of a cold or pneumonia, or it may be jaundice. Of all cases of "cold" probably fatigue is one of the most efficient. A jaded man coming home at night from a long day's work, a growing youth losing two hours' sleep over evening parties two or three times a week, or a young lady "doing the season," and overfed children with a short allowance of sleep, are common instances of the victims of the cold. Luxury is favorable to chills; taking; very hot rooms, soft chairs, feather beds, create a sensitiveness that leads to catarrh. It is not, after all, the cold that is so much to be feared as the antecedent condition that gives the attack a chance to do harm. Some of the worst colds happen to those who do not leave their house or even their bed, and those who are most invulner-

able are often those who are exposed to change of temperature, and who by good sleep, cold bathing, and regular habits preserve the tone of their nervous system and circulation.

A Good Housekeeper Ought to Know

That the easiest way to keep cheese moist in hot weather is to wrap it in a cloth saturated with vinegar.

That cucumber peelings will expel cockroaches if strewn around in their haunts.

That iced tea is much improved in flavor by the addition of a few slices of lemon.

That you can always keep bread, cake and apple tins free from an ill flavor by always washing them in hot water after using.

That if ice is scarce when freezing ice-cream you may utilize newspapers. Pack the freezer three-quarters full of ice and salt, then finish with newspapers.

That a few drops of ammonia in a cupful of warm water will remove spots and dirt from paintings and chromos.

That vinegar and salt will clean the black crust off spiders and pots; then scour them afterward with sand soap.

That a small scrubbing brush is an excellent thing to keep around the sink for cleaning beets or potatoes.

That mosquitoes may be kept away by sponging the body with a diluted extract of pennyroyal, which also allays the pain of the bites.

The Dutiful Son.

When Phil Sheridan had assumed command of the army in the valley, and the movements betokened that hard fighting was in prospect—in fact, when it had become certain that the new commander meant to attack and grapple with the foe—a certain young staff officer, of General Emory's corps, applied for leave of absence, giving as a reason that his father, whom he loved dearly, was lying at the point of death. When the petition reached Emory's hands, he summoned the officer to his presence.

"How is this, sir?" demanded the old warhorse, in his gruff, crisp way.

The applicant re-stated his case. His father was dying, and his mother had sent for him to come home. His duty as a son led him to honor and revere his parents.

"Aye," replied Emory, with a grim smile, "you honor your father and your mother that your days may be long in the land!"

The youth's request was not granted, and he now has the proud satisfaction of telling that he fought at Opequan and at Cedar creek.

Wives of European Statesmen.

It is always gratifying to find that there are great men who are ready and anxious to acknowledge the value of the service rendered to them by their consorts. England's Prime Minister is always extolling Mrs. Gladstone's wifely devotion, and declaring his indebtedness to her "society, help and comfort" at all periods of his public career. Another great statesman, Prince Bismarck, has recently testified to the beneficent influence that his wife has at all times exercised over him. "Had it not been for my wife," he told those who went to congratulate him on his birthday, "I should not have lived to my present age." Lord Beaconsfield, too, was wont to say that he owed everything to his wife's sympathy and help and counsel. It is a pertinent fact that neither Princess Bismarck, Lady Beaconsfield nor Mrs. Gladstone ever took a prominent part in the political fray, but have rendered valuable services to their respective countries by the mere faithful discharge of wifely duties.—Exchange.

Saved by Sunshine.

I think the superb health of my family is to a great extent due to the habit we have of almost living in sunshine. Every bright day all of the shutters are open, and the entire house gets the benefit of sunlight. It drives away dampness, mold, microbes and blue-devils, and puts us all in good humor and health. I cannot imagine good sanitary conditions and darkness. Even my cellar is as light as I can possibly make it, and whatever fruit and delicacies need to be shut away from light I put in close cupboards or covered boxes. I have sheets of canvas that can be thrown over them before they are put away, and always take pains to so arrange my stores that nothing can be injured by an abundance of light. People who live in badly lighted apartments have little color and less health. I for one do not intend to spend my life in an atmosphere of gloom.—New York Ledger.

True Marriage.

A happy wedlock is a long falling in love. I know young persons think love belongs

only to the long hair and plump, round, crimson cheek. So it does for its beginning, just as Mount Washington begins at Boston bay. But the golden marriage is a part of love which the bridal day knows nothing of. Youth is the tassel and silken flower of love; age is the full corn, ripe and solid in the ear. Beautiful is the morning of love with its prophetic crimson, violet, saffron, purple and gold, with its hopes of days that are to come. Beautiful also is the evening of love, with its glad remembrance and its rainbow side turned toward heaven as well as the earth.—Theodore Parker.

Dollar of 1804.

One of the rarest coins of the United States mintage was recently sold in Boston for \$1200. It was a silver dollar of 1804. There are many stories about this issue of United States coin. It is said that there are not more than eight known to be in existence. According to the record of the United States mint, 19,570 silver dollars were coined in 1804. One of the stories about the use of this mintage is that they were sent to Africa to pay off American sailors who were engaged in a war on the Mediterranean with Tripoli at that time. It is said that the natives took a very great fancy to these coins and that sailors parted with them for souvenirs. It was stated that later the chiefs of tribes valued these dollars so highly as ornaments and tokens that they took great trouble to get possession of them and that, partly through robbery and trickery, they succeeded in getting possession of all the dollars issued that year. The dollar of 1804 has a flying eagle with 13 stars upon the reverse, while the face bears the date and the head of the goddess of liberty with floating hair.

Lamar's Mistake.

The late Chief Justice Lamar was probably the most absent-minded man that ever occupied a prominent place in public life in this country. The Boston Herald tells this amusing story of his forgetfulness: As long ago as the time when he was a Senator he got on a bobtailed car in Washington, took a quarter from his pocket, and, with thoughts intent on far-away things, dropped it into the box. "Why, Senator," exclaimed a fellow-passenger who knew Mr. Lamar and noticed his mistake, "don't you think it a little extravagant to pay 25 cents for a ride when the fare is only 5 cents?" "Why, that's a fact, that's a fact," responded the Senator, waking up from his day-dream. Then he drew out a handful of change, carefully picked out a nickel, dropped it into the box and sat down, satisfied that he had rectified the mistake and had not paid 30 cents for his ride.

Ram's Horn Wisdom.

When we get to heaven we will all find that we had something to do in building it. One of the saddest sights upon which angels have to look is the life of a lonely child.

Whether we get to heaven or not is to be decided by what we love, not by what we know.

The world is full of people who want to do good, but they are in no hurry to commence.

The heart is the largest thing in the world, because it takes more than the world to fill it.

If you want to have power to lead others, learn to control the man who wears your own hat.

The woman who paints her cheeks and the man who dyes his whiskers never fool but one person.

A Hint.

The following poem won for its author, the editor of the Rocky Mountain Celt, the prize of \$1000 offered for the best appeal poem to newspaper readers to pay up their subscriptions: "Lives of poor men oft remind us honest men won't stand no chance; the more we work, there grow behind us bigger patches on our pants. On our pants, once new and glossy, now are stripes of different hue, all because subscribers linger and don't pay us what is due. Then let us be up and doing; send in your mite, however small, or when the snow of winter strikes us, we shall have no pants at all."

Lives of such men still remind us
We might make this life sublime
By writing up such silly doggerel
For a thousand dollars a time.

Mending Table Linen.

A housewife whose table linen always does her good service mends it with flax embroidery cotton of a number to correspond with the quality of the cloth. Under the ragged edges of the tear she bastes a piece of stiff paper, and makes a network of

fine stitches back and forth over its edges, carrying the stitches about an inch beyond the edges of the cut. Thin places and breaks in linen may be run with the flax or embroidery floss, and towels should be mended in the same way.—Daughters of America.

A Scheme for Fairs.

Among the new devices for making money at church fairs and other charitable entertainments is one which its originators term "The Living Library." A certain number of books are chosen beforehand, and each one is represented by some young woman who is dressed appropriately to indicate either the title to the book or some leading character therein. Each impersonator must also be thoroughly acquainted with the volume she represents, and her actions and behavior must be in accord with the character chosen. A catalogue is prepared, and furnished on application, and whenever a book is called for, a curtain is drawn aside, and the living copy stands revealed. The regulations usually governing "The Living Library" are that, first, all books must be secured from the librarian; second, the fee for each book shall be ten cents for ten minutes' use, payable in advance; third, books cannot be called for twice in succession; fourth, persons having called for and obtained the books must relinquish them upon notice from the librarian that the time paid for has reached its limit, or, failing to do so, shall pay at the rate of two cents a minute for overtime; and finally, that no book can be retained for a longer period than twenty minutes. The rules do not provide for it, but it is understood, of course, that during the busy hours of the fair no books shall be taken off on a promenade through the entertainment-room, and the books themselves are forbidden by the unwritten laws to drink lemonade and eat ice-cream between the hours of eight and ten at night.—Harper's Young People.

French--English.

The early education of many competent, intelligent housewives and good cooks has been neglected in the sterner needs of life, and so many French names are used in the present day in recipes or on menu cards, we append a few of the most used with their definitions:

Bouillon.	Beef tea.
Boeuf.	Beef.
Bifteck.	Beefsteak.
Bisque.	Broth.
Braised.	Stewed.
Consomme.	Gravy soup.
Crouton.	Crust end; bit of toast.
Cafe au lait.	Coffee with milk.
Entrees.	Course of dishes.
Fromage.	Cheese.
Fricassee.	Fried hash; a medley.
Glace.	Iced; frozen.
Glee.	Jelly.
Gateaux.	Cakes.
Grill.	Broiled; toasted.
Jamhou.	Ham.
Legumes.	Vegetables.
Mouton.	Mutton.
Mayonnaise.	A dressing of eggs, oil, etc.
Oeuf.	Egg.
Puree.	Pea soup.
Pate de Foie-Gras.	A pie made of goose livers.
Santee.	Fried lightly.
Timbale.	A raised pie.
Veau.	Veal. [in it.]
Rissole.	A fritter with minced meat
Augratin.	With bread dressing.

Don't See Too Much.

Very miserable people are those who go through the world seeing too much. They plume themselves upon their ability, and proclaim everywhere the wonderful secrets their sharp-sightedness has discovered. They find out small delinquencies and trifling offenses of friends, neighbors and servants. We are not at all obliged to them for what they reveal. On the contrary, we are continually trembling lest our own pet sin be brought to light, or our friend's dear little secret weakness exposed.

It is not hard to gain much peace of mind by studying the art of judiciously shutting our eyes. Let us refuse to see too much of other people's errors and mistakes. Nay, more, let us refuse to see anything except what we wish to see. The way is clear, the circumstances are fortunate, people are well-meaning and industrious, happiness abounds, and we ourselves are on the road to fame and fortune.

A fool's paradise, you say? Perhaps. But I doubt if a fool's paradise is not better than the heaven of the people who would carry thither microscopes that they might discover its possible imperfections.—Harper's Bazar.

Strictly Business.

It was pouring hard, and a certain minister not long since filling a Lewiston pulpit settled himself for an afternoon of sermonizing. Suddenly there came a sharp ring at the bell. On opening the door a gentleman

and lady, both in ordinary apparel and much the worse for the storm, stepped into the hall.

"Say, parson, we want to be spliced, don't we, Mary?"

Mary nodded coolly, as if the splicing process were a matter of supreme indifference to her.

"You see, parson," continued the prospective bridegroom, "we didn't have to work in the mill to-day, and we wanted to get in the time, and so I told Mary we might as well be spliced now as any time. Mary said her clothes wasn't fit, but I told her they'd do for a rainy day."

He had the license, and so, choking back her query if he didn't know it was the custom for the lady to set the wedding day, the parson's wife acted as witness and the two were spliced.—Lewiston Journal.

The Best Ten Books.

A vote instituted by the *Critic*, on the ten books which its readers regarded as "the greatest yet produced in America, or by Americans," resulted as follows: 512 votes, Emerson's essays; 493, Hawthorne's "Scarlet Letter"; 444, Longfellow's poems; 434, Mrs. Stowe's "Uncle Tom's Cabin"; 388, Dr. Holmes' "Autocrat"; 307, Irving's "Sketch Book"; 269, Lowell's poems; 256, Whittier's poems; 250, Wallace's "Ben Hur"; 246, Motley's "Rise of the Dutch Republic." In considering this list it must be borne in mind that the *Critic* is a literary periodical of the highest grade, not a popular weekly, and its readers are presumably the most highly educated class.

How to Stay Well.

To-day the physician is asked not only how the sick may be healed, but how the well may stay well. From the less serious maladies immunity is largely a question of taking care of one's general health and vigor. To maintain a healthful condition, wholesome food, abundant exercise, cleanliness, temperance in all things and the avoidance of trouble are indispensable. Every one will assent to this, while not one in a hundred will remember it five minutes. We remember what we like; the rest we refer to our neighbors. What a world we make of it!—Popular Science Monthly.

Flannels.

Flannels should never be wrung nor ironed, says a writer in the New York *Ledger*. They should be first dipped in quite hot suds, then rinsed in water of about the same temperature, in which a little soap has been put. To get rid of the first suds, they should be gently pressed, and, after rinsing, be pinned out on lines without any wringing or pressing whatever. Press any silk or muslin facings, bands, etc., but fold and smooth the garments and put a heavy weight upon them. They will be much more comfortable when thus treated, and will last as long again.

Wanted a Book on Courtin'.

The requests made to editors are curious at times. One of the frankest ever made public was addressed to *The Scotsman* recently, the envelope bearing a request that the letter should be handed to any bookseller in Edinburgh. The letter ran: "The kind of book that I want is a Courtin' book—a book that will tell me how to talk to the lass that I love, a book that will tell me the words to say to her and the words to ask her when I be courtin' her is the sort of a book that I want. No matter how few or how little the words may be."

A Speaking Dog.

A story comes from Irkutsk, the capital of Eastern Siberia, of a dog seven months old that has suddenly developed the faculty of making sounds so like a human voice that a person in the next room could not tell the difference. The dog seems to have no comprehension of the meaning of the words he utters, but he readily repeats anything that is said to him in a shrill, boyish-sounding voice. Some days he seems to lose the faculty or to be disinclined to exercise it, but on others delights to say anything he is told.

It Is Unlucky

To be struck by lightning on Monday.
To sit on a circular saw in motion on Tuesday.
To fall downstairs with the coal-scuttle on Wednesday.
To get wet when you fall overboard while boating on Thursday.
To see a tax-collector over your right shoulder on Friday.
To marry on Saturday a girl who practices with ten-pound dumb-bells.
To be one of sixteen at table on Sunday, when there is only food for six.

YOUNG FOLKS' COLUMN.

The Naughty Chicken.

An old mother hen and her chickens nine
Were resting under a blackberry vine,
When an old gray hawk went sailing by
Far overhead in the bright blue sky.

"Hush! keep very quiet babies mine,
And make no noise or any sign,
But safe in this shelter with me await,
And don't venture under the garden gate."

But the old gray hawk had espied them there.
"I'll have one for my lunch, I do declare—
"I'll wait 'round here, where I can see,"
And he perched far up in a chestnut tree.

The mother hen dozed, and, sure as fate,
She dreamed of her babies she had only eight.
She awoke with a start and looked around,
And it was too true, for but eight were found.

The ninth little chick, so silly and wild,
Had acted just like a foolish child,
And when his old mother didn't see,
Slipped under the gate and said, "Ah me."

"Who wants to be kept so strict and fine,
And ordered about just all the time
As if this place I didn't know?"
So he strutted around and tried to crow.

Now the old gray hawk in the chestnut tree
Quietly laughed in his merry glee,
Then pounced on the chicken so silly and weak
And carried him off in his cruel beak.

Well, idle Jack Turner was out with his gun,
Looking for bird's nests, mischief and fun,
And he hanged at the hawk, who, dropping his prey,
Sped over the hills to his home far away.

Down in the meadow, Farmer White
Heard a faint little peeping that very night.
"What on earth is that? I should like to know."
"Peep, peep," says the chicken soft and low.

He searched and he found the poor little thing.
"Why, I'll take you right home to your mother's wing;
You're one of Bet's chickens, as sure's you're horn,
And Jack Turner shot at a hawk this morn."

Old mother hen and her chickens nine
Are all together at evening time.
This silly chicken and all the rest
Have learned that mother knows what is best.

—Esther Rodgers.

My Baby Cow.

[Written for the RURAL PRESS by Z. E. D.]

YELLOW GRANGERS: As you, separately and collectively, have been talking of your favorite cow, and dwelling on her marks be—"fore and aft"—er, please allow me to pick up my stool and, with one leg of said tipsy article, point out the beauties of my cow.

A year and a half ago I was taken with a speculative mania that staid like Poe's raven, until I decided that the object of that speculation should be a calf. One day I found a creature to my liking, a small affair about two weeks old. That calf appealed to my sympathies and its owner to my pocket-book, so, finding that its pedigree could be traced to somewhere near the early settlement on Mt. Ararat (what was "Jersey" in the original?), I paid \$5 and brought home my calf.

This momentous bargain was made in spite of solemn hints about size, color and straightness of back, and other discouraging remarks from most of the family, such as "she'll starve if you have to teach her to drink;" "you have no pasture for it," etc. Of course, I had thought of these things, but I wanted that calf.

Do any of you remember the first time you helped to lift a calf into a wagon? Do you remember the pitiful eyes, the vicious legs and the back that will not stay down? Even now I look back tearfully on the undertaking. That calf!

I read in the RURAL PRESS that a good cow must be a hearty eater, so I spent an uncomfortable share of my days with my fingers in her mouth, and my nights in vivid dreams of that animal, for there came a time when skimmed milk, even new milk, was not good enough for her ladyship, when

one of a pair of boots or portions of the harness were sampled; when the faucet which she turned when thirsty was left open; when my father lectured at length and my miseries grew longer. She delighted in the corn field, the beet patch, the carrot bed. Nothing came amiss, not even a wee "bossy" when she was 19 months of age. Which was most pleased, the little mother or I, would be hard to tell.

Now, a kind neighbor offers \$30 for my baby cow, and even my father would buy "that promising calf." Now, all look with favor on this once despised little animal. I've cared for her through all the ills of teething, weaning, poverty and sorrow (she was saved from being a grandmother by the death of her daughter at a very tender age), and now they tempt me with gold, forgetting the command "Thou shalt not covet," spoken so long ago.

Have you all finished your milking? Boys, turn the calves into the pen—how they do like to run! What is the matter with my baby cow now? That is what I want to know. Can any of you gentlemen of the RURAL PRESS barnyard tell me why she has grubs in her back?

DOMESTIC ECONOMY.

CURRENT SHRUB.—Mix a pound of sugar with every pint of currant juice. When the sugar is dissolved, boil it a few minutes and skim it. When almost cold add a gill of brandy to every quart of syrup. Bottle it, cork it well and keep it in a cool place.

PICCALILLI.—One peck of green tomatoes and one quart of onions, all chopped fine; add two cupfuls of salt and let them stand over night; drain well in the morning and add one head of cauliflower and one quart of chopped peppers; stir in two ounces each of cloves, allspice, cinnamon and mace, four ounces of mustard seed; cover with good vinegar, heat quite hot, then put in your jars and cover when cold.

STRAWBERRY ICE CREAM.—Take one quart strawberries, mash them, and then sweeten so that they will not curdle the cream. Take three pints of cream, and if rich one-half pint of milk. Put strawberries and cream together and sweeten all sweeter than if to be eaten before freezing, as the freezing takes out the sweetness. Other flavors may be made with just the cream and flavoring, including peach, pineapple and vanilla.

CHOCOLATE CREAM.—Soak a box of gelatine in half a pint of cold water for two hours. Put one quart of milk in the double boiler, and place on the fire. Shave two ounces of chocolate and put it in a small pan with four tablespoonfuls of sugar and two of boiling water. Stir over a hot fire until smooth and glossy, and then stir into the hot milk. Beat the yolks of five eggs with half a cupful of sugar; add to the gelatine and stir the mixture into the hot milk. Cook three minutes longer, stirring all the while. On taking from the fire add two teaspoonfuls of vanilla and half a salt-spoon of salt. Strain and pour into molds that have been rinsed in cold water; set away to harden and serve with sugar and cream.

ORANGE CUSTARD.—Scald one pint of milk. Beat the yolks of three eggs light with one fourth of a cup of granulated sugar. Slowly pour the milk on the eggs, beating all the while, and when well mixed put back into the farina boiler with chippings of the rind of the orange. Cook for two minutes, or until smooth and thick, stirring constantly. Add the juice of two oranges, strain and put away to cool. If you desire baked custard, use the same recipe, strain the custard into cups, stand in a pan of hot water and bake in a moderate oven. The great secret of making custards is slow cooking, and remember in baked custards it is much easier to overcook than to have them underdone. Never stir the eggs into the milk, but always pour the milk on the eggs, and when cooking in the farina boiler never leave it for an instant.

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder
ABSOLUTELY PURE

HAY PRESSES.

Eli Challenge Full Circle.
Champion Full Circle.
Junior Monarch.
Petaluma.
Miller Lightning.
Ingersoll's.

ECONOMY HOP PRESSES.

Write for prices and get full particulars.

WE ARE HEADQUARTERS

On Hay Presses and Haying Tools.

BALE YOUR HAY WITH T. H. & CO.
BALE TIES.

TRUMAN, HOOKER & CO.,
San Francisco and Fresno.

HAY PRESSES.

The Monarch, Junior Monarch, and other kinds of Presses, made by the Celebrated Hay Press Manufacturer, Jacob Price, for sale by

L. C. MOREHOUSE,
San Leandro, Cal.



CHOPPERS ATTENTION!

ASK FOR THIS AXE.
USE NO OTHER.

Wood-choppers, try the Kelly Perfect Axe. It will cut more wood than any other axe.

The scoop in the blade keeps it from sticking in the wood, and makes it cut deeper than any other axe. Ask your dealer for it. Send us his name if he don't keep it. It is the Anti-Trust Axe.

Kelly Axe Mfg. Co.
LOUISVILLE, KY.



REGULATE THE
STOMACH, LIVER AND BOWELS,
AND
PURIFY THE BLOOD.
A RELIABLE REMEDY FOR

Indigestion, Bilio-nousness, Headache, Constipation, Dyspepsia, Chronic Liver Trouble, Bilelessness, Bad Complexion, Dysentery, Offensive Breath, and all disorders of the Stomach, Liver and Bowels.

Ripans Tablets contain nothing injurious to the most delicate constitution. Pleasant to take, safe, effective. Give immediate relief.

Sold by druggists. A trial bottle sent by mail on receipt of 15 cents. Address

THE RIPANS CHEMICAL CO.,

10 SPRUCE STREET, NEW YORK CITY.

TREE WASH.

"Greenbank" Powdered Caustic Soda and Insecticide.

T. W. JACKSON & CO.,

Sole Agents,

No. 5 Market Street, San Francisco, Cal.

The American Bee Journal,

(Established 1861.)

IS Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample.

\$1.00 BEE-BOOK FREE

GEO. W. YORK & CO. 58 Fifth Ave., Chicago, Ill.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards. Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.

CALIFORNIA If you want to know about California and the Pacific States, send for the PACIFIC RURAL PRESS, the best illustrated and leading Farming and Horticultural Weekly of the Far West. Trial, 50c for 3 months. Two sample copies, 10 cents. Established 1870. DEWEY PUBLISHING CO., 220 Market St., San Francisco.

STEVEN'S FRUIT CASE!

A notable invention of the Columbian year, for transporting California's fresh fruit to market. Look into it! It is worthy of trial! Its advantages truly stated are: Fruit can be picked later and ripen; requires no wrappers; no decay from pressure, bruising or rubbing; the ventilation is absolute and positive; it grades and counts the fruit in the carrier; fruit all open to inspection; no rehandling or repacking at destination; no skilled labor for packing. Gives the grower all the advantage arising by arrival of his fruits in markets ripe, sound, insoucious and attractive, instead of half ripe, bruised or decaying. It isolates each piece of fruit by double, elastic walls, with air spaces between, over and around it. It is not an untried quantity. Messrs. Brown & Wells, of California Market, San Francisco, say: "We have made shipments of green fruit in it to Honolulu, Panama, Boston, New York, Philadelphia, Australia and Arizona, and have received report to the effect that the fruit arrived in perfect condition. We believe it is surely destined to become in the near future the universal package for short or long distance shipments." Nothing to equal it for fine apricots, peaches, plums and pears. Will carry fresh figs successfully. Carriers now ready for delivery for apricots. Send in early orders to insure supply.

PRICE (for ordinary standard package) \$15.00 per hundred, including outside and inside cases. Call on us or send for circulars.

STEVENS FRUIT CASE CO., 307 Front Street, San Francisco,
Agents for the Pacific Coast.

ARE YOU A

Hay Baler? If so, do you use our Patent

Steel Wire **CROSS HEAD** Bale Ties?

IF NOT, WHY NOT?



THE WASHBURN & MOEN MFG. CO.

San Francisco Office and Warehouse

8 and 10 Pine Street.

ONLY 25 YEARS OLD
AND A GIANT!

THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.

A. T. DEWEY.

W. E. EWER.

G. H. STRONG.

DEWEY & CO.'S

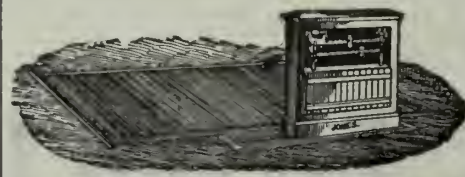
Scientific Press



Patent Agency.

ESTABLISHED 1863.

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class Agency. We have able and trustworthy Associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 220 Market St. S. F.



THE JONES 5-TON WAGON SCALE.
Price \$66, Delivered Anywhere in the United States.

These Scales have STEEL BEARINGS, Not Wood-BEAR THIS IN MIND.
From 25 to 50 per cent cheaper than any other Scales of like quality. All sizes and kinds of Scales always in stock.

Truman, Hooker & Co., San Francisco.

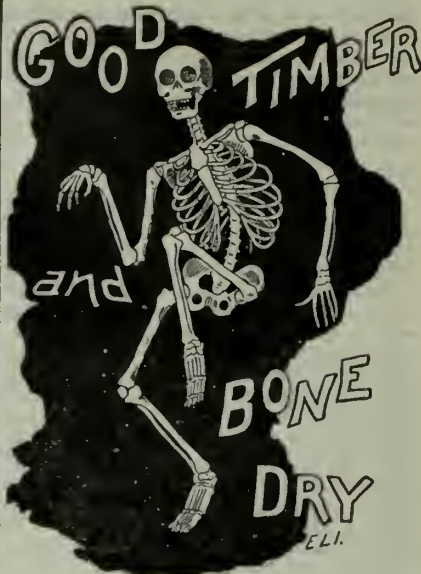
Send for Price Lists
OF GUNS
And all Articles used
by Hunters and
Anglers.



GUNS SENT ON
TRIAL.

OLD GUNS TAKEN
IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO



RUSHFORD FARM WAGONS

LIGHTEST DRAFT WAGONS
IN THE WORLD.

EVERY ONE GUARANTEED.

TRUMAN, HOOKER & CO.,

SAN FRANCISCO AND FRESNO.

Deep Well Pumps.



The Valves and working parts of the Fulton Pump can be removed, repaired and replaced without taking the pump out of the well.

Pumps fitted up for all depths of wells, ready to put in.

Send for Circular and Price List to

A. T. AMES,
GALT, CAL.

MANUFACTURER OF PUMPS AND
WINDMILLS.

STOCK SCALES

4 TON \$45.

U.S. STANDARD. FULLY WARRANTED.

Delivered at your R. R. Station and ample time for building and testing allowed before acceptance.

OSGOOD & THOMPSON, Binghamton, N. Y.

PORTABLE PLATFORM SCALES,
TRUCKS, ETC.

Twenty-five per cent cheaper than any other on the market. Send for Catalogue.

C. H. LINDEMANN, Agent,

126 KEARNY STREET, SAN FRANCISCO.

ALAMEDA STEEL WIND MILL.



10, 12 and 14 ft.
Cheaper than any First-Class Mill in the market.

Every One Guaranteed.

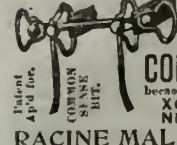
No hearings, no springs, no wheels to get out of order. The simplest mill in the world.

10-foot..... Write
12-foot..... for
14-foot..... Prices

Agents Wanted

— ADDRESS —

TRUMAN, HOOKER & CO., San Francisco or Fresno.



THIS BIT combines the BEST QUALITIES of other patent bits and will easily control the most vicious horse at all times. It is the

COMMON SENSE BIT

because it can also be used as a mild bit.

XC Sample mailed \$1.00.

Nickel - - - 2.00.

RACINE MALLEABLE IRON CO.,

J. J. DAVIES, Mgr. RACINE, WIS.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

Livermore Herald: A great deal of hay is being shipped from Livermore at present. Reports continue to come in from all quarters in regard to the fine quality of the hay, and the farmers are hopeful of securing good prices this year for their product.

Haywards Journal: The shipments of cherries and currants for the month of June from Haywards station amounted to 2,099,100 pounds, about one-third being currants. Chas. Graham came down from Pleasanton this week on a short visit. His brother has about 100 acres in tomatoes on the Black ranch, and everything points to a fine crop this year.

Haywards Journal: The thrashing season opened Monday, with Obermuller and Hesse Bros.' machine in full blast. In an interview with John Obermuller, Thursday, he reports the grain turning out over one-third better than the farmers expected. He has been at work in Mt. Eden and this valley, and is now in Castro valley, and the yield shows the same increase, while the quality is the best known for years.

Livermore Herald: While in Tracy recently, we met Mr. Peter Moy, who has charge of five combined harvesters for a San Leandro firm. The machines are all propelled by steam, and average from 70 to 100 acres each per day, cutting and thrashing the grain as they go along. Up to last Sunday he had finished contracts for 15,000 acres and had several more large ones in view. He charges \$1.50 per acre, which is much less than is charged for heading and thrashing. He informed us that he might bring one of the machines into this valley before the season is over.

Amador.

Ledger: A load of peaches from the ranch of J. J. Davis in Shenandoah was brought to town Tuesday by his son and found ready sale. Through the courtesy of Mr. Davis, the *Ledger* staff was enabled to test the fruit and found it the most delicious possible to imagine. It was ripe, and had ripened on the trees—a condition which is seldom found in fruits sold in the larger cities where long delays arise between the time of picking and consumption. Mr. Davis' peaches, beyond any peradventure, demonstrate the fact that Shenandoah valley is a great place for fruit production.

Butte.

Chico Chronicle-Record: From all parts of the State, as well as the country at large, come distressing reports of crop failures. We of Butte are among the few fortunate communities. We have taken pains to interview many of the farmers of this vicinity and find that the yield of grain for the present season is far above the average. One man said to us yesterday: "My grain is not turning out as it has in some years past, but I cannot complain, as what has been thrashed has averaged a little more than 10 sacks, or 23 bushels, to the acre." And several have told us that their wheat was turning out from 8 to 11 sacks to the acre. Of course all the grain in this section is not equally good, but, taken all together, the average yield is very gratifying considering the season.

Colusa.

Sun: The telephone operator at Jacinto informs the *Sun* that the fire on the Glenn ranch, which took place on the 7th, started under the thrashing machine. It is supposed some one dropped some matches in the straw and they were ignited. The fire burned 800 acres of as fine wheat as there was on the ranch and two stacks of hay. It was turning out 14 sacks to the acre. The grain was insured for \$8 per acre.

Fresno.

Republican: The owners of Malaga vineyards are doing well if they all do half as well as W. S. White and Miss Nellie Boyd. Miss Boyd has just sold from one acre of her Malaga vines 17 tons of green grapes at \$20 per ton. There are about three tons yet on the vines. This is \$340 for one acre's crop. Mr. White, whose vineyard is south of the city, has sold from 1½ acres 21 tons of green grapes at \$18 per ton, making a total of \$378.

A visitor among the grain-growers in the foothills of Fresno county reports that the stringency of the money market is affecting the farmers to an alarming extent, owing to their inability to secure money to purchase sacks for their crops. He says there are hundreds of thousands of acres of the finest wheat ever grown in this section, averaging 12 to 13 sacks to the acre, awaiting harvesting, yet they are unable to negotiate for money with which to buy sacks.

Glenn.

Willow Review: G. W. Packer has 60 acres in prunes. The trees are now five years old. He will have 200 tons this year. Say he can sell them at six cents per pound, which is a very conservative estimate. Figure this out and get the result. The best harley we have seen harvested this year is on G. W. Crook's place on the river. Off of 70 acres he cut 2000 sacks and the sacks averaged 116 pounds.

Humboldt.

Arcata Union: The fruit season is now at hand and the busy housewives are bottling their fruit for winter. Blackberries are just coming in and the small boys are in their glory. Strawberries are yielding large crops and cherries are better and more plentiful than they have been for years. Raspberries and currants have also done quite well, and the crop of apples and plums promises well.

Robuerville Home Journal: The first fruit-

grower to respond to the request for Humboldt fruit to be placed on exhibition at the World's Fair was Mr. W. B. Shively of Bluff Prairie, who forwarded a box of magnificent cherries. This worthy example should be imitated by others. Fruit-growing is destined to become one of the most important industries of our county, and the sooner we can demonstrate the fact to our Eastern friends the better it will be for us. In no way can we better advertise our advantage in this respect than by placing selected displays of fruit on exhibition at the World's Fair.

Standard: The creamery industry is a comparatively new one in Humboldt county, but it is coming to be a wonderful source of revenue. Twenty years ago the late Hon. Joseph Rusa controlled some 25 or 30 dairies in the Bear river and Cape ridge sections. Then the output was chiefly pickled roll; now the creameries devote their attention almost exclusively to fresh roll, gilt-edged at that. Next week the Swauger creamery will be added to the list already in operation. The butter shipment of the present year will be an important item in Humboldt's commercial showing. Last year's output was about 1,800,000 pounds.

Standard: Wild blackberry pickers are said to be abundant in the vicinity of all Eel river valley towns, in spite of the fact that nearly every land-owner has posted notices warning them not to trespass. Time was when Clark's addition and the Russ and Greenlaw claims (this side of Eel river although) were favorite berrying grounds, but the march of improvement has changed this condition of things, and berries are so scattering and difficult of access people conclude it is cheaper to purchase them at \$1 a bucket than to go in search of them. When Eureka boasted three or four hundred Chinese as a part of her population it was a sleepy Mongol who could not earn \$2.50 to \$5 a day in the wild blackberry patches.

Kern.

Californian: It will be remembered that Placer county has on exhibit in Chicago a sheaf of oats that is eight feet long. It is inclosed in a glass case and attracts no end of attention. Jose Peralta has brought into town from the Kiefer place one stool of oats eight feet and two inches long, and this is a sample of the field.

Californian: There must be over 4000 acres of alfalfa in the South Fork region this year. They say up there that one ton of mountain alfalfa is equal to two tons of the valley product, but then men are wont to exalt their own possessions on the principle of the boy with the new pair of boots: "Say, mister, see my boots. They are the bestest boots in the world."

Californian: A moderate estimate puts the area in grain in this county this year at 301,000 acres, divided as follows:

Antelope.....	90,000
Tehachapi.....	90,000
Tejon.....	6,000
Weed Patch.....	12,000
South Fork.....	6,000
Calloway.....	20,000
Miller.....	50,000
Delano.....	25,000
Small lots.....	2,000
Total.....	301,000

Kings.

N. W. Motheral, of Hanford, has sold his dried apricots at 8½ cents per pound, which netted him \$170 per acre.

Los Angeles.

Covina Argus: The orange trees in the valley have set a full crop of oranges this year, and unless something unforeseen occurs to cause them to fall off the next year's crop will be immense. From present appearances it looks as if the new orange-growers' association would have a big crop to handle the first year of its experience, a fact which will thoroughly test the working of the new order of things.

Merced.

Herald: Supervisor Alf. Davis personally confirms the report that on his ranch near La Grange, one day lately, 726 sacks of wheat were turned out by Bailey & Hartman's combined harvester and crew. The harvester has a 20-foot cut, and the land upon which the record was made yielded 22 sacks to the acre.

Herald: N. M. Tomlinson, the well-known farmer near Turlock, tells us that one day last week his Haines-Houser combined harvester, having a 20-foot cut, turned out 701 sacks of wheat. A careful record was kept by the men on the machine, by Mr. Tomlinson's orders, and no avenue for error was left unclosed.

Monterey.

Gonzales Tribune: The grain yield of the Salinas valley this year is something enormous, but unfortunately the prices are low. It is generally believed, however, that as soon as the present stringency in the money market is over, prices will go up.

Watsonville Pajaronian: The green crop of the Pajaro was a bit backward this year, but it is gradually getting there. When the books are balanced at the close of the year the Pajaro will make a better showing than was anticipated in the spring. It has to be a hard year—climatic ally and financially—when the Pajaro valley does not go to the head of the class.

Pajaronian: Heavy shipments of cherries have been made from here to Eastern points during the past month. Most of the late varieties found their way to Chicago and other points beyond the Rockies. The shipments were made through the Earl Fruit Co. of Sacramento, and of course Sacramento or San Jose got the credit of our good fruit. The prices realized in Chicago were considerably in ad-

vance of the San Francisco prices. Walter Bowman shipped all of his cherries through the company and they handled nearly all of the Bigorreus raised in this valley.

Napa.

St. Helena Star: Rev. James Mitchell, has received a letter from Mr. Coates, of Napa, asking him to interest the fruit-growers of this section in the fruit-drier combination organized in Napa. Four shares of stock entitles one to membership. It is the idea of the combination to erect a drier, take the fruit of the members and prepare it for market in the most excellent manner possible; then, as a combination, go into the market and place in one handling the product of all the members.

Orange.

Santa Ana Blade: The grape crop bids fair to be a large one this season. A *Blade* representative, in a trip through the vineyard district of this county, found that the berries were well set and the vines heavily loaded.

Gazette: Stern & Goodman are the first to move the new crop of barley. This week they ship 9000 sacks of the new crop—5000 sacks from Santa Ana, 2000 sacks from Fullerton and 2000 from Santa Fe Springs. The first consignment of 5000 sacks goes to Arizona, and the other 4000 to San Francisco.

Anaheim Gazette: Next week beet-digging will begin. A couple of newly made beet-diggers are expected to arrive in China in time to begin the digging. These are capable of digging five to six acres of beets per day, and will make it lively for the haulers. The polarization of the beets raised here will be watched with interest by the citizens, as upon the extent of their saccharine qualities depends the success of the beet industry in this section. It is confidently expected that the beets will average well in sugar.

Orange News: The shipment of oranges from this neighborhood for the season just closed were as follows: By the Santa Fe—Thacker Bros., A. B. Cauldwell, manager, 22,500 boxes or 75 carloads. The Earl Fruit Co., E. T. Parker, manager, 63 carloads. By Southern Pacific—Orange depot, 20 carloads; Wanda, 26 carloads; Tustin, 115 carloads. Thacker Bros. paid out for labor \$3750. The greatest number of boxes packed by one man in their employ was 4015. Mediterranean Sweets proved the best shipping oranges. The Earl Fruit Co. shipped 30 carloads of potatoes from Orange depot.

Riverside.

San Jacinto Register: Apricot drying is hurrying the mesa fruit-farmers. Quantities of luscious apricots are cut and exposed every day to the hot rays of the sun. A great many young people thus find lucrative employment.

San Diego.

Escondido Advocate: Notwithstanding the stringency in financial affairs, there is a large amount of grain being handled by the business men of Escondido, and the prices being paid are said to be higher than those offered by the grain-dealers of San Diego.

San Luis Obispo.

Paso Robles Moon: W. G. Guffey, of the Huer Huero, made this office a present of half a basket of delicious apricots recently. They were of the Moorpark variety, and 40 of them weighed 9½ pounds. Mr. Guffey intends to bring in a lot of the largest apricots on his ranch, which will be preserved and sent with other exhibits to the winter fair in San Francisco.

Moon: Putnam & Hord have on exhibition at their office two limbs of matured deciduous fruits from the ranch of Levi Exline that are beauties. One small branch is loaded with peaches to the number of 77. The apricot limb has 40 delicious-looking beauties hanging on it almost as thick as they can stick.

Sacramento.

Antone Menke, the well-known hop-grower, informed a *Record-Union* reporter that stiff breezes did considerable damage to hop vines by tearing them loose from the poles and wires. At times, he said, it looked as if whole acres would be prostrated, but happily this was averted. The vines that were loosened can be fastened up, he says, but many of the shoots were broken and the young hops beaten off. Otherwise, Mr. Menke says, the crops are doing well, and the yield will be very satisfactory. Prices are fair and stiff, and the hop-growers generally anticipate good results from their year's labors.

Santa Clara.

Los Gatos News: I. H. Beach informs a reporter that he has killed nearly all the gophers on his ranch of 30 acres (which was formerly a portion of the Bondish ranch, on the Saratoga road) by using carbon bi-sulphide on cotton-wadding and then sticking the cotton in the holes, covering it over with dirt. He says it is essential to find every hole on the tract and fill it up. He used only two gallons of carbon bi-sulphide and about \$1's worth of cotton, the total cost being about \$4.

Solano.

Republican: The acreage devoted to different crops in Solano county this year was as follows: Wheat, 80,943; barley, 30,346; hay, 6316; oats, 230; corn, 166. Total, 117,801. The acreage in grapevines is 2858. The number of fruit trees is as follows: Peach, 299,000; apricot, 227,000; pear, 186,000; French prune, 123,000; other prunes, 51,000; almond, 91,000; cherry, 26,000; fig, 14,000; olive, 6378; orange, 4452; walnut, 4300; apple, 2248; lemon, 208; other kinds, 1559. Total, 1,039,382.

Sonoma.

Sebastopol Cor. Farmer: Some of our energetic and thrifty apple-growers are thinning

the enormous yield by taking from the earliest varieties many of the largest sized apples, packing them nicely and shipping to the San Francisco markets, where ready sale is found at from 75 cents to \$1.50 per box. This is a source of profit in two ways that are very easily understood—first, in being an income, and, second, in greatly increasing the size of the fruit remaining on the trees for ripening. Small, inferior fruits never bring good prices, and truly it is often difficult to find sale for it, the idea being clearly shown by the different grades of apples, for every one knows that the small or diseased fruit is hard to sell at any price, but the best quality goes on sight and at the highest price. That is the object of our orchardists.

Sutter.

Sutter Farmer: The harvester of G. L. Douglas made a big run last Saturday on the farm of J. A. Onstott, west of this place, harvesting in fine shape 600 sacks of wheat on that day. The machine cuts 18 feet, and beats the record for a harvester operated with horses. The grain made a yield of 14½ sacks per acre.

Independent: As the harvest progresses, we hear of fields that are turning out much better than was expected. Many places are running from eight to ten sacks to the acre, and we have heard of one—the Sam Hutchinson place—where 14 sacks is said to be the yield. R. W. McLaughlin, who lives near the tule, southwest of John Kimball's, had ten sacks to the acre.

Farmer: During the last week or two the steamer has brought to the Rideout ranch over 60,000 feet of lumber for building a big hop-drying and storing house 80x100 feet. There will also be built a large tank-house near the same. Contractor J. Renfrew has a gang of men working there now and also another gang at Nicolaus, where the Grider Bros. are building a new addition to their hop buildings. As the hop crop is expected to be large this year, the necessity of increased facilities for handling the same is apparent.

Farmer: In the orchards the work of packing and shipping has been going on lively during the past week. The crop ripening being mostly Hale's early peaches, plums, pears and apples, the same are sent to the Eastern markets. Owing to the extension of time of from nine to twelve days which it takes for the fruit to reach New York, the prices have not been extra, as the fruit reached its destination in poor condition. A carload containing plums, peaches, apples and pears was shipped to Denver the other day, J. B. Wilkie being the principal consignor.

Tulare.

Times: On the Giant Oak fruit farm, near Farmersville, the Clyman plum has proven quite a success this year. The trees are in their third summer, yet as high as 65 pounds of fruit have been gathered from one tree. These plums the company will ship green to the East.

Times: W. A. Smith left at this office a sample of his magnificent Mt. Whitney wheat from the Baird ranch, 11 miles northeast of town. In appearance the wheat can't be beaten. Its actual weight is 61 pounds to the bushel, overrunning the standard one pound. It is in all probability the coming wheat.

Register: There is now a prospect that the blockade will be removed. J. Goldman & Co. made the first start, beginning recently to advance money on wheat. They will advance \$15 per ton on wheat delivered at Port Costa. Other firms will doubtless follow, and there will soon be a considerable movement in grain.

Times: "Ranch 16," known as the fruit ranch of Eppinger & Co., has a fine crop of fruit this season for a young orchard. All the apricots there were dried this year. This work is nearly completed. In the orchard is a five-year-old prune tree that was expected to break the record of 1102 pounds to one tree, but the wind broke the entire tree down. The fruit will probably ripen, but the tree is ruined for further bearing. It was estimated to have 1600 pounds of fruit this year.

Yolo.

Capay Cor. Democrat: I hear that many of the fruit-growers up the valley have become alarmed at the demoralization of the Eastern fruit market, and consequently will most likely dry most of the crop that remains unsold. It seems too bad that a combination of unfortunate conditions should serve to handicap the fruit interest in the first stages of its development in Capay valley.

Winters Express: J. G. Fredericks, of Citrona, shipped from this place two crates of sweet-water grapes to San Francisco on Tuesday, the 11th inst. This is the first shipment from this section that we have been advised of this season, and proves what we have always thought—that the farmers of that section have a very early locality, and should improve their natural opportunities. Mr. Fredericks also shipped 20 boxes of figs the same day.

Winters Cor. Mail: The drying season for apricots is drawing toward its close. In spite of short crops a great many have been dried, and perhaps the total amount will equal that of ordinary years on account of decreased shipments. A buyer was in town recently and had been endeavoring to make contracts on the basis of nine cents per pound. Growers generally look for better prices to rule and are not disposed to close contracts at once.

Cor. Democrat: A fruit-grower who recently shipped 1000 boxes of apricots East, when they were supposed to be worth a fair price, showed me his returns yesterday and they netted him just 10 cents a box. It is hard to disabuse oneself of the idea that there must be a combination among the fruit-dealers of Chicago to rob the fruit-growers of California. People who have returned from that place say the customers who buy at retail are complaining of-

the high price of California fruit, while the commission merchants' returns are hardly sufficient to cover the freight.

Yuba.

Wheatland Four Corners: The growers have begun to receive letters from families living at a distance, and from present indications little trouble will be had in securing a full force of hop-pickers. Those intending to pick should decide in what yard they will work, then inform the grower of their desire to work and state the number there will be in their party.

Wheatland Four Corners: All is bustle and work around the hop houses. At this time the new kilns and cooling rooms are going up, kilns are being cleaned and improvements made. In the yards the hops are forming rapidly. Picking will commence between the 5th and 10th of next month. Already the hop-pickers' camps begin to spring up around the bottom. Many of the old pickers who are unable to get work are camping on credit, awaiting with eagerness the picking season.

Wheatland Four Corners: The day is not far distant when it will be proper to ask for a "piece of blackberry." John Palmer, of Brown's valley, expressed to this office Wednesday a 10-pound box of the largest blackberries we ever saw. The largest berry was nearly two inches long and an inch across, while all in the case were much larger than the ordinary. The flavor of these giants was par excellence; they were rich, juicy and tender. Accompanying the box were the following lines: "I send you this box of berries as a specimen of what the red dirt of Brown's valley can produce with plenty of water."

WASHINGTON.

The State Horticultural Society has just finished the most successful meeting in its history. Henry Bucey was elected president for the ensuing six months; D. M. Jessee, vice-president; C. A. Tonneson, secretary and treasurer, and P. W. Tonneson, corresponding secretary. The trustees are: E. G. Grindrod, of Ellensburg; John T. Blackburn, of Vashon, and J. L. Hoopes, of Olalla. The next meeting will take place at Whatcom in December.

PATRONS OF HUSBANDRY.

From Worthy Master Davis.

Do you work in order that your children may play? Better keep them employed with books, chores and some play—not all play!

Have a good grindstone and keep your sickle sharp! Have a keen mind and eye, and watch your representative in Congress about now!

Who is the father of the idea that will relieve the present financial and commercial distress? The country demands a man who won't jump a cog, miss a notch or assist a measure against the labor of the nation. Produce the man and he will be heard and respected. Results are wanted, not theories.

We hope there will be a large delegation of farmers in the State Convention to meet in Sacramento, September 7th, to discuss the subject of "Good Roads."

The Governor did not appoint many farmers in his list of 20 to attend the Road Convention, and yet who is more interested in that subject than the farmer? And, by the way, who contributes more freely to the Road Fund of the State than the farmers of the State?

Governor Altgeld of Illinois has not added one jewel to his crown by pardoning from the State penitentiary the anarchists found guilty of murder. The prisoners did not receive a sentence any too severe—in fact, not severe enough. The Governor has shown his disregard for justice and for the wishes of law-abiding citizens in giving pardon to these men. And we miss our guess if the farmers and loyal citizens of Illinois do not send him, at the next election, to that political region from whose bourne no demagogic politician has ever yet returned.

It has been demonstrated, almost beyond a doubt, that the water supply of our country is largely dependent upon the growth of timber. There is no doubt of the health-giving value of our natural and cultivated forest growth. Every tree is a physician of the "old school." Nothing in the power of man to create is more necessary for the health and development of mankind than tree growth. These things being known and generally admitted, how very important it is that we look well to the care of our national timber resources. The careless destruction of timber ought to be prohibited, and the planting of trees ought to be liberally encouraged by township, county, State and national authorities. There is no good reason why subordinate granges should not plant, at least once a year, ornamental and useful trees. Let's have more timber, more water, more health!

It is more than regrettable—it is sure to be a calamitous fact—that much of the present fruit crop of California is to perish

for want of ready money to handle it. In many sections the canneries are not able to secure money enough to do anything, and hence will not "start up" during the season. This means that much fruit will perish. Much labor in orchards, on the roads and in the canneries will be idle, and revenues that ought to come to the State from other parts of the world will not come. Unless confidence is soon restored, and money comes from its many hiding-places, there will be a much more wide distress than many are wont to believe or to admit. Let every man, woman and child who can do so, preserve, dry, can and secure as much of the fruit crop as possible. Our land is blessed with an abundant harvest, yet, unless great effort is put forth, there will be much suffering before another harvest-time rolls around.

Silver bullion is very desperately cheap, but is it any cheaper, in proportion to its real worth, than wheat? Can Congress restore wheat to its nominal worth? As silver goes down, wheat goes down. Do something—anything to advance the price and worth of silver, and no doubt wheat will feel the advance. Labor must have more compensation, or millions will suffer and hundreds will starve. Hard times, trying times, are at our very door right now, and the worst may yet be to come. Let wisdom and statesmanship find us a remedy. All need assistance about this time. No hurried plan will do; no half-digested meal will relieve the hunger of the millions. The industries of this nation cannot long be stifled without serious harm to home and friends. Something must be done, and that right soon. Confidence is shaken; it must be restored. Watch and help!

From New Hampshire.

What the Grange is Doing in the Banner State of the Order.

TO THE EDITOR:—Although this is the quiet season in the grange year, on account of the press of farm work and short evenings, the order never was comparatively stronger in the Granite State than at the present time.

We claim more patrons in proportion to our population than are to be found in any other State of this glorious Union and we hope that the elevating and ennobling principles of the grange are as firmly implanted as are the rocks in our rugged hills. During the past year an unprecedentedly large number of subordinate and Pomona granges were organized and it is very gratifying to add that all of them are in a flourishing condition.

The Farmers' Alliance has never taken root here and there has never been a persistent effort to introduce the organization. All kindred organizations that are managed by members of the grange or are working in the interests of agriculture are in harmony with the grange.

The State Board of Agriculture originally gave it a cool recognition, but the extent, influence and power of the grange long ago compelled the board to recognize it, and it is very rare that a meeting of the board is now held that does not contain on its program one or more parts taken by patrons. This friendly relationship is not only advantageous to each organization but more materially beneficial to agriculture.

The N. H. Grange State Fair Association has decided to hold another exhibition at Tilton, which decision is an honor to the town and a further recognition by the association of the generosity and encouragement given to the fair by Hon. C. E. Tilton, who formerly was a resident of the "Golden State." With favorable weather the success of the next exhibition is assured, for its management is in able, experienced and trustworthy hands.

While under the wing of and overshadowed by Dartmouth College the N. H. College of Agriculture never flourished and never received the confidence nor support of the farmers of the State, but recently the grange has endeavored to aid and support it. It was quite generally believed that the removal from Hanover to Durham, and a consequent separation from Dartmouth College, would inaugurate an era of prosperity in the career of the agricultural college, but there is a suspicion abroad that what that institution most needs is to be "saved from its friends." The transactions in connection with the erection of the new buildings at Durham and the selection of the new president of the college have set the tide of the opinion of the agricultural community very strongly against it once more.

H. H. Metcalf, a prominent patron and formerly an able editor of several of the leading daily and weekly papers in the State, is preparing a 600-page volume on "New Hampshire Agriculture." The forthcoming

book will contain a history of agriculture and of the organization instituted for its benefit. It will also contain fine scenic views and portraits of those who have been most successful in agriculture. GEO. R. DRAKE, Manchester, July 10, 1893.

From San Jose.

Steps Taken Toward a Grange Hall—Other Matters of Interest.

TO THE EDITOR:—San Jose Grange was aroused from its semi-comatose condition to-day into something of its old-time energy and activity, when the question of building a grange hall was presented for discussion. Members who expressed themselves were unanimously of the opinion that a building properly arranged with stores below, and grange hall with suitable anterooms above would be a good-paying investment, and that the present time, in the absence of boom prices would be an excellent time to buy realty. A committee will be appointed to ascertain the prices of a suitable lot, and cost of the contemplated building, and report at a subsequent meeting. Most of our members are actively engaged in gathering their fruit crops, hence our meetings are not as largely attended as they will be in the near future.

To-day a class of five were taken into full membership, and five more applications were read; when they are admitted the membership of San Jose Grange will be even 180. It will be seen that the growth of our grange is not spasmodic but rather gradual and healthy. Our membership includes the leading agriculturists and horticulturists of Santa Clara county, as well as many of the most eminent educators and ex-educators of our State, each of whom is largely interested in horticulture. Thus you will see there will be a commingling of the cultivated mind of the scholar with the less cultivated mind of the man of muscle, which must redound to the advantage of both classes. The first Saturday of each month is set apart as "young ladies' day." They select some one of their number to get up a literary and musical program for their next meeting, thus presenting an opportunity for generous rivalry among the young ladies to outvie each other in their efforts to excel. During these exercises the grange doors are open to all who desire to attend, thus giving the young ladies an opportunity to go outside the grange hall to get talent and the result is that frequently some of the best musical and literary talent of San Jose is brought into service.

Do not think for a moment, Mr. Editor, that the young ladies of our grange are all old maids, for they are not. It is possible they might be called so in other parts of the State, but here in this beautiful valley of sunshine and flowers we call them our unappropriated blessings. And by the way only a few days ago, a gay young lothario, without any of the obligations of our order resting on his shoulders, very quietly appropriated, by marriage, one of the fairest of the fair of our unappropriated blessings to himself, and the twain immediately hied themselves away to a more southern clime for an indefinite time.

It is proposed as soon as our members get over their hurry to secure their crops and are able to attend grange meetings more regularly, to bring up questions for discussion relating to politics and religion, finances and taxation, water communication east by the Nicaragua canal, and such other questions the discussion of which will better qualify grangers in the discharge of their duties as citizens. AMOS ADAMS.

From Grimes Grange.

Our Correspondent Objects to "Too Much Walking Around."

TO THE EDITOR:—Although the harvest here is in full blast, Grimes Grange continues to hold its regular meetings with good attendance. Applications for membership still continue to be read, and I have to register my old complaint that the making of a granger occupies altogether too much time that could be used to better purpose, and I think I am safe in saying that, if our worthy master is ever sent as a delegate to the National Grange, he will make an attempt to shorten the initiatory ceremony. Why can't the thing be done in one degree? True, it takes a year to plow the seed and harvest the crop, but why lengthen out our ceremony that long? It seems to me I see the same people walking around our grange-hall that were walking around last spring. When we have the four degrees, the exercises end in a harvest feast, and every one is good and hungry when the feast arrives; and that reminds me that at our next meeting we are to have a harvest feast which will not exactly be a feast. Walking around

in a brick building in the middle of summer on a hot afternoon does not make one look longingly forward to roast chicken, hot coffee and all the other essentials of a harvest feast, so we are going to change the program and have an ice-cream social, to which all our good friends are cordially invited.

The grain crop here, while far below the average, is somewhat better than was anticipated early in the season. I have heard of one field of club wheat yielding 15 sacks to the acre, but eight and nine sacks is nearer what the average fields are turning out.

I was going to say a word about a breeding association that has been organized here and the grand horse it has secured as a starter, but I will devote a letter to the subject later on. MEMBER.

Grimes, July 16, 1893.

Field Day at Petaluma.

TO THE EDITOR:—At the last regular meeting of Petaluma Grange, Saturday, July 8th, the Third and Fourth Degrees were conferred upon a class of four. There were eight candidates in all, but four were, unfortunately, unable to attend. Thus we are gradually increasing our numbers, and, while not inclined to boast, feel that we are making satisfactory progress. Many of the brothers and sisters of Two Rock Grange were present, and by their kind efforts added materially to the success and pleasure of the occasion.

In the afternoon an open meeting was held, in which all farmers and their families were invited to participate and discuss questions of vital interest to farmers generally. W. M., E. W. Davis was present and delivered a most eloquent and able address. He was followed by Bro. John Denman, W. M. of Two Rock Grange, with some well-chosen remarks tending to show the advantages of co-operation, and that a live grange may be a success financially as well as socially. Bro. Martin, W. L. of Two Rock Grange, also gave some well-timed and pleasing remarks. Bro. Harrison Meacham, of Petaluma Grange, spoke in an earnest and forcible manner to the farmers, of the necessity for strict economy now that the dark cloud of business depression hovers over our land, urging them to use the pruning-hook unsparingly in cutting off expenses. The speech-making was interspersed with cheering and inspiring songs. Petaluma, July 10, 1893. E. S.

From Two Rock Grange.

Still Growing—Preparations Under Way for the Coming State Grange.

TO THE EDITOR:—On account of busy times, in planting potatoes and hay making, the attendance of our grange has been small, but now the plow and mowing machines are laid away, we will look for a better attendance. At our last meeting we received another application for membership, thus our grange is still growing in members. Two Rock Grange will confer the third and fourth degrees on a class of four on July 20th, also will, on same day, celebrate Ceres day.

I met Master Grover of Petaluma Grange the other day and in speaking of the State Grange meeting, he said he was aware there was a big job on hand in preparing for that time; but added that in the hands of the committee he had appointed and a like committee from Two Rock he had no fear but that everything would be in readiness at that time. The people of Petaluma are looking forward to that time and will give a hearty welcome to the coming grangers. Two Rock, July 10, 1893. J. C. P.

National Grange Meeting.

TO THE EDITOR:—The next meeting of the National Grange, P. of H., will be held in the city of Syracuse in the State of New York, commencing on Wednesday, the 15th day of November next. Official notice of the same will be sent to officers and delegates in due time.

By order of the Executive Committee.

J. J. WOODMAN,
Sec'y of Committee.

Paw Paw, Mich., June 15, 1893.

WATSONVILLE GRANGE has resolved to discuss the silver question on Saturday, July 29th. The grange also suggests that the secretary of the State Grange request each grange in the State simultaneously to discuss the same question and report the consensus of opinion arrived at to the secretary of the State Grange for forwarding to our members of Congress. While the secretary does not feel empowered to take the action

requested, he is very willing to receive and forward any information sent to him as above suggested.

Secretary's Official Circular.

SAN FRANCISCO, July 18, 1893.
To the W. M. and Members of the Grange, P. of H.—DEAR PATRONS:—According to the requirements of the Constitution of the State Grange of California, the following proposed amendments are submitted to the consideration of each subordinate grange in the jurisdiction, pending action of the State Grange:

No. 1.—By J. D. Huffman, W. L. of S. G., offered at the last session of the State Grange and ordered submitted to the subordinate granges:

That Art. II, Sec. 1, of the State Grange Constitution be amended to read as follows: The membership of the State Grange shall consist of the masters of the subordinate granges and their wives, if matrons, and where the wife is the master of a subordinate grange, her husband, if a fourth-degree member in good standing, shall be a voting member in the State Grange. Past masters and their wives, when matrons, are honorary members and are eligible to hold office, but not entitled to vote.

No. 2.—Offered by E. C. Shumaker, W. S. of S. G., and recommended by vote of the State Grange:

That Art. II, Sec. 1 read as follows: The membership of the State Grange shall consist of two fourth degree members from each subordinate grange. These members shall be the master and wife of each grange. In case the master be a patron having no wife, or his wife be not a member, then the grange shall elect a fourth degree member who is in good standing. If the master be a matron and she having no husband, or the husband be not a patron, then the grange shall elect a fourth degree member who is in good standing. Each member so elected shall enjoy all the privileges and rights now accorded the master and wife. Each grange shall elect two alternates who are in good standing. Past masters and their wives are honorary members and are eligible to hold office, but not entitled to vote.

The Executive Committee, in examining the foregoing (No. 2) recommended a change providing for the election of a fourth degree member of opposite sex to the master for member of the State Grange, and one alternate of each sex.

No. 3.—Offered by A. T. Dewey, Sec'y of S. G., and recommended by vote of the State Grange:

That Art. II read as follows: Sec. 1. The membership of the State Grange shall consist of the masters of subordinate granges and their wives or husbands who are fourth degree members. Past masters and their wives or husbands who have attained the fourth degree are honorary members, eligible to hold office, but not entitled to vote.

Sec. 2. Two alternates shall be elected separately by ballot, by each subordinate grange during the three months preceding the annual session of the State Grange. In the order elected, they shall be designated as first and second alternates. These alternates shall vote and otherwise act as representatives while at the State Grange only when a vacancy exists by the absence of the master, or the master's wife or husband, or by the master having no wife or husband who is a fourth degree member. Alternates shall have attained the fourth degree and fill vacancies respectively as numbered, alternate No. 2 acting only while there are two vacancies. All alternates shall pay the regular fee upon applying for the fifth degree.

Sec. 3. Wives or husbands of masters, if members of the fourth degree in good standing, shall be eligible to appointment as deputy lecturers, with full authority to perform the duties of such.

Other amendments can be submitted, if sent to the secretary of the State Grange in time to be forwarded to each subordinate grange at least one month before the meeting of the State Grange.

The following resolution, offered by S. Good-enough, W. Chaplain S. G., at the last session of the State Grange (see page 47 of report for 1892), to provide for the submission of questions for legislation to the voters at State and municipal elections, was placed on file for action at the next meeting, to which your attention is duly called, viz:

"In view of the present difficulty of reaching legislative bodies with the weight of public sentiment, and believing that some direct and effective method of so doing is desirable, the State Grange of California hereby memorializes the legislature of this commonwealth to provide by suitable legislation for the exercise of the right of 'The Initiative' by the people."

The proposed Act is published on page 77 of report for 1892. It was indorsed by the State Grange at one of its previous sessions.

The next session of the State Grange will open at Petaluma, Tuesday, Oct. 3d, at 10 A. M. Petaluma Grange, assisted by the other granges of Sonoma county, is preparing to give the members and visiting patrons to the State Grange a noble welcome, and it is expected a large number of earnest and faithful brothers and sisters will be present. It is important that members be prompt in attendance, for, being the year of biennial election of officers, a more than average amount of business may be expected.

Nearly the whole session will likely be held in the fourth degree, and all husbandmen and matrons welcome to participate in the proceedings, except in the matter of voting.

Tuesday evening will be devoted to literary and musical exercises, including a welcome by the grange and citizens of Petaluma, and response by the W. M. of the State Grange.

Wednesday afternoon will be devoted to a R. R. excursion to Sebastopol and basket picnic in the grove.

All elective officers of the State Grange and general, district and county deputies should forward their annual reports, carefully prepared and written, to the secretary of the State Grange on or before the 1st day of September, for printing and circulating after the opening of the session.

STATE GRANGE EXCURSION RATES.

The following important information should be made known to all patrons, and the directions relating to securing receipts for tickets purchased on starting carefully adhered to.

To all Patrons of Husbandry:—The Southern Pacific Company has agreed to give reduced rates to San Francisco or Santa Rosa to all who attend the State Grange at Petaluma (commencing Tuesday, October 3d), from all parts of California, over all their lines, according to the following terms and regulations:

Patrons will purchase first-class (unlimited) tickets to San Francisco or Santa Rosa from their local stations, on the railroad lines, being particular to take a receipt from the station agent, on the certi-

cates (blank receipts) sent to the secretary of their grange for that purpose.

Upon application so the secretary at the State Grange, he will certify that the member of the order has attended the State Grange and is entitled to purchase a return ticket from the San Francisco or Santa Rosa station agent at one-third unlimited first-class fare, making the cost of the round trip two-thirds the regular rate.

Blank receipts will soon be forwarded to the secretary of each grange. Send notice if more are wanted. Several names can be included in a single receipt.

Patrons can buy tickets as soon after the receipt of blank certificates as they desire, and on going can stop over at Oakland, San Francisco, or any points on the route. Return tickets must be bought at Petaluma within 48 hours after the close of the State Grange, and used within 48 hours after purchase. Provided, however, if the session closes on Saturday, 24 hours longer can be taken for buying tickets.

In an emergency, take an ordinary receipt from the station agent and it may answer. It is the duty of station agents to give receipts whenever asked for.

UNLIMITED RATES OF FARE TO SAN FRANCISCO AND SANTA ROSA FROM POINTS NOTED VIA S. P. R. R.

Station.	San Francisco.	Santa Rosa.
Anderson.....	\$ 7.15	\$ 7.00
Athlone (Plainsburg).....	4.55	5.65
Anburn.....	4.10	4.25
Byron.....	1.90	2.75
Collax.....	5.05	5.20
Gridley.....	5.10	5.25
Gilroy.....	2.25	.....
Hanford.....	6.90	8.40
Hollister.....	2.66	.....
Los Angeles.....	15.00	16.50
Maxwell.....	4.50	4.35
Marysville.....	4.60	4.75
Merced.....	4.25	5.35
Modesto.....	3.10	4.20
Martinez.....	1.00	1.70
Newcastle.....	3.95	4.10
Orland.....	5.45	5.30
Oakland.....	.....	1.50
Paso Robles.....	6.20	.....
Roseville Junction.....	3.60	3.70
Sacramento.....	3.30	3.15
Selma.....	6.35	7.45
Santa Barbara.....	15.00	16.50
San Francisco.....	.....	1.50
San Mateo.....	.....	.....
San Miguel.....	5.95	.....
Salinas.....	3.25	.....
Santa Cruz.....	2.80	.....
Tulare.....	7.25	8.35
Templeton.....	6.40	.....
Tracy.....	2.10	3.20
Vallejo.....	1.00	1.35
Wheatland.....	4.20	4.35

S. F. AND N. P. (DONAHUE BROAD-GAUGE ROUTE.)

On this line, tickets receipted for at regular rates on going will be made good for return by endorsement of the secretary of the State Grange, thus making the round-trip half-rate.

Inquire particulars regarding routes from local ticket agents.

Tickets can be bought directly to Santa Rosa by Southern Pacific lines via Vallejo Junction and Napa Junction, or to San Francisco by the Southern Pacific lines; then from San Francisco or Santa Rosa to Petaluma by the S. F. and N. P. Railroad (Donahue Broad-Gauge Route). Receipts must be taken for payment of all tickets bought at each office going to Petaluma.

Attendants who return home repeatedly during the session are entitled to reduced rates for all such trips. During the next month blank railroad receipts and blank applications for the fifth and sixth degrees will be forwarded to the secretaries of all granges.

Fellow-patrons, please make the information contained herein known to all members early. If possible for you to come, do not fail to be prompt in attendance on the third of October next. Yours truly and fraternally, A. T. DEWEY, Sec'y Cal. S. G.

Note.

At its last meeting, Washington Grange adopted resolutions in memory of its late brother, Reuben S. Pardoe.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California street, San Francisco.

Hay Pressing.

If you are interested in pressing hay write Truman, Hooker & Co., San Francisco. They will save you money.

WE GUARANTEE

That one tablespoonful of

GOMBAULT'S CAUSTIC BALSAM

will produce more actual results than a whole bottle of any liniment or ointment ever made. It is therefore the cheapest (as well as safest and best) external applicant known for man or beast.

THE LAWRENCE WILLIAMS CO., CLEVELAND, OHIO.

BARGAINS IN REAL ESTATE!

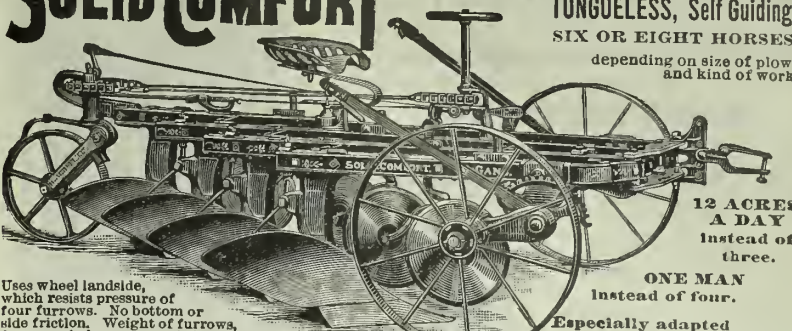
\$6500 FINE NEW RESIDENCE, N. W. COR. 19th avenue and 17th street, East Oakland. Nine rooms. Lot 40x130. Send for photograph.

\$200 EACH—7 LOTS IN TOWN OF BELMONT. Average 50x250. Level land. Easy terms. Two minutes walk from station.

JOHN F. BYXBEE, No. 42 Market St. San Francisco.

SOLID COMFORT THE "WONDER ON WHEELS"

TONGUELESS, Self Guiding.
SIX OR EIGHT HORSES,
depending on size of plows
and kind of work.



12 ACRES
A DAY
Instead of
three.

ONE MAN
Instead of four.

Especially adapted
to Traction Engines.

Uses wheel landside,
which resists pressure of
four furrows. No bottom or
side friction. Weight of furrows,
frame and plowman carried on three
greased spindles. Draft reduced to lowest
possible limit. Foot brake prevents gang running on team.
Levers and turning device within easy reach.
Drying, Straight Furrows, and Adjust-
ment at will. Made with stubble, sod and stubble, or breaker bottoms.

ECONOMIST PLOW CO., So. Bend, Ind., or Stanton, Thomson & Co., Sacramento.
Special prices and time for trial given on first orders from points where we have no agents.
Our book, "FUN ON THE FARM," sent Free to all.



MECHANICS' INSTITUTE PREMIUM.

S. F. MECHANICS' INSTITUTE MEDAL
TO DEWEY ENGRAVING CO.

This Silver Medal was awarded for the fine display of HALF-TONE PHOTO-ENGRAVINGS in the Dewey Engraving Co's exhibit showing the progress of Half-Tone and Photo-Relief Engraving on this coast—the Dewey Engraving Co's Establishment being the first to introduce photo-engraving on this side of the continent, in 1877.

SUPERIOR ENGRAVING.—This able and reliable firm, through long and practical experience and thorough knowledge of the special requirements of all trades and classes desiring engravings on this coast, possess superior advantages in accommodating all Pacific States patrons of the Engraving Art.

Specimens of fine art and commercial work mailed free. Also estimates for any kind of engravings specified upon request. The very lowest prices for good and satisfactory service are offered with prompt and thorough attention guaranteed. Address, DEWEY ENGRAVING CO., A. T. DEWEY, Manager, 220 Market St.

GRANGERS' BUSINESS ASSOCIATION, SHIPPING AND COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.

Full Cargoes of Wheat furnished Shippers at short notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

A. M. BELT, Assistant Manager.

HERCULES.

STEEL AND IRON.

The Best Windmill for Deep or Shallow Wells.

CENTRAL ACTING.

DOUBLE BEARINGS

Warranted to run with less oiling than any other Windmill.

HERCULES.
R. F. WILSON, PROPRIETOR.

AUTOMATIC OIL BEARINGS.

THIRTY DAYS' TRIAL, IF DESIRED.

Deep Well Pumps, All Brass Cylinder Pumps.

PRICES ARE LOW—Save money by DEALING DIRECT WITH THE MANUFACTURER.

Improved Davis, San Joaquin and Hercules Windmills, Pumps, Etc.

Patent Non-Shrinkable Redwood Tanks.

Write for Prices.

R. F. WILSON, WORKS, COR. MAIN & OTTER STS., STOCKTON, CAL.

MAKE YOUR OWN GAS!

BADLAM BROS..

519 Market St., San Francisco.

SOLE MANUFACTURERS OF THE CELEBRATED SPEELESS GAS WORKS. New process, safe and inexpensive, from \$100 upward. Light cheaper than coal oil. Send for catalogue and prices.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos. A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St., San Francisco.

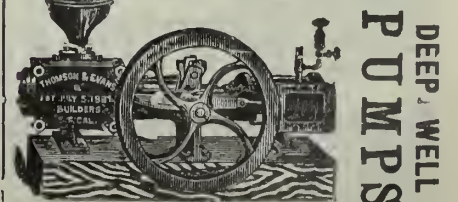
C. H. EVANS & CO.,

(Successors to THOMSON & EVANS.)

110 and 112 Beale Street, S. F.

MACHINE WORKS,
Steam Pumps, Steam Engines

And All Kinds of MACHINERY.



WELL MACH'Y All Kinds, Water, Gas, Oil, Mining, Ditching, Pumping, Wind and Steam, Heating Boilers, &c. WIN pay you to send 25c. for Encyclopedia of 1500 Engravings. The American Well Works, Aurora, Ill. Also, Colorado, Ill., Dallas, Tex., Sydney, N. S. W.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Hoteliers, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

JOHN LYNOH, Petaluma. Breeder of Thoroughbred Shorthorn. Young Stock for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER SAKS & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

O. BLOM, St. Helena. Brown Leghorns a specialty.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

JOHN MCFARLING, Calistoga, Cal. Importer and Breeder of Choice Poultry. Send for Circular. Thoroughbred Berkshire Pigs.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

FOR SALE at low price—Three extra fine young thoroughbred Dishfaced Berkshire Boars. T. Chittenden, Chittenden, Cal.

C. H. DWINELLE, Fulton, Sonoma Co., Cal. Shropshire and Crossbred Shropshire-Merino. Rams for sale.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

R. H. CRANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

SWINE.

J. E. ALSFORD, Woodside, San Mateo Co. Breeder of Berkshire Hogs and Toulouse Geese.

P. H. MURPHY, Perkins, Sac. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, Low Price.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.



OXFORD DOWN SHEEP FOR THE PACIFIC COAST.

W. A. SHAFOR, Middletown, Ohio,
Largest American Importer of
O. D. Sheep.

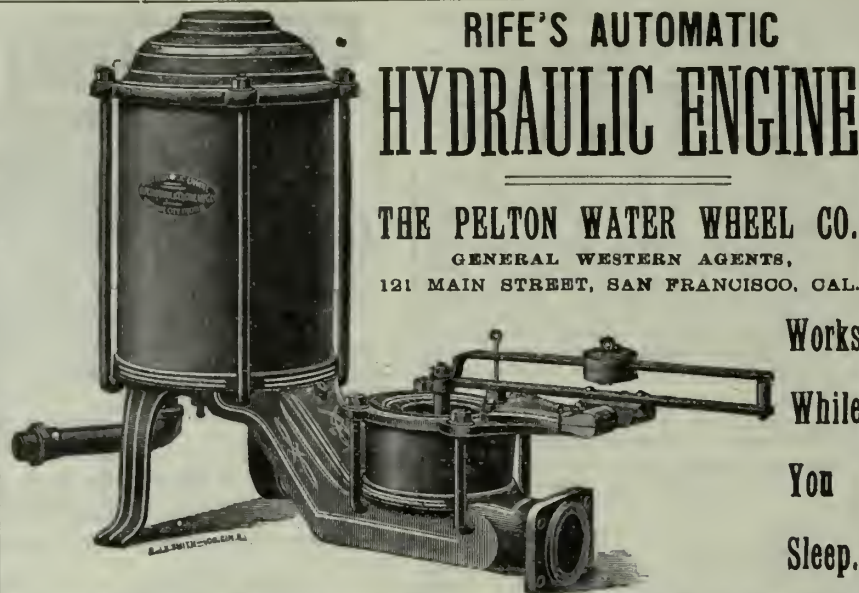
Is prepared to quote prices on the best stock of Oxford Down Sheep to be had in England. Parties wanting first-class stock should write for particulars and induce their neighbors to join them. Import will arrive about August 1st. Write at once.

EGGS! EGGS! EGGS!

S. C. BROWN LEGHORNS.
S. C. WHITE LEGHORNS.
EGGS \$1.50 per setting; \$4 for two settings; \$5 for three settings. White Leghorn pen headed by "Volante," score 98½. Brown Leghorn pen headed by "Imperial," score 93. Send for circular. Satisfaction guaranteed to all.

FRANK A. BRUSH,
Care Santa Rosa National Bank, SANTA ROSA, CAL.

—THE—
HALSTED INCUBATOR
COMPANY,
1512 Myrtle Street, Oakland, Cal.
Send Stamp for Circular.



RIFE'S AUTOMATIC HYDRAULIC ENGINE

THE PELTON WATER WHEEL CO.

GENERAL WESTERN AGENTS,
121 MAIN STREET, SAN FRANCISCO, CAL.

Works
While
You
Sleep.

THE RIFE HYDRAULIC ENGINE is the most simple and efficient machine yet devised for elevating water for irrigation, filling railroad tanks, supplying mills, factories, dairies, stock yards, country residences, small towns, and for various other purposes. This ram is self-operating, constant in action, and is not only much more efficient than anything of the kind ever put upon the market, but from absence of wearing parts, more durable and every way reliable. Many may be referred to that have run for years, elevating water in some cases from 100 to 300 feet without any attention or expense in the way of repairs.

These machines have already come largely into use in all parts of the country, and are rapidly superseding every other device for the purpose. They will work effectively under a head as low as two feet and for every foot of fall will elevate 20 feet. By means of an adjusting lever the capacity of any of the various sizes can be reduced 50 per cent or more, as may be desired, to provide for a variation in water supply, without disadvantage or loss in efficiency.

WATER RAISED AND WASTE.—The fall from the spring, stream or other source of supply to the engine determines the height of which the water can be elevated, as well as the relative proportion between the water raised and wasted, the quantity raised varying according to the height it is carried and the distance conveyed. For ordinary purposes it is sufficient to say that with a discharge pipe 1000 feet in length, one-sixth of the water can be raised and discharged at an elevation five times the height of fall or one-twelfth ten times the height of fall.

Parties writing for information should give the quantity of water that can be supplied to the engine, either in gallons, cubic feet or miners' inches; the head or fall from source of supply to point where the engine is to be located, length of drive pipe, height to which the water is to be raised, distance from engine to place of discharge and the quantity of water it is desired to elevate. No reliable information can be afforded without an explicit answer to these inquiries.

FRUIT PAPER!

RAISIN WRAPS, SWEAT PAPER

FROM THE MANUFACTURER DIRECT AT LOWEST PRICE.

Raisin-packers are advised that we will make and carry in stock the "Azure Blue" "Top Wrap," which has been used for years by the packers of Spain.

S. P. TAYLOR PAPER CO.,

414 & 416 CLAY STREET.....SAN FRANCISCO.

PROTECT YOUR TREES

— WITH —

GILMAN'S TULE TREE PROTECTOR.



Cheapest, Best and Only One to Protect Trees and Vines from Frost, Sunburn, Rabbits, Squirrels, Borers and Other Tree Pests.

For Testimonials from Parties who are using them send for Descriptive Circulars.

B. F. GILMAN,

Sole Manufacturer of Patent Tule Covers,

420 NINTH ST., SAN FRANCISCO, CAL.



GEM STEEL WIND MILL WITH GRAPHITE BOXES.

Never Requires Oiling or Climbing of Towers.

Guaranteed more durable without oil than other mills that are oiled. Practically, these mills require no attention. Truly a Gem, and worth its weight in gold. It combines beauty, strength, durability and simplicity. Governs itself perfectly, is easily erected and is sold on its merits; in fact, it is the best mill on earth. They are geared back three to one—the wheel making three revolutions to one stroke of pump—making them run in the lightest wind or breeze. The mill is made entirely of Steel and Cast Iron. Each one of our Gem Wind Mills is warranted. If not satisfactory, freight will be paid both ways and money refunded. We also carry Pumps of all kinds, Tanks, Pipe Fittings, Hoses, Etc.

WOODIN & LITTLE, 312 MARKET ST.,
Hose, Etc. San Francisco, Cal.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular

E. FOUGERA & CO.,

30 North William Street, New York.

Short-Horn BULLS

Calves, Yearlings and 2-year-olds

FOR SALE.

ROBERT ASHBURNER,

Baden Station, San Mateo County, Cal.

Only three-fourths mile from the terminus of the S. F. and San Mateo Electric Road.

A BARGAIN!
Two 3-year-old Imported Shire Mares in foal. Also Imported English Coach Stallion. Address W. W. RUSHMORE, Importer and Breeder of Draft and Coach Stallions. P. O. Box 86. Stable, Broadway and 32d St., Oakland, Cal.

PACIFIC RURAL PRESS!
Is the Largest Illustrated and Leading Agricultural and Horticultural Weekly of the West. Established 1870. Trial Subscriptions, 50c for 5 mos. or \$2.40 a year (all further notice). DEWEY PUBLISHING CO., 320 Market Street, San Francisco.

MECHAM & FRITSON,

Importers & Breeders of Red Polled Cattle.

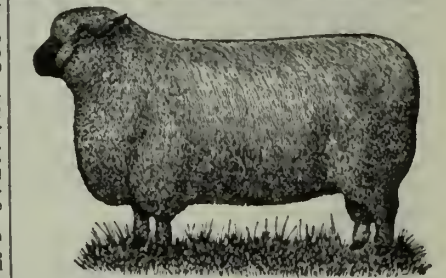
We have 200 head of Full Bloods and Crossbreds on Devons, Bulls and Heifers for sale. Address communications regarding Cattle to MECHAM & FRITSON, Petaluma, Cal.



MECHAM & HINKLE,

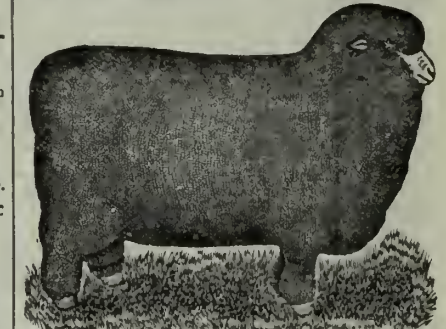
Importers & Breeders of Shropshire Sheep.

The flock was imported or bred direct from imported stock. The Shropshire excels all mutton breeds for a cross on the merino—giving more wool and mutton than that from any other breed. Pure and Crossbred Rams and Ewes for sale. Direct inquiries regarding Shropshires to MECHAM & HINKLE, Petaluma, Cal.



H. MECHAM,

Breeder of American Merino Sheep Without Horns. The only flock in the United States. When we bought our sheep East 24 years ago, among them was a ram without horns. He grew to be a fine large sheep, shearing at 2 years old, a 12-month's fleece, 35 lbs. of long white wool.



I have bred from him and his get ever since and have never made an out-cross and never used the same ram but one year on the same flock. My rams at two years old weigh from 160 to 180 lbs., have a strong constitution, without wrinkles, and will shear on an average about 25 lbs., a 12-month's fleece, of long white wool. Rams and Ewes for sale. P. O. Address Stony Point, Sonoma Co., Cal. R. R. Station, Petaluma.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

- KENDALL'S SPAVIN CURE -

STOCKTON, CAL., Dec. 19th, '92.

DR. R. J. KENDALL CO.
Gentlemen:—Having read one of your Treatise on the Horse and seeing the Spavin Cure advertised, I thought I would try it. I had one horse with a prominent Spavin of 12 months standing. I removed it with ½ bottle. I tied up one fore foot on same side the spavin was and compelling the horse to rest on lame leg while I took a surcingle and drew it across the hock or spavin until the hock or spavin got very warm with the friction, then putting on Spavin Cure. I had a mare that had a running from her nose for 12 or 14 months. I rubbed the Spavin Cure from her eyes down to her nostrils, then from back of jaw bone down under the throat for a week. I have not seen any discharge for two months.

Yours truly, **HUGH McDADE.**

Price \$1.00 per bottle.

DR. R. J. KENDALL CO.,

Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

Dr. A. E. BUZARD, VETERINARY SURGEON.

MEMBER OF THE ROYAL COLLEGE OF VETERINARY Surgeons, London, England. Late Veterinary Surgeon in the United States Army. Veterinary Contributor to the "Pacific Rural Press." The diseases of all Domestic Animals treated on Scientific Principles. Special attention given to Chronic Lameness and Surgical Operations. 406 BRODERICK ST., SAN FRANCISCO. Calls to the country promptly attended to. Telephone No. 4697.

S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, July 19, 1893.

No advance in wheat prices has taken place during the week, but there has been some slight improvement of the situation generally. It is now possible for farmers in most places to obtain advances on wheat, though banks are exceedingly cautious, and the sums are not so large as in years past, nor accommodations generally extended. Time was when it was possible to obtain as much as \$30 per ton on wheat—90 cents per bushel—but now lenders will not allow more than \$18 per ton, and loans are limited at that. It looked for awhile as though the farmers would be obliged to struggle through the harvest with absolutely no assistance from the banks; but the recent improvement in the monetary situation has given warehouse receipts a negotiable value, though it is by no means what it ought to be, what it has been, and what, we hope, it will soon be. Wheat is now rapidly accumulating in warehouses and the harvest is well along. Exports have increased recently and the tendency all around seems to be toward a better state of things.

During the week just passed, the wheat market has manifested considerable activity, the foreign market developing a stronger tone and showing a small advance for cargoes afloat over recent very low figures. During the past three days, however, a generally lower feeling has prevailed in Eastern markets. We base our expectation that more encouraging conditions will prevail on the fact that the export movement from California has recently been comparatively heavy, during the present month no less than seven cargoes having been sent afloat, against nine for the entire month of June. While we carry over from last season considerably larger stocks than last year, the shortage in this year's crop and the free export movement will tend to free the warehouses from overburden and to decrease stores. Locally the situation, as regards available quantities of wheat, seems bound soon to reach a normal condition of things. The general situation indicates a shortage in the world's supply, the deficit in the United States and Europe for the crop of 1893 being estimated at 160,000,000 bushels. The Indian crop will probably be larger than usual, and the stocks of old wheat are large; but the oversupply will probably not balance the deficit, and it seems imperative that an equalization between supply and demand will be reached. The general financial disorder, however, is so closely related to the wheat situation that a statement as to what will happen in the near future is little better than guesswork. If the financial situation improves—and it has shown signs of betterment—it must have its effect on wheat.

The shortage in the California crop is now variously estimated at from 15 to 25 per cent. Wheat in northern California is almost uniformly turning out better than expected, early prophecies of a half crop not being carried out.

The Stockton *Mail* notes that "many farmers are keeping grain on the farm. This is particularly the case with those who thrash from the stack. They are putting off the work of thrashing. Even some of those who have combined harvesters, and who perform have to thrash, since the thrashing is done simultaneously with the cutting, are allowing their wheat to lie out on the farm. The objection to this is that sacked wheat thus exposed dries quickly and loses in weight. The harvest is at its height in places, as for instance on the West Side, but in other places it has just begun, the season having been backward for heavy lands."

Spring Wheat in the West.

The Chicago *Farmers' Review* of July 12th has this to say of spring wheat in the Middle West: "Very little spring wheat is being raised in Illinois, Indiana, Ohio, Michigan, Kentucky, Missouri, Kansas and Nebraska. The few counties where it is raised in the above States give a very indifferent report. Of these Nebraska sends in the greater number of reports. There the greater number report the condition as poor. In some localities the crop was seen to be doing so badly that it was plowed up and the ground planted to corn. Some counties report a complete failure. In Iowa spring wheat is doing well, two-thirds of the correspondents reporting good, and the rest fair. In Wisconsin the crop averages about fair, which means less than a full crop. It is making rapid growth and in some counties is ready to head out. Dry weather is the cause of the low average. In Minnesota the condition is poor, on account of drouth. In Clay county the grain is heading, but is only ten inches high, and other counties report a similar condition. Half of the correspondents in Dakota report condition bad; the rest of the reports are equally divided between fair and good."

The World's Wheat Crop.

The following from *Mark Lane Express* of June 26th seems a little old, but it seems to be applicable to present conditions: "The crop prospects of the great foreign wheat-growing countries are now exciting a good deal of attention at Mark Lane. Reports from France are usually conflicting, and vary from 28 to 41 million qrs., a difference reducing statistics to something very like an absurdity. A letter from Odessa speaks of crop prospects in southern Russia as greatly improved; 'with a few exceptions a fairly large yield is expected, more especially of rye, the chief bread-stuff of the people. The weather has been an alternation of sunshine and showers for the past month (May 22d to June 22d) and has worked a miraculous change in harvest prospects.' Reports from Saratoff in southeast Russia and from Kharkoff confirm the above news. In Austria the prospects of the wheat crop may be doubted, for when the soberest of telegraphic agencies advises 'an improvement of 75 per cent,' it is evident either that the previous outlook had been unprecedentedly deplorable or else that some very wild writing was to the fore. In America, we believe the last fortnight has been highly favorable to both wheat and maize, but the winter wheat will not be much benefited, harvest being actually in progress in the chief States, and the fortunate weather change coming too late. The spring wheat crop, however, will be much benefited, and two great producing regions,

Manitoba and the Dakotas, are each in expectation of a good yield in August.

"A report from the Argentine Republic speaks of the export surplus of wheat remaining unshipped on May 16th at 3,200,000 qrs. This seems a very large figure, and will require a good deal of confirmatory evidence before the trade accepts it as fact. There is also need of confirmation for the report that 600,000 qrs. remain for shipment from Australia. The New Zealand crop has been much affected by wet weather during and since harvest. The yield in bulk is reckoned quite 200,000 qrs. smaller than last year, and now that quality and condition are likely to be below the average also, it would appear that New Zealand will only play a very minor part in the trade of the second half of 1893."

Other Grains.

More is doing in barley than in wheat, but the market does not show any great spirit. The market has declined for actual feed qualities, the deliveries being large and the demand only moderate. In this connection, however, it should be noted that much barley which would hardly class as better than choice feed in this market, has been taken at brewing prices for export, though brewing of best quality has been shipped in exceptionally large quantity. Since the 1st inst. two vessels have taken part cargoes for Great Britain and one has cleared for New York. There are several vessels now on the engaged list to clear with more or less barley.

Oats are dull and have developed little but weakness.

Corn is weak and sales are occasionally made at shaded prices.

Rye is quiet and slow.

Fresh Fruits.

Watermelons have appeared in the market, but no definite prices have yet been established. Likewise cantaloupes are beginning to come in, but they are not yet on a fixed basis. The height of the cherry season is passed and a few more days will see them out of the market. Grapes are here, but the quality is by no means above reproach. Pears are slow and move off at low prices. Crabapples have appeared, but are in light supply. Plums are plentiful and dull. Peaches of ordinary quality are very plentiful. Early Crawford's are now offered in commercial quantities, selling as high as 65 cents per basket. Berries in crates do not meet with favor by the trade. A box of nectarines sold yesterday for \$1.50.

For new-crop dried fruits about the only regular local quotation so far made is for bleached apricots, at 9@10c per pound.

Imports of Dried Fruits.

The Government Bureau of Statistics furnishes the following report, giving the imports of foreign dried fruits and a comparison with previous year:

—Month of May—			
	1893.	1892.	
Currents, lbs.	68,867	26,750	
Dates, lbs.	6,784	522	
Prunes, lbs.	811,511	553,493	
Raisins, lbs.	272,769	419,588	
—Eleven mos. end'g May 31—			
	1893.	1892.	
Currents, lbs.	33,093,994	36,633,419	
Dates, lbs.	16,163,529	16,084,314	
Prunes, lbs.	25,812,557	10,539,770	
Raisins, lbs.	27,456,893	20,626,709	

The Dried Fruit Market.

[Bulletin of the Santa Clara Fruit Exchange for week ending July 19, 1893.]

The bottom of the Eastern dried fruit market seems to be in sight, if not actually reached, and there is a stiffening condition already perceptible, although no actual improvement in prices, and no increase of transactions. Apricots ought now to be freely moving from southern California, but almost nothing is doing. The few carloads that have been sold, beginning with a price of ten cents for choice rapidly ran down to 8¢.

The Exchange adheres to the opinion expressed from the first, that the average prices of prunes for the season will not be less than 6 cents. This opinion is based on the following among other facts: The Eastern apple crop, instead of being enormous as first reported, is very short. The report of a careful investigation made at our request is that New York will have from one-third to one-half a crop; Michigan about one-third of a crop, and the States west of these still less. The French crop, although doubtless large, will push hard for other outlets before seeking a market which will net their growers less than 4 cents a pound. The product, at the low rates at which the market has opened, will pass very rapidly into consumption, even in hard times; and finally the growers on this side are not in the condition which Eastern buyers may imagine them to be. The great majority are in a condition to hold their crops for a legitimate demand, and will not turn them over to the speculators at panic prices. In fact they could not if they desired, for speculators have no money.

The amount of prunes thus far sold at from 5 to 5½ cents is variously estimated at from 100 to 150 carloads, mostly short sales. If these shorts are filled without loss, it must be from out-of-the-way places, or from those who are not prepared to dry, and who will be compelled, when their fruit matures, to take whatever they can get, just as apricot-growers do now. We repeat our advice given early in the season—get ready to dry your own fruit; if you don't, you will sell cheap. Lack of money will prevent the usual competition from buyers.

Apricots.—The crop of the State is light, and of Moorpark's very light. Only two of our correspondents report apricots as "good," and one as "heavy." Canners here and over the State are doing nothing, or almost nothing. Some apricots will be packed if money can be had, but the most will be dried. Driers are beginning to offer growers not prepared to dry as low as \$15 per ton in this and other counties, and from that to \$25. For canning sizes occasional offers are made ranging from \$20 to \$35, usually on from 30 to 90 days' time for part of the money. Nobody who can possibly dry is selling at these prices. Those who cannot, must do the best they can. Considering our small crop, and the very high quality which our pack will have, dried apricots ought to be good property, and should not be unduly pushed on to the market.

Peaches.—The Eastern crop seems to be large; our own is a good crop, but not excessive. The

great majority of our correspondents report peaches either "fair" or "good." The late varieties are much better than the early. Canners and shippers, so far as buying, pay from \$25 to \$30 for suitable sizes and varieties. For drying purposes from \$10 to \$20 is reported as offered, here and there. There is some old stock in Eastern markets. At \$10 per ton for green fruit, dried fruit can be put in sacks for 4½ cents and peaches ought to be worth more than that, net, to any grower.

Prunes are evidently very uneven in this State. Almost exactly the same number of correspondents report prunes as "poor," "fair," "good," and "heavy." The crop in this vicinity, however, is "good." In the northern counties hot winds have been followed by a very severe drop. A few buyers of green prunes have appeared with a range of offerings reported from \$18 in Santa Barbara county to \$23 or \$30 in this vicinity. Very few sales, and none from those who can dry. Selling prunes at \$30 per green ton is about equivalent to selling dried prunes, sacked, at 4½ cents, if the shrinkage is 2½ to 1.

Wool.

Thos. Denigan, Son & Co. report as follows on the local wool market: "The week has been, like many preceding ones, dull, without any business except some few parcels of the best descriptions of Humboldt and Mendocino. Even this class of wool, which seems cheap when last year's prices are considered, does not attract buyers except when they can get best descriptions at their own prices, and even after buyers take a small quantity they frequently wish they had not done so. As to the ordinary run of spring clip there is absolutely no outlet for it. Scourers are taking an occasional parcel of eastern Oregon wool, but the largest share of our receipts from there is stored away for lack of interest in it. As to the coming fall clip it will be hard to do anything with it so long as our market is so heavily stocked with spring wool, which holders are unable to move even at last year's fall prices, and as the banks are not letting out money the probability is that no large amount of fall shearing will be done. Eastern papers and circulars from wool houses quote defective fall worth there, say 6 to 7 cents. Our San Joaquin and Southern falls are generally very defective, and if they are only worth 6 to 7 cents in Boston they will be difficult to sell here at prices as low as 5 to 6 cents. Already a few parcels of early lamb shearing have been received here, and so far there has been no trading in them except a couple of lots taken at 5 and 6 cents by scourers as test samples. We have no large sales to report and quotations are merely nominal. Liberal buyers could get liberal concessions on the quotations, but concessions do not attract buyers or stimulate trade in the slightest degree."

Provisions.

A decline has occurred in pork products during the week. Bacon has been reduced one-half a cent and lard is also lower. Eastern hams have also shown some weakness. General local conditions, however, remain about the same. Few hogs are being marketed and stocks in the country are very light.

Butter.

Supplies of butter continue good. The market has shown no change since last week. Choice stock brings an advance of quotations.

The general tone of cheese is better, though no recent advance in quotations has taken place. Stocks are not so heavy, and trade is improving. A better condition of things may be expected.

Eggs.

The improvement in the egg market has invited heavier shipment from the East. The domestic product is in good supply, and trade seems in fair condition.

Vegetables.

Quotations for potatoes are somewhat lower than a week since, but the demand is good and the general tone of the market is fair. Choice onions bring full figures, while poorer varieties of red are weak. Lima beans are sold in small quantities. Asparagus attracts small attention just now. Choice tomatoes from the river bring fancy figures. Green corn is abundant. Carrots are plentiful and have declined. The general vegetable trade is active and no complaint can be found with the demand.

Poultry.

But little choice poultry is coming in, though there is a great deal of poor stock. The market seems to offer little attraction for Eastern stock, and but little of the latter is coming in. Prices range about the same from week to week. The local consumption is not heavy.

Miscellaneous.

Honey keeps steady, and trade is of fair volume. The crop of 1893 does not appear to be so heavy as early reports indicated.

The tendency of the hay market is downward. The supply is large. Wire-bound hay sells below quotations.

Supplies of fresh meat are liberal, and the market generally has an easy tone.

Hops are steady, while prices higher than quotations have been asked in some cases.

Pink beans are scarce and firmly held.

This Year's Productions.

At the present writing it may be said the crop of strawberries was quite small over the entire country as compared with previous seasons; currants, gooseberries and cherries were also light. Blackberries appear short and raspberries are not an average yield.

All indications point to a good crop of plums, especially in the south and southwest. The watermelon crop, while not considered heavy, will be a good average. Muskmelons will be a fair crop, particularly throughout Delaware and Maryland.

The peach crop is said to be heavy, not only in the peninsula but throughout the North and West. Pears will show a large yield, and the Southern States promise an abundance, especially Le Contes. California is said to have a good crop of Bartlett's. Grapes will be a heavy crop. Western New York and Ohio promise immense yields, while California also reports favorable. Under the present conditions there appears reason for much encouragement among our fruit-growers and merchants, and it is to be hoped that the various markets will receive

equitable shares of the product, so as to prevent gluts and unsatisfactory prices.—New York Fruit Trade Journal, July 8th.

The Honey Crop.

This has not been a good year for beekeepers, as there has not been half a crop of honey, says the *Pomona Progress*. It has been two or three years since there was a large crop of the product, but when there is beekeepers make plenty of money. In a good year an average season's work for a stand of bees is 200 pounds of honey, though a particularly good stand will sometimes gather 500 pounds. The product sells for \$90 to \$140 a ton.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per cwt. for the past week:

	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Thursday....	5609d	5609d	5610d	5611d	5600d	5604d
Friday.....	5609d	5610d	5611d	5600d	5601d	5601d
Saturday....	5609d	5610d	5611d	5600d	5600d	5601d
Monday.....	5609d	5609d	5610d	5611d	5600d	5601d
Tuesday....	5609d	5609d	5610d	5611d	5600d	5601d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for this past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday....	293d	305d	293d	.....Firm
Friday.....	293d	305d	293d	.....Quiet
Saturday....	293d	310d	293d	.....Firm
Monday.....	293d	310d	293d	.....Steady
Tuesday....	293d	310d	293d	.....Quiet

To-day's cablegram is as follows:

LIVERPOOL, July 19.—Wheat—Cheaper to sell. California spot lots, 5s 11d; off coast, 29s; just shipped, 30s 6d; nearly due, 29s 3d; cargoes off coast, very slow; on passage, weaker; Mark Lane wheat, slow; French country markets, very inactive; wheat in Paris, quiet; flour in Paris, firm; weather in England, showery.

Eastern Markets.

The following shows this closing prices per bushel of wheat for the past week at

New York.

Day.	July.	Aug.	Dec.
Thursday.....	72½	73½	81½
Friday.....	72½	73½	82
Saturday.....	72½	73½	81½
Monday.....	71½	72½	81½
Tuesday.....	71½	71½	80½

The following is to-day's telegram—per bushel:
New York, July 19.—July, 70; August, 70½; December, 79½.

Chicago.

Day.	July.	Sept.	Dec.
Thursday.....	65½	69½	75½
Friday.....	65½	69½	75½
Saturday.....	65½	69½	76½
Monday.....	65½	69½	75½
Tuesday.....	63½	67½	74½

The following is to-day's telegram—per bushel:
CHICAGO, July 19.—July, 62½; September, 66; December, 72½.

Local Markets.

WHEAT.

	New.	Dec.
Thursday, highest.....	\$1 18½	\$1 31½
" lowest.....	1 18½	1 30½
Friday, highest.....	1 18½	1 31½
" lowest.....	1 19½	1 31½
Saturday, highest.....	1 19½	1 31½
" lowest.....	1 19½	1 31½
Monday, highest.....	1 19½	1 31½
" lowest.....	1 19½	1 31½
Tuesday, highest.....	1 17½	1 29½
" lowest.....	1 16½	1 28½

The following are to-day's recorded sales on Call:
Wheat—Morning—Informal Session—December, 100 tons, \$1.28½; 200, \$1.28½ per cwt. Regular Session—December, 700 tons, \$1.29½; 200, \$1.28½; 700, \$1.28½. Seller 1893, new, after August 1st—100 tons \$1.17½; 100, \$1.17½ per cwt. Afternoon Session—December, 200 tons, \$1.28½; 500, \$1.28½ per cwt.

BARLEY.

	New.	Dec.
Thursday, highest.....	83	92
" lowest.....	83	92
Friday, highest.....	83	92
" lowest.....	83	92
Saturday, highest.....	83	92
" lowest.....	82	91
Monday, highest.....	81	91
" lowest.....	81	91
Tuesday, highest.....	80	90
" lowest.....	80	90

The following are to-day's recorded sales on Call:
Barley—Regular Session—Seller 1893, new—100 tons, 80½c; 100, 80½c. December—600 tons, 90c; 100, 89½c. No. 1 Brewing, October—100 tons, \$1.02 per cwt. Afternoon Session—December—1000 tons, 89½c. May—100 tons, 96c; 300, 95½c per cwt.

Markets by Telegraph.

California Products in New York.

New York, July 16.—American produce ought to find a liberal outlet abroad this season, owing to diminished crops across the Atlantic. Hay, hops, wheat, oats, corn and dairy products have already made liberal departures at this early date. There are numerous bright spots in our monetary situation. Early in the week stocks broke down seriously, but rallied promptly with surprising vigor and closed without any feeling of alarm. The return of gold from abroad was also an incident of reassurance.

Wheat—Wheat has shown light option dealings. Exporters bought quite steadily, giving the market a wholesome firmness at the close. September closed at 75½c.

Corn—Corn in good demand. Advanced to 49c delivered.

Flour—Wheat flour has another high price; easy; spring patents, \$3.75@4.25; winter do, \$3.50@3.80.

Oats—Renewed export demand for oats in view.

A preliminary statement from the National Statistical Bureau makes the year's exports of wheat nearly 116,000,000 bushels. This quantity has been exceeded but four times in 20 years. The wheat flour total is about sixteen and three-quarter million barrels—the largest in 20 years.

Canned Fruits—There is some demand for water-planting places, but nothing of moment is leaving wholesale hands; prices weak.

Prunes—There are rumors of sales at 5 cents, free on board; buyers, however, not interested. Turkish, to arrive, 4½; no buyers above 6½ for French.

Peaches—No sale; no rate named for new evaporated, unpeeled. Small sales, old, 7½@8. Enough in store to last until the new are marketable.

Raisins—Three-crown, hags, nominal at 5; small sales best loose four-crown, boxes, \$1.50; layers, \$1.75. Spaniards say they will market goods 30 days in advance of California. If Valencia run a fine quality, they will again prove a price-making factor. The coast should keep this point in view.

Apricots—Buyers continue indifferent on the unsettled phase of future prices.

Fresh fruits ran variable in quality, but all prime lots moved well at good prices for the time. Eastern railroads are making preparations to handle 6,000,000 baskets of peaches from the peninsula. This is, perhaps, an extreme estimate, but it certainly means a heavy crop.

Wool—There was enough revival of business last week to show that manufacturers look for better times, but the volume of sales is comparatively small for the period, and prices continue low. The scouring basis for unwashed wools is only 40¢@45¢, which indicates the cheapness of such lines. Receipts exceeded prompt wants, and much interior stock remains unplaced. Many points which are evidently here at this time are loaded up with collections, for which

there are no treaties for spot sales nor encouraging advances current for shipment. Sales at New York were 300,000 pounds of domestic, including 28,000 scoured California and 226,000 foreign, all private. Philadelphia reports affairs the same as last week. Sales at Boston were 1,632,000 pounds domestic, including 95,000 spring California at 11¢13¢; 95,000 Texas, at 13¢15¢, and nearly 1,000,000 Territory at 15¢21¢. Washed wools range at 20¢29¢, the extreme for the best Ohio.

Lima Beans—The Arabia followed the Hitchcock with almost 52,000 bags, and the market for spot is tender at \$2. We hear of offers to land parcels in New York via steamer route at \$1.55 per bushel.

Honey—Buyers seem waiting for the full benefit of the decline.

Beeswax—25 to 26 to ordinary Tobes.

Hides—Fair business in best foreign. 11¢12¢, with California dry quoted at 10¢; sales, 4800.

Hops—There is no change, but there is more firmness in last prices. Account from abroad indicates injury to crops, especially in Germany. Trade here not active. Exports for the week, 325 hales.

Sales of California Fruit.

CHICAGO, July 18.—Porter Bros. Company sold at auction to-day six carloads of California fruit at the following prices: Tragedy Prunes, \$2.15¢2.30; German Prunes, \$1.75¢2.05; P. D. Plums, \$1.50¢1.90; Peach Plums, \$1.35; Peaches, \$1.10¢1.30; Apricots, 90¢¢1.25.

NEW YORK, July 18.—Porter Bros. Company sold at auction to-day seven carloads of California fruit at the following prices: Tragedy Prunes, \$2.4¢2.7; Washington Plums, \$3.62; Peach Plums, 90¢¢1.35; German Prunes, \$2.20¢2.10; Mixed Plums, \$1.60¢1.90; Plums, \$1.30¢1.60; Clyman Plums, \$1.40; Koenig Clay Plums, \$1.10¢1.35; Royal Hative Plums, 90¢¢1.40; Cherry Plums, 45¢; Hale's Early Peaches, 75¢¢1.55; St. John Peaches, \$1.25¢1.40; Bloodgood Peaches, \$1.30; Alexander Peaches, \$1.20¢1.20; Governor Garland Peaches, 75¢¢1.10; Bartlett Peaches, \$1.35¢1.95; Clapp's Pears, \$1.35; half-boxes Clapp's Pears, 75¢¢1.00; Peach Apricots, \$1.05; Royal Apricots, \$1.10; Apricots, 75¢¢1.05; Royal Ann Cherries, \$1.10; Figs, 45¢¢1.00.

MINNEAPOLIS, July 18.—Porter Bros. Company sold at auction to-day two carloads of California fruit at the following prices: Bartlett Pears, \$1.30¢1.45; Peaches, \$1.10¢1.35; Figs, 60¢.

NEW YORK, July 18.—The Earl Fruit Company sold California fruit to-day at the following prices: Cherries—Black Bigarreau, \$1.55¢2.45; Royal Ann, \$1.50¢1.85; Hale's Early Peaches, \$1.20¢1.40; Apricots, \$1.10¢1.35; Peach Plums, \$1.25¢1.40; Purple Duane, \$1.20¢1.30; Tragedy Prunes, \$1.25¢2.90; Bartlett Pears, \$1.40¢1.75.

CHICAGO, July 18.—The Earl Fruit Company sold California fruit to-day at the following prices: Tragedy Prunes, \$2.20¢2.25; Hale's Early Peaches, \$1.10¢1.35; Royal Apricots, \$1.10¢1.20; Cherries—Royal Ann, \$1.61¢1.45; Black Republican, \$1.50¢1.70; Bartlett Pears, \$1.35¢1.75.

BOSTON, July 18.—The Earl Fruit Company sold California fruit to-day at the following prices: Royal Apricots, 90¢¢1.30; Hale's Early Peaches, \$1.40¢1.60; Alexander Peaches, \$1.50; St. John, \$1.60; St. Catherine Plums, \$1.30¢1.50; Royal Hative Plums, \$1.80; Black Figs, crates, \$1.90¢2.00; boxes, \$1.30¢1.35; Bartlett Pears, \$1.75¢2.00.

MINNEAPOLIS, July 18.—The Earl Fruit Company sold California fruit to-day at the following prices: Bartlett Pears, \$1.35¢1.45.

The New York Raisin Market.

NEW YORK, July 17.—The Commercial Bulletin, reviewing the dried-fruit trade, says: Offers to sell raisins at prices below the open quotations have been made the past week, and it seems more than probable that the California growers and packers need to keep a watchful eye upon the Spanish packers this season, since the latter evidently are on the alert to gain every advantage that may accrue from the Pacific coast handlers of raisins holding the umbrella as they did the early part of last season.

There is, however, a redeeming feature in the fact that prices are exceptionally low and the carry-over of old stock is comparatively light. In the ordinary course of events the stock on hand is likely to be reduced considerably before the new goods come upon the market. There are no developments in the market for new-crop evaporated apricots and California peaches. The lowest offers made thus far fail to stimulate business men to any great extent.

Dried Fruits in Chicago.

CHICAGO, July 18.—Raisins—London Layers, 3-crown, 3/4 lb., \$1.65¢1.75; fancy, \$1.85¢2.00; Loose Muscatels, 3-crown, according to quality, 3/4 lb., \$1.25¢1.35; 4-crown, sacks, 3/4 lb., 5/8¢; 3-crown, 5/8¢; 2-crown, 4/8¢; off goods, 3/8¢. Prunes—60 to 50 to the lb., sacks, 3/4 lb., 12¢¢12 1/2¢; 50 to 60, 10¢¢11¢; 60 to 70, 10¢¢10 1/2¢; 70 to 80, 9¢¢10¢; 80 to 90, 9¢¢9 1/2¢; 90 to 100, 9¢¢9 1/2¢; 100 to 120, 8¢¢. Apricots—Choice to fancy, in sacks, 3/4 lb., 15¢¢15 1/2¢; fair to good, 13¢¢14¢. Peaches—Felled, 25-lb. boxes, 3/4 lb., 22¢¢24¢; sacks, 20¢¢22¢; unpooled, 8¢¢10¢. Nectarines—Red, in sacks, 3/4 lb., 10¢¢12¢.

Visible Supply of Grain.

NEW YORK, July 17.—The visible grain supply is as follows: Wheat, 59,368,000 bushels, a decrease of 2,452,000; corn, 8,843,000 bushels, an increase of 309,000; oats, 2,964,000 bushels, a decrease of 58,000; rye, 364,000 bushels, a decrease of 2000; barley, 392,000 bushels, a decrease of 2000.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations. JULY 19, 1893.

Strawberries, chest	500 @ 8 00	Grapes (green)	75 @ 1 00
Longworth, 500 @ 8 00		Crabapples...	50 @ 65
Sharpless, 400 @ 5 00		Do drawer...	25 @ 35
Gooseberries, lb	2 @ 3	Extra choice fruit for special	
Raspberries—		purposes sell at an advance	
chest, 300 @ 4 50		on outside quotations	
Blackberries, 300 @ 4 50		Beets, sk.,.....	1 @ 1 25
Cherries, box—		Carrots, sk.,.....	45 @ 50
Royal Ann, 50 @ 65		Okra, dry, lb.	15 @ —
Limes, Mex, 400 @ 4 50		Okra, green, bx	75 @ 1 00
Do Cal., 75 @ 1 00		Parsnips, ct.,	150 @ 2 00
Tomatoes, box, 1 50 @ 3 00		Peppers, dry, lb	5 @ —
Do Santa Bar., 400 @ 5 00		Peppers, gr'n, bx	35 @ —
Do Sicily choice 4 50 @ 5 50		Peas, lb.,.....	2 @ 2 1/2
Green Apples, bx 25 @ 3 05		Turnips, ct.,.....	— @ 75
Red Apples, bx., 50 @ 1 00		Cabbage, 100 lbs	50 @ 65
Currents, chest, 2 50 @ 4 50		Garlic, 3/4 lb.,.....	1 @ —
Apricots, box—		Cauliflower.....	60 @ 70
Royal, 25 @ 60		Celery.....	50 @ 60
Plums, 25 @ 50		Tomatoes, box	50 @ 65
Pears, bx., 30 @ 50		String Beans,...	2 @ 4
Pears, Bart., bx 50 @ 1 00		Rhubarb, bx.,...	30 @ 65
Peaches, box, 35 @ 75		Asparagus, box	50 @ 1 25
Peaches, bkt., 35 @ 65		Cucumbers, doz	50 @ 60
Figs, Black, bx 25 @ 50		Artichokes, doz	50 @ 60
Figs, White, bx 25 @ 40		Eggplant, bx.,	1 50 @ 1 75
Apples—		Summer squash,	
Watermelons—		box,.....	25 @ 60
per doz, 2 00 @ 3 00		Green corn, dz.	10 @ 12
Cantaloupes—		Corn, field, sk.	75 @ 1 25
per crate, 2 00 @ 3 50		Corn, hay, doz.	20 @ 2 2 1/2

Live Stock.

BEEF.	MUTTON.
Stall fed,.....	Wethers,.....
Grass fed, extra,.....	Ewes,.....
First quality,.....	Light, 3/4 lb, cents,.....
Second quality,.....	Medium,.....
Third quality,.....	Soft,.....
Bulls and Cows,.....	Feeders,.....
Range, heavy,.....	Stock Hogs,.....
Do light,.....	Dressed,.....
Dairy,.....	

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. JULY 19, 1893.

BEANS AND PEAS.	BAGS.
Bayo, ct.,.....	Standard Calc Grain,
Butter,.....	Spot,.....
Red,.....	June & July delivery, 6 @
Pink,.....	Potatoes, gunnies, 14 @ 15
Small White, 2 55 @ 2 65	Wool, 3 lb.,.....
Large White, 2 55 @ 2 65	Wool, 4 lb.,.....
Lima,.....	1892, fair,.....
Cal., poor to	Good,.....
fair, lb.,.....	Choice,.....
Do g'd to choice	Extra, city mills 4 @ 10
Do Giltedged,.....	Do country mls, 4 @ 10
Do Creamery,.....	Superfine,.....
Do do Giltedged,.....	Superfine,.....
Cal. Pickled,.....	NUTS—JOBBER.
Cal. Keg.,.....	Walnuts, hard

CHEESE.

Cal. choice	cream,.....
Do fair to good,.....	Do Giltedged,.....
Do Skim,.....	Young America,.....
Store,.....	Ranch,.....
Eastern,.....	Outside prices for selected
large eggs and inside prices	for sized sizes—small eggs
are hard to sell.	
FEED.	
Bran, ton,.....	Feedmeal,.....
Feedmeal,.....	Gr'd Barley,.....
Middlings,.....	Oil Cake,.....
HAY.	
Compressed,.....	Wheat, per ton,.....
Do choice,.....	Wheat and oats,.....
Wild Oats,.....	Cultivated do.,.....
Barley,.....	Alfalfa,.....
Alfalfa,.....	Clower,.....

GRAIN, ETC.

Barley, feed, ct, 77 1/2 @	Do good,.....
Do choice,.....	Do brewing,.....
Do Chevalier,.....	Do do Giltedged,.....
Buckwheat,.....	Corn, white,.....
Yellow, large,.....	Do small,.....
Oats, milling,.....	Feed, choice,.....
Do good,.....	Do fair,.....
Do common,.....	Surprise,.....
Black feed,.....	Gray,.....
Rye,.....	Wheat, milling
Giltedged,.....	Shipping, choice 1 17 1/2 @
Off Grades,.....	Off Grades,.....
Sonora,.....	

WOOL.

California, year's fleece 90¢10¢	Do, 6 to 8 months,.....
Do, 8 to 10 months,.....	Do, Foothill,.....
Do, Northern,.....	Do, extra Humboldt
and Mendocino,.....	Nevada, choice, light,.....
Do, heavy,.....	Do, heavy,.....
Oregon, East'n, choice,.....	Do, Eastern, poor,.....
Do, Valley,.....	

PROVISIONS.

Cal. bacon,.....	heavy, per lb.,.....
Medium,.....	Light,.....
Lard,.....	Cal sm'd beef,.....
Hams, Cal.,.....	Do Eastern,.....
SEEDS.	
Alfalfa,.....	Clower, Red,.....
White,.....	Flaxseed,.....
Do, 4 to 6 months,.....	Do, 6 to 8 months,.....
Do, brown,.....	White,.....

HONEY.

White comb,.....	2-lb frame,.....
Do do 1-lb frame,.....	Do do 1-lb frame,.....
Do do 1-lb frame,.....	Do do 1-lb frame,.....
Do do 1-lb frame,.....	Do do 1-lb frame,.....
Do do 1-lb frame,.....	Do do 1-lb frame,.....
Do do 1-lb frame,.....	Do do 1-lb frame,.....
Do do 1-lb frame,.....	Do do 1-lb frame,.....
Do do 1-lb frame,.....	Do do 1-lb frame,.....
Do do 1-lb frame,.....	Do do 1-lb frame,.....
Do do 1-lb frame,.....	Do do 1-lb frame,.....

Spider's Web for Telescopes.

The fineness of the spider's web long ago suggested its use as a textile material in place of silk, and very delicate fabrics have been thus produced. But it was evident that no results of practical value could be attained in this line, unless spiders could be reared in large numbers and the thread wound from their cocoons. Individually the spider lends himself to this purpose in a very satisfactory manner; but the thing which interfered with the prosecution of the industry, and finally frustrated it altogether, was the inconvenient habit which the large spiders have of eating the smaller ones, this practice continuing in a colony until in a very short time only the biggest spider remained, rendered still bigger by having assimilated its companions.

One important use remains, however, to which the spider's web is admirably adapted—that of making the vertical and horizontal lines which are stretched across the field of vision of a telescope. Nothing better than the spider's web can be desired for this purpose, it being very strong as well as fine, and proof against expansion or contraction by heat, cold or moisture. It was at one time supposed that the best threads might be obtained from the large spiders of China, but experience has shown that the American "turtle-back" spider has no superior in this respect. It abounds in the neighborhood of Washington, where its web is gathered to be used in the telescopes of the United States Naval Observatory.—The Paper Mill.

Functions of the Bee's Sting.

It will be a surprise to many to learn that, after all, the most important function of the bee's sting is not stinging. I have long been convinced that the bees put the finishing touches on their artistic cell work by the dextrous use of their stings, and that during this final finishing stage of the process of honey-making the bees inject a minute portion of formic acid in the honey. This is, in reality, the poison of their sting. The formic acid gives to the honey its peculiar flavor, and also imparts to it its keeping qualities. The sting is really an exquisitely contrived little trowel, with which the bee finishes off and caps the cells when they are filled brimful of honey. While doing this

The Judson Fruit Company,

308 and 310
WASHINGTON STREET
San Francisco, Cal.

the formic acid passes from the poison bag, exudes drop by drop from the point of the sting, and the beautiful work is finished.—Baltimore News.

The Care of the Hair.

The best hair-dressers tell us that it is quite an easy matter to wash the hair too often and thereby destroy the vital oils essential to its growth. The use of bay rum or any stimulants, or of borax or alkalis of any kind, is condemned by some of the authorities. One of the best things for washing the hair is the white of an egg, which is especially nourishing on account of the albumen which it contains. It should be rubbed thoroughly through every part of the hair and rinsed out with tepid water. It will require repeated rinsing before the water runs clear, but not until then is the process thoroughly accomplished.

When applying the white of the egg, rub it on with the tips of the fingers, touching every part of the scalp, and continue this vigorous manipulation of the scalp for several minutes. Where any soap is used, the best quality of white castile is alone allowable. Some hair is so naturally dry and free from oil that a little pure vaseline should be applied after it is washed and dried. Other hair possesses enough natural oil in itself and does not require any such addition. Where the hair has become dead, or does not grow vigorously, a preparation of rum and quinine or some of the various tonics of quinine sold by trustworthy hair-dressers will be found valuable.

There is an excellent one which has in it a portion of oil of neroli or the essential oil of bitter oranges as a component part. This gives a refreshing fragrance and is possessed of valuable tonic qualities. The hair should be clipped monthly. This assists the growth materially and stimulates it.—New York Tribune.

GRANGERS' BUSINESS ASSOCIATION,

(A Corporation).
Principal Place of Business, 108 Davis St.,
San Francisco, Cal.

NOTICE.

There are delinquent upon the following described stock, on account of assessment levied on the 8th day of May, A. D. 1893, the several amounts set opposite the names of the respective shareholders, as follows:

Name.	No. of	Certificate.	Shares.	Amount.
D. Q. Adams,.....	220	8	20	00
Nathan Barnes,.....	231	16	40	00
G. W. Brake,.....	44	2	2 50	
Nelson Carr,.....	61	20	25	00
Jas. A. Clark,.....	59	20	50	00
Annetta Clark,.....	60	4	10	00
Clement V. Detten,.....	146	2	2 50	
T. G. Frost,.....	77	2	5 00	
W. H. Frye,.....	76	20	50	00
J. A. Holliday,.....	76	4	10	00
Joseph Huntly,.....	170	4	10	00
Mrs. Joseph Huntly,.....	171	4	10	00
H. M. Hollenbeck,.....	238	8	20	00
Mrs. H. M. Hollenbeck,.....	239	8	20	00
C. H. Holliday,.....	251	6	15 00	
H. M. Jewell,.....	111	38	95	00
John Johnson,.....	96	4	5 00	
Mrs. Sarah Johnson,.....	456	10	25	00
Mrs. T. E. Ketchum,.....	139	12	15	00
T. E. Ketchum,.....	140	28	35	00
Geo. A. Lamont,.....	464	60	150	00
Mrs. L. E. McMahon,.....	124	20	60	00
C. W. Plass,.....	212	20	60	00
P. Peterson,.....	303	28	70	00
P. Peterson,.....	361	14	35	00
P. Peterson,.....	469	28	70	00
Thomas B. Pilkington,.....	312	8	20	00
E. M. Smith,.....	168	20	25	00
L. Stone,.....	206	20	50	00
Mrs. Julia E. Sylvester,.....	352	4	10	00
J. B. Sheat,.....	434	8	20	00
Thomas Salmon,.....	428	20	25	00
G. W. Tillotson,.....	199	4	10	00
A. A. Van Sandt,.....	200	4	5 00	
J. P. Vincent,.....	243	10	12 50	
Uriah Wood,.....	161	54	135	00
J. Wisecarver,.....	184	8	20	00

And in accordance with law, and an order of the Board of Directors, made on the 8th day of May, 1893, so many shares of each parcel of such stock as may be necessary will be sold at the office of the Corporation, 108 Davis Street, San Francisco, California, on WEDNESDAY, the 12th day of July, 1893, at three (3) o'clock p. m. of such day, to pay delinquent assessments thereon, together with costs of advertising and expenses of sale.

CHARLES WOOD,
Secretary Grangers' Business Association.
Office, 108 Davis St., San Francisco, Cal.

POSTPONEMENT.

Notice is hereby given that the above and foregoing sale is postponed until the 26th day of July, 1893, at the hour of three o'clock p. m., and said sale will take place and be held on said 26th day of July, 1893, at the hour of three o'clock p. m., at the office of the corporation, No. 108 Davis Street, in the City and County of San Francisco, State of California.

By order of the Board of Directors.
CHARLES WOOD,
Secretary Grangers' Business Association.
Office, 108 Davis St., San Francisco.
July 12, 1893.

— We are now better than ever prepared to receive consignments of all kinds of perishable products, such as Fruits, Vegetables, Eggs, etc. Our facilities for cool, dry storage and packing for long-distance shipping cannot be excelled. It is our constant aim to make our consignors and our customers stay with us.

HORSE COLLARS

—AND— SADDLERY GOODS.

Davis & Son's Horse Collars are not filled with Self-Pulverizing Cork.

The U. S. Inspector of Harness Supplies and Horse Collars selected Davis & Son's make—both harness and collars. And so will all persons who want a solid, broad-faced, smooth collar which does not pinch the neck nor roll about unsteadily for three months before it settles down to a fitting shape or set squarely back on the shoulder. If you want a collar not stuffed with wads but our collars, as all other makes on this coast are wad collars. All wad stuffed collars flatten down in a short time so that a sweat collar is needed to protect the horse from the wads or ropes of straw. Davis & Son's Collars are all put under a powerful shaper or press before finished, which solidifies them into a perfect shape, which allows the collar to set with its whole face against the shoulder. When a wad-stuffed collar is brought under this force it shows the old wad-stuffed collar to be merely a Puff Ball. Send or bring in to our factory in this city any collar and see this done, and see what a Fan Cake you have been selling to the people for collars. Our Boston Team long straw collars have no wads. The Rod of our Great Machine is supplied with small teeth on its lower surface like a fine saw. It picks up and carries with it as it flies through the straw a long straw in each tooth, all of which are deposited in the collar, one behind the other, with more precision and regularity than human skill could ever accomplish, thus avoiding all lumps and wads, not even two straws crossing each other.

HAME ROOM.

No Collars on this Coast or elsewhere have as good Hame Room as the Davis & Son's Collar.

410 Market St., San Francisco.

Educational.

Bowens Academy,

University Ave., Berkeley.

BOARDING AND DAY SCHOOL For Boys and Young Men.

Special university preparation, depending not on time but on progress in studies.

T. S. BOWENS, M. A., Head Master.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,

Surveying, Architecture, Drawing and Assaying,

723 MARKET ST., SAN FRANCISCO, CAL.

California Crops.

[Summary of Report of Observer James A. Barwick for Week Ending July 15, 1893.]

Placer County (Newcastle) — Admirable weather for perfecting of fruit in the orchards. Crawford peaches being marketed. The orchardists will be kept busy from now until next November. (Towles) — The hay crop is unusually large and the apple crop will be a good one.

Yehama County (Corning) — This place and the country north was visited on Monday evening, the 10th instant, with a thunder storm. Rain at this time would do much to damage farmers, by destroying stubble feed and wetting sacks of grain in the fields waiting to be hauled. Of course it would benefit young orchards. Before the rain and the day after a cool wind blew. The prunes in portions of this county have suffered from blight, which almost rendered the fruit unfit for use.

Butte County (Gridley) — Fruit has matured slowly and is well developed. Work in orchard and field has been better, and grain filled plump to a great extent. Rain fell at Red Bluff Monday night. (Union District) — Heading nearly finished and thrashing will soon begin. Fruit-picking will begin this week. Wheat is turning out about eight sacks per acre. (Oroville) — Harvesting is in full blast all over the county. The crop is turning out light, though in many instances better than the farmers expected. On some ranches near the Sutter county line, where high water prevailed, the crop will not pay for harvesting.

Sutter County (West Butte) — Harvesting and thrashing are in full blast, but will not last long. The crops are mostly of a light character, though some pieces of grain have turned out fairly good. (Yuba City) — In the orchards the work of packing and shipping has been going on lively during the past week, the crop ripening being mostly Hale's Early peaches, plums, pears and apples, and the same are sent to the Eastern markets.

Yuba County (Wheatland) — All is bustle and work around the hop houses. At this time the new kilns and cooling rooms are going up, kilns are being cleaned and improvements made. In the yards the hops are forming rapidly. Picking will be commenced between the 5th and 10th of next month.

Yolo County (Winters) — Two shipments of carload lots of green grapes were made during the week to the East.

Solano County (Fremont) — The orchardists hereabout complain of a very light crop of almonds. Frost at a critical time was probably the cause of the light yield. Other varieties are up to the average. There will be a heavy crop of grapes. (Dixon) — There is a pronounced difference between the fruit grown on the plains and in the foothill valleys of the county this year, and it is in favor of the plains. (Denver) — The crop in the Montezuma will be an average one, turning out from 12 to 14 sacks per acre.

Sonoma County (Forestville) — Damaging conditions do not exist. All crops would have done better if the regular June fog had come at the proper season. The ground is very dry and small plants are suffering from that cause. Potatoes are looking well. Hay crop baled and stored. Thrashing begun and yield fair. Corn fields being weeded out for the last time. Peaches and berries crowding the markets. Some apples are being shipped. (Petaluma) — This year's grape crop will be an unusually large one. (Santa Rosa) — Absence of foggy weather causes the blackberries to ripen too rapidly and retards their development in size. Prune crop looking well; quantity not up to the average, but the quality is above. (Cloverdale) — The grape outlook is immense, and it is thought the wineries and distilleries will be able to handle the crop.

Santa Clara County (Mountain View) — In most of the orchards the early varieties of apricots are coloring, and in a couple of weeks the harvest will begin, but it will be the first of August before the liveliest period will be reached. The dropping of this fruit will be more than usual this season.

San Benito County (Hollister) — Inquiry develops the fact that San Benito county's fruit prospect this year is first-class. The relative yield of apricots and prunes will be about the same and there will be a heavy crop in both varieties.

Monterey County (San Ardo) — Thrashing going on and grain turning out well. A big yield anticipated.

Stanislaus County (Turlock) — Harvesting is well advanced and the average for wheat will be about 10 bushels to the acre.

Kings County (Stringtown) — Apricots are about all picked and dried, and preparations are now being made for nectarines and peaches.

Ventura County (Nordhoff) — Fruit drying and marketing is the business in this section just now. Apricots are ripening very rapidly and must be handled quickly to save the crop.

San Bernardino County (Redlands) — Deciduous fruits are coming in very heavily, and shipments to Eastern points are large. Apricot and peach crop unusually large. Varieties large. Prospects for coming citrus fruits very good, though the trees are not so heavy as at this time last year. (Chino) — The warm weather is beginning to ripen the beets. They are showing an increase in sugar constituents and purity, though yet not what it is desired they should be.

Riverside County (Beaumont) — Very comfortable weather, which is excellent for fruit and grain harvesting. (Arlington Place) — The output for the coming crop of the Magnolia Fruit Company is estimated at 300 carloads. (San Jacinto) — Apricot-drying is hurrying the mesa fruit farmers. Quantities of luscious apricots are out and exposed every day to the hot rays of the sun.

San Diego County (Escondido) — The grain product of this region for this year will far exceed that of any previous season. (San Marcos) — Phil Rutherford has thrashed 601 sacks of oats from 20 acres, and J. J. Gray has baled 11 tons of tame-oat hay from 2½ acres. Who says crops cannot be raised without irrigation? (National City) — The olive-oil works shipped within the past two weeks 40 cases of oil to Chicago, 25 cases to St. Louis, and small quantities to Coronado. The apricots forwarded to the World's Fair by express from San Diego are reaching there in fine condition, and Mr. Allen says they are the best on exhibition from anywhere.

SPECIAL ANNOUNCEMENT.

We have made arrangements with Dr. B. J. Kendall Co., publishers of "A Treatise on the Horse and his Diseases," which will enable all our subscribers to obtain a copy of that valuable work free by sending their address (enclosing a two-cent stamp for mailing same) to Dr. B. J. KENDALL CO., ENOSBURGH FALLS, VT. This book is now recognized as standard authority upon all diseases of the horse, as its phenomenal sale attests, over four million copies having been sold in the past ten years, a sale never before reached by any publication in the same period of time. We feel confident that our patrons will appreciate the work, and be glad to avail themselves of this opportunity of obtaining a valuable book.

It is necessary that you mention this paper in sending for the "Treatise." This offer will remain open for only a short time.

Three and One-Half Days to the World's Fair.

We take pleasure in advising the readers of the PACIFIC RURAL PRESS that the UNION PACIFIC is the most direct and quickest line from San Francisco and all points in California to the WORLD'S FAIR.

It is the ONLY LINE running Pullman's latest improved vestibuled Drawing-Room Sleepers and Dining Cars from San Francisco to Chicago without change, and only one change of cars to New York or Boston.

Select Tourist Excursions via the UNION PACIFIC leave San Francisco every Thursday for Chicago, New York and Boston in charge of experienced managers, who give their personal attention to the comfort of ladies and children traveling alone.

Steamship Tickets to and from all points in Europe.

For tickets to the World's Fair and all points east and for Sleeping-Car accommodations call on or address D. W. Hitchcock, General Agent Union Pacific System, No. 1 Montgomery street, San Francisco.

Our Agents.

J. C. HOAG—San Francisco.
R. G. BAILEY—San Francisco.
F. D. HOLMAN—California.
GEO. WILSON—Sacramento, Cal.
SAMUEL B. CLIFF—Creston, Cal.
A. C. GODFREY—Oregon.
E. H. SCHAEFFLE—El Dorado and Amador Co's.
D. A. MACDONALD—Siskiyou and Del Norte.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos., \$1. 10 mos., \$2; 15 mos., \$3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

DEWEY & CO
PATENT
SOLICITORS.
220 MARKET ST. S.F.
ELEVATOR 12 FRONT ST. S.F.

CALIFORNIA FRUITS AND HOW TO GROW THEM.

A practical, explicit and comprehensive book embodying the experience and methods of hundreds of successful growers, and constituting a trustworthy guide by which the inexperienced may successfully produce the fruits for which California is famous. 800 pages. Fully illustrated. Price \$3. Postpaid. Send for circular. DEWEY PUBLISHING CO., Publishers, 220 Market Street, San Francisco, Cal.

Seeds, Plants, Etc.

AN INVITATION

IS EXTENDED TO ALL INTERESTED TO VISIT THE SAUSAL FRUIT FARM DURING THE FRUITING SEASON, WHERE ALL VARIETIES ARE TESTED THAT ARE GROWN AT

NAPA VALLEY NURSERIES.

AN INSPECTION OF THE NURSERIES ALSO SOLICITED. CLEAN STOCK, UNIRRIGATED, PROPAGATED FROM BEARING TREES.

LEONARD COATES, NAPA, CAL.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrobalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

OLIVE TREES.

ALL KINDS OF

Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,
Pomona, Cal.



HEADQUARTERS
For Rare new Tropical fruit and ornamental plants and trees. Palms, Ferns, Orange Trees, Pineapples, Bamboos, Aquatics, Etc.
Plants safely shipped everywhere. Send stamp for new and full catalogue which tells all about this subject.
REASONER BROS
Oreco, Fla.

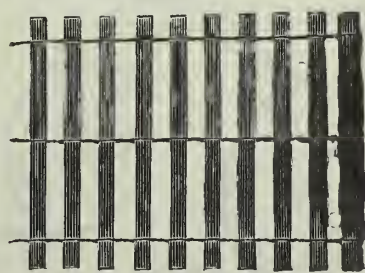
RABBIT-PROOF STOCK FENCE.

Cheap, Durable and Effective.

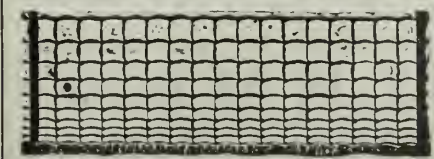
Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2½ ft., 4 ft., 4½ ft., and 6 ft. high. Send for circulars and price list to

JUDSON M'F'G CO.,

12 & 14 Fremont St. San Francisco.



The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.



SAMPLE TESTIMONIAL.

Millbrook, N. Y., June 27, 1893.
Gentlemen:—Please send me by freight at your earliest convenience, 320 rods of 24-inch fence.
The 66-inch fence (400 rods) is standing straight as a string and is perfectly satisfactory.

Yours truly,

OAKLEIGH THORNE.

Mr. Thorne is one of the most noted importers and breeders in this country.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Commission Merchants.

DALTON BROS.,
Commission Merchants,

—AND DEALERS IN—

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

Grain, Wool, Hides, Beans and Potatoes.

Advances made on Consignments.

308 & 310 Davis St., San Francisco.

[P. O. Box 1936.]

Consignments Solicited.

P. STEINHAGEN & CO.



404 & 406 DAVIS ST. S.F.

ALLISON, GRAY & CO.

501, 503, 505, 507 & 509 Front St.,
And 300 Washington St., SAN FRANCISCO.

GENERAL
COMMISSION MERCHANTS

GREEN and DRIED FRUITS,
POULTRY, EGGS, GAME, GRAIN, PRODUCE
AND WOOL.

MOORE, FERGUSON & CO.
WOOL, GRAIN, FLOUR

General Commission Merchants,
310 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

[ESTABLISHED 1864.]

GEORGE MORROW & CO.,
HAY and GRAIN

COMMISSION MERCHANTS,
39 Clay Street and 23 Commercial Street
SAN FRANCISCO, CAL.

SHIPPING ORDERS A SPECIALTY.

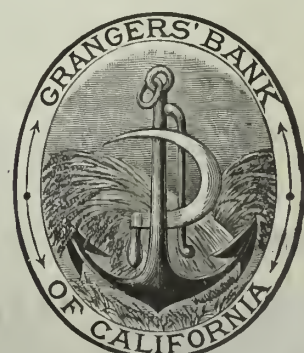
LINDSAY & CRAIG,
Crocker Building.....San Francisco.

Mortgages Bought, Loans Negotiated.

Several buyers on hand for desirable Fruit and Grain Ranches.

GRANGERS' BANK
OF CALIFORNIA.

SAN FRANCISCO, CAL.
INCORPORATED.....APRIL, 1874



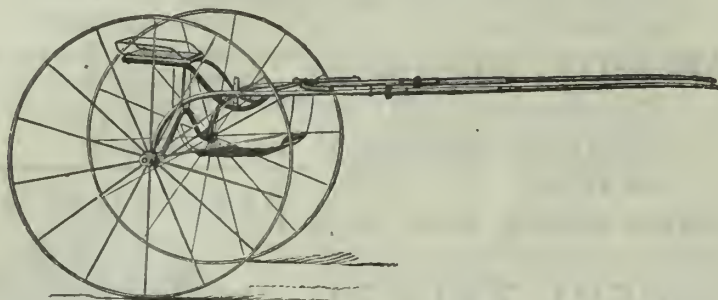
Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 800,000
Dividends paid to stockholders.... 720,000

OFFICERS.

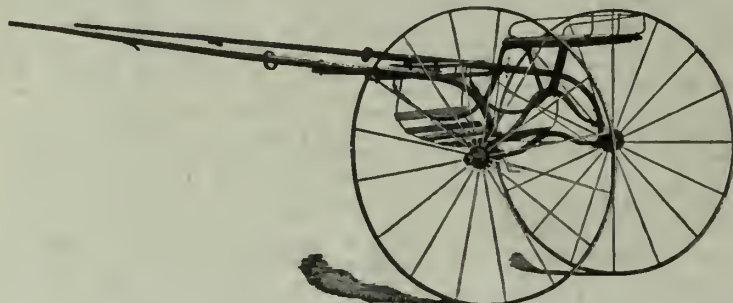
A. D. LOGAN.....President
I. O. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK MCMULLEN.....Secretary
General Banking. Deposits received, Gold and Silver.
Bills of Exchange bought and sold.
Loans on wheat and country produce a specialty.
January 1, 1893. A. MONTPELLIER, Manager.

Buggies, Road Wagons, Carts ^{A AND D} Harness.

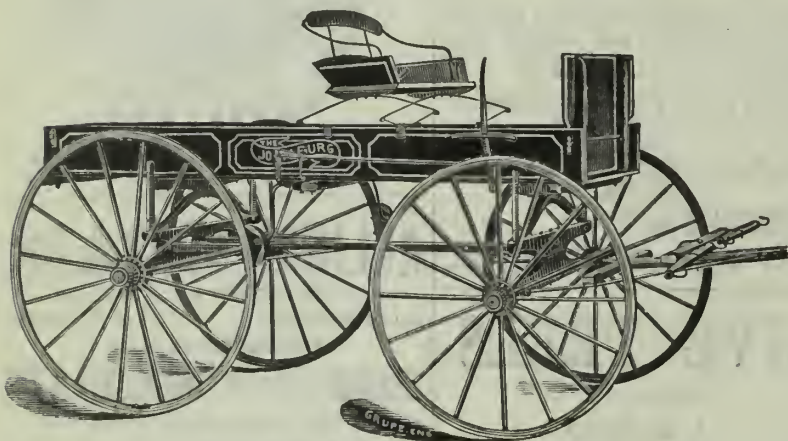
A COMPLETE STOCK.



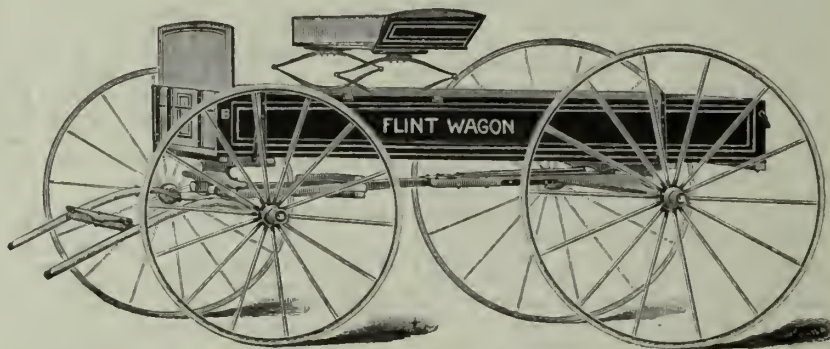
No. 25 Speeder, With Steel Foot Rest.



No. 95 Cart.



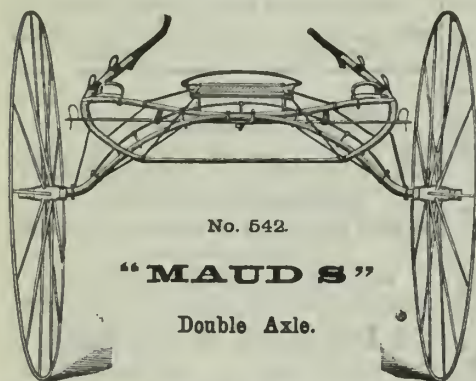
John Burg Half-Spring Wagon.



Flint One-Horse Wagon, With or Without Springs.

WRITE US FOR CATALOGUE.

DEERE IMPLEMENT CO., 305 & 307 Market St., San Francisco.



No. 542.

"MAUDS"

Double Axle.

NOW! NOW!!

IS THE APPOINTED TIME

Less than Actual Cost.

No. 542

"MAUDS" Double-Axle Sulky

Acknowledged by Leading Horsemen to be the

STIFFEST AND BEST

Track Sulky Now Made at

Cal State Library 41 '93 76822

WE HAVE AN OVERSTOCK
OF THE

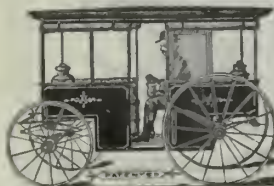
Regular and Pneumatic Tire Sulkies,
And for a Limited Time Will Sell for Less
Than Actual Cost.

NANCY HANKS
Record 2:04

TROTTED THE FASTEST mile on record when hitched to a Sulky with Ball Bearing, Pneumatic Tired Wheels. We can furnish you with a No. 24 Nancy Hanks Sulky with Pneumatic Tired Ball Bearing Wheels. This price includes the regular Sulky wheels as well and either style may be used. We solicit your order. Remember we give you the regular wheels in addition to the Pneumatic Tired Wheels. So you have two sets of wheels with each Sulky.

WRITE FOR PRICES.

Truman, Hooker & Co.
SAN FRANCISCO and FRENCH.



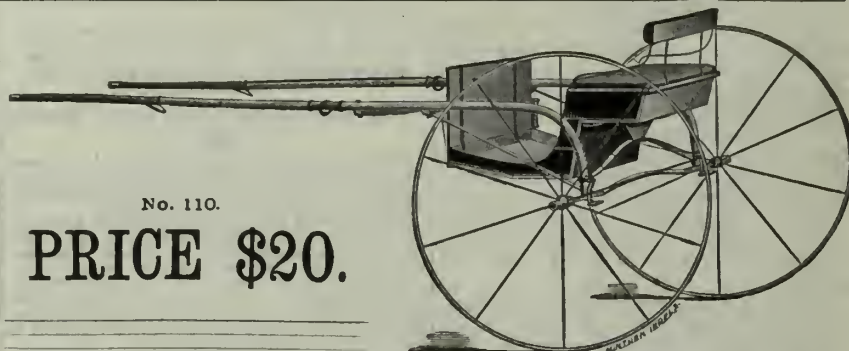
MILKMEN

Who ride in those famous

"LOW-DOWN" WAGONS

are protected from the storm. They never have lame backs. They never slip or fall getting in and out. Their milk is not churned. THEY LIVE LONG AND THEY PROSPER. You can get full particulars by writing the

PARSONS "LOW-DOWN" WAGON CO., Earlville, N. Y.



No. 110.

PRICE \$20.

50% SAVED.



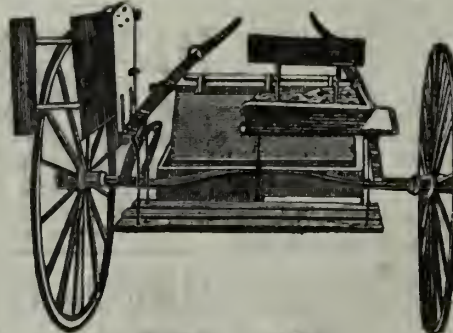
No. 60. Price \$80.



No. 201. Price \$195.

HARNESS, \$7
HARNESS, \$10
SURRIES, \$155

WRITE FOR
CATALOGUE
OR CALL.



No. 25 1/2. Price \$30.

HARNESS, \$7
HARNESS, \$10
SURRIES, \$155

WRITE FOR
CATALOGUE
OR CALL.

WORLD'S FAIR, CHICAGO
THE PULLMAN HOTEL
55th St. and Washington Ave.
Three blocks from main entrance. Best of R.R. and street car service. First-class cafe. Rates \$1 to \$2.50 per person. Write for circular.

CALIFORNIA

If you want to know about California and the Pacific States, send for the PACIFIC RURAL PRESS, the best illustrated and leading Farming and Horticultural Weekly of the Far West. Trial, 50c for 3 mos. Two sample copies, 10 cents. Established 1870. DEWEY PUBLISHING CO., 220 Market St., San Francisco.

CALIFORNIA WAGON & CARRIAGE CO.,

36 1/2 to 44 1/2 FREMONT STREET,

SAN FRANCISCO, CAL.



Vol. XLVI. No. 5.

SAN FRANCISCO, SATURDAY, JULY 29, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market St.

Tagosaste in California

The account on another page of the value of tagosaste in South Australia has the greater interest for Californians from the fact that the plant was introduced to this State more than a decade ago by the State University, and the seed has been distributed from year to year to local experimenters in different parts of the State. Some of these parties have reported the thrift and beauty of the plant but have not said much of its forage value. It should be clearly understood that it is not a fodder plant in the ordinary acceptance of that term. In California it makes a high shrub and had to be moved out of the Berkeley garden because of its unfitness for a situation given to grasses, clovers and the like. The plant easily attains a height of ten feet or more and makes tree-like trunk and branches. If thus grown it would make good forage for camelopards but lowlier animals would starve under its shade after they had browsed the lower branches. The plant is evidently unsuited for our rich valley lands; even on unirrigated adobe it grows as we have described, where it is not disturbed during its early years. If planted in connection with orchards or vineyards it would make a thicket which would soon have to be grubbed out, unless it was trimmed to hedge-like proportions.

Since the above points of its growth were seen at Berkeley the plant has not been recommended by the University people except for trial on waste lands where shrub-forage is the only kind likely to withstand adverse conditions. In such places, if given to browsing before it attains too great size, it might be forced to make a low, spreading growth and would never get beyond the reach of sheep, goats or horned stock. On dry waste lands it might thus be a valuable addition to the indigenous shrubs which please live stock.

One difficulty with the establishment of tagosaste on waste lands is that it does not readily start from the seed. It is a leguminous plant with a flower something like the locust tree and, like it, has a very hard, polished black seed which is difficult of germination unless soaked for a time before sowing. To scatter the seed on dry ground or to sow in the winter and allow it to take

its chance of drouth and moisture does not usually succeed well. Most experimenters report no result from seed carelessly scattered in waste places. It will probably be better to soak the seed in warm water, sow in boxes and trans-

Coast Range Scenery.

Though the Sierra Nevada can claim the grandest scenery which railways make accessible to the traveling public, the lines which cross and thread the coast ranges bring to view scenery which for variety and picturesqueness is unexcelled. We have shown this fact in our illustrations from time to time and the engraving on this page is also put in evidence. When the Donohue line passed northward of Cloverdale it entered the canyon by which the Russian river breaks through the Coast Range. It is a region of exceptional beauty, changing from the charm of leafy shade and gentle slopes to the grandeur of high cliffs, bold headlands and pitting rocks. The character of the country made some difficult construction for the railway contractors and added to the delights of the traveler. Our picture gives an instance of this. The lofty rock, rising several hundred feet from the water's edge, seemed a barrier to the road except for the art of tunneling. The tunnel takes its name from the peculiarity of the topography, which gives echoes of assorted sizes and volumes without limit.

THE WINE-GROWERS' UNION at St. Helena proposes to lead a movement for co-operation among wine-producers of the State. It is designed to form a pool and place the marketing and sale of all old-stock wine in its hands; nominate a board of directors on the basis of one for each million gallons; appoint a manager who shall effect sales under direction of the board; the wine is to be taken by the pool at its present market value, and each producer is to receive a certificate entitling him to an undivided pro rata interest in the wine held by the pool. No more wine shall be offered than the market will bear at an advanced price, and the proceeds and profits shall be divided proportionately. We understand this proposition to be substantially the same as has been made before; but, as the necessity of co-operation is now



ECHO TUNNEL IN THE RUSSIAN RIVER CANYON ON THE DONOHUE ROAD.

plant when a few inches high, giving the plants some protection from animals during the first year's growth. Tagosaste seed can usually be had during the winter by application through the mails to the Experiment Station, Berkeley.

greater than ever, and its entire feasibility has been amply demonstrated in other lines, the conditions for success are more favorable. It seems to be the only way to bring wine up to a price at which there shall be a profit to the grower.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half inch (1 square).....	1.00	2.50	6.50	22.00
One inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager

San Francisco, July 29, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—Echo Tunnel in the Russian River Canyon on the Donohue Road, 85.
EDITORIALS.—Tagosaste in California; Coast Range Scenery; The Wine-Growers' Union, 85. The Week; The Wheat Situation; Distinguished Pomologists May Come; Miscellaneous, 86. From an Independent Standpoint; Editorial Correspondence, 87.
CORRESPONDENCE.—Concerning Pensions, 87.
MISCELLANEOUS.—Gleanings, 88.
THE FIELD.—A Drought-Resisting Fodder Plant; Resources of Southern Counties; Do Not Pick Hops too Early; Cost of Bean Culture, 89.
HORTICULTURE.—Modern Manufacture of Olive Oil; Ladybird Eats the Red and Black Scale; Fighting the Codlin Moth; An Australian in Our Orchards, 90. An Average Prune Acre in Tulare; To Destroy the Red Spider, 91.
WORLD'S FAIR.—California at the Fair, 91.
THE DAIRY.—How to Make Cheese at Home; Size of the Dairy Cow, 91.
POULTRY YARD.—Lice and Warm Days; Table Scraps; One Remedy for Lice, 91.
THE HOME CIRCLE.—92.
YOUNG FOLKS' COLUMN.—93.
DOMESTIC ECONOMY.—93.
PATRONS OF HUSBANDRY.—From Worthy Master Davis; July Letter from New Hope; Accommodations at Petaluma; Sonoma County Pomona Grange, 94.
AGRICULTURAL NOTES.—94-96.
MARKET REPORTS.—97-98.

BUSINESS ANNOUNCEMENTS.

(NEW THIS ISSUE.)

	PAGE
Fruit Paper—Paraffine Paint Co.....	100
Coiled Spring Fence—Page Woven Wire Fence Co., Adrian, Mich.....	99
Roofing Felt and Paint—Gum Elastic Roofing Co., New York.....	99
Real Estate—John F. Byrbee.....	98
Spark's Mammoth Apricot—N. B. Smith, Ventura.....	98
Hogs—H. J. Philpott, Niles.....	96

See Advertising Columns.

The Week.

Midsummer quiet continues. While the financial sky is still clouded people seem disposed to undertake nothing, to risk nothing, in fact to do nothing which can be decently postponed. The condition might not be deplored, perhaps, were it not that the agricultural producer's interests demand activity and some attention on the part of the public. While his crops are growing he could better endure such a state of the public mind, but his harvest demands activity, interest and confidence in others as well as in himself. For these reasons the present state of affairs is deeply to be deplored. The only consolation one can summon is that it might be worse, and that in the midst of embarrassments people are working along as well as possible with such accommodations as they can secure. This very fact is itself a surety of better times. Courage and confidence move forward, though they unfortunately have only feet while distrust and apprehension are winged. Every liberal thought, every trustful act, if wisely done, and every generous impulse, as well as every stroke of earnest work, will have its influence in the restoration of the public mind and heart.

VICE-PRESIDENT ADAMS, of the Santa Clara Fruit Exchange, has prepared the following valuable table to assist growers in determining whether they shall sell green or dry:

Peaches and Apricots.—Estimate of average shrinkage 5½% to 1. Cost of drying and sacking (including sacks), 2 cents per dry pound.	
Selling green fruit at these prices	Is equivalent to
PER TON	Selling dried fruit at these prices in sacks
\$10.....	PER POUND.
15.....	3½ cents.
20.....	6½ "
25.....	7½ "
30.....	8½ "
35.....	10½ "
40.....	11½ "
45.....	13 "

Each additional \$5 per green ton adds 1½ cents per dry pound.
Prunes.—Estimate of average shrinkage 2.6 to 1. Cost of drying and sacking (including sacks), ½ of a cent per dry pound.

Selling green prunes at these prices	Is equivalent to
PER TON	Selling dried prunes at these prices in sacks
\$20.....	PER POUND.
25.....	3½ cents.
30.....	4½ "
35.....	6½ "
40.....	8½ "

Each additional \$5 per green ton adds ½ of a cent per dry pound.

SAN JOSE GRANGE has discussed the matter and informally agreed that just rates for picking prunes are \$2.25 to \$2.50.

The Wheat Situation.

The wheat-grower is carrying a very heavy piece of the unfortunate industrial situation. It is not only heavy in itself, but the sustaining power or carrying capacity of the wheat-grower is not what it was some years ago. Recently he has had hard work to make both ends meet, with all the aid of labor-saving machinery, reduced interest rates and low ocean freights. Now he has to face the refusal of loans at any rate and advanced ocean freights, and is doing the only thing possible, and that is to sell his wheat at whatever he can get and hope for better things next year.

It is easy enough to explain the main features of the situation. For some years there has been an excess of wheat ships in these waters. They have floated for months idly waiting for charterers, and in some cases have lain over one crop for the next. They have kept coming, expecting that others would go elsewhere and they might enjoy the advance through small supply of available tonnage; but each year a full fleet arrived and freights have remained low—lower than wheat-growers of 20 years ago ever dreamed possible. This course seems at last to have changed; the reaction has come, and a large part of the wheat fleet has deserted our waters. The following figures show the contrast:

	July, 1892.	July, 1893.
Disengaged tonnage.....	133,220	43,904
Chartered tonnage.....	50,353	66,791

This shows how many less ships are now in sight, also how much greater engaged tonnage there is now in port than there was a year ago. The conclusion is that wheat is being pushed forward because it is impossible to hold it in warehouse, although the grower would refuse ruling prices as profitless and ruinous if it were possible for him to hold for the advance in values which must come before another crop can be harvested. The demand for ships to carry these accumulating supplies of wheat and the lessened supply of tonnage has naturally lifted the charter rate so that it is about \$2.50 per ton higher than a few weeks ago. Thus the wheat-farmer finds his milk skimmed on both sides and is undoubtedly a grievous sufferer by the unfortunate financial condition. In fact it is impossible to figure out wheat as anything but a losing proposition as things now are.

The present situation shows how valuable a feature has been the system of loans on wheat in warehouse which has grown up in California during the last 15 years. It is true that it does not seem adequate to such situations and conditions as now rule, and yet were it not for the recent experience in loaning money upon wheat in warehouse, the condition might be even worse. Now we anticipate a resumption of liberal advances on wheat as soon as the present flurry is over. It looks as though the appeal of leading growers and interior bankers for money was availing something and is likely to avail more before long. Unless the bankers' idea of warehoused wheat as security had become very different from what it formerly was, there would be little ground to hope for speedy recovery. Now it only needs a quieting of the financial nerve to restore activity. The security and desirability of the collateral does not come into consideration at all.

While one thinks of the impossibility of getting money from real property at low valuations, it is difficult to restrain indignation that much of the present trouble in this region of the country has resulted from bankers putting money into all kinds of wildcat enterprises, which, as custodians of funds not their own, they should never have considered for a moment. Instead of dealing conservatively and wisely, they have thrown millions hither and thither where ordinary private investors would never have risked pennies. The result is that depositors lose money, business is depressed and producers find themselves put to scorn and the products of their labor torn from their places as pledges for money borrowed to produce and market them. It is hard to see the work of honest men thus put to naught by the folly of those who should be the pillars of the community's confidence and safety.

Distinguished Pomologists May Come.

For several years the horticultural societies of California have cherished the plan of receiving a visit from distinguished Eastern pomologists in the form of a meeting in this State of the American Pomological Society. This hope seems within possibility of realization, for the secretary of the State Horticultural Society presented at the meeting of June 28th a letter from George C. Brackett, secretary of the American Pomological Society, stating that quite a number of the members of the society he represents have expressed a desire to hold its next meeting some time in February, 1894, on the Pacific coast, provided sufficient interest will be given to render the session practically interesting and a good attendance can be brought out.

We make this early notice of this announcement of in-

tention on the part of the American Pomological Society because it is unquestionably true that to secure such a meeting for California there must be some practical interest shown by the people of this State. The society is the most prominent in its line in this country. It was organized in 1848 and has held biennial meetings since that time. It has made most important publications, and its verdict on new fruits and other advanced points is held as authoritative. It has had on its officer list the most distinguished horticulturists of the country for the last 45 years. It would be exceedingly desirable to bring a large body of the members of this society to this coast and to show them as much of the State and its fruit interests as possible.

The California State Horticultural Society tendered to this body an invitation to assemble in California two years ago, but it was not then thought feasible to attempt it. The present inquiry from the secretary shows that the invitation has had some influence. A similar invitation was also extended, if we remember correctly, by the horticultural societies of Oregon or Washington, or by both of them. The society seems in doubt as to what point on the coast will be best for them to choose for a meeting, and this is one reason why the subject should receive immediate and earnest attention from Californians. If the great Winter Fair in San Francisco materializes, as now seems assured, we shall probably have no difficulty in securing the meeting of the society in this State, if we take proper steps toward that end. The equipment of the horticultural department of that fair and the excursion of this prominent Eastern society seems to be closely allied. We trust the matter will receive general and effective attention from the local horticultural societies of this State.

THE DETERMINATION OF THE STATE BOARD OF HORTICULTURE not to hold the coming State fruit growers' convention at Los Angeles has been wisely reconsidered by the Executive Committee of the board, which, at a meeting last Monday, decided upon Los Angeles as the place and November 21st-24th as the time for the convention. Commissioner Kimball was appointed director of the convention, and he was given full power to act in all matters. A program for the entire convention was also adopted. Among subjects assigned for discussion are:

Insect pests and tree diseases; remedies for their destruction; most effective and cheapest formulas, time to apply, etc.
The best means to secure effective quarantine against the introduction into the State of foreign tree pests and diseases.
The selecting, grading and care of fruit.
The proper time to thin the different kinds of fruit; gathering, processing, etc.
The best varieties of the different kinds of fruits to meet the wants of consumers.
Co-operation among fruit-growers; sale of fruit by auction, and how to distribute and manage the sales of fruit in the Eastern and other markets.
Transportation facilities and rates of freight on green and dried fruits.
Pruning, cultivation, fertilizing and irrigation; flora and forest culture; protection to fruit, etc.

THE SOUTHERN PACIFIC AND THE SANTA FE have made a reduced rate of 50 cents per hundred (the former was 75 cents) on canned goods from California common points to the East. This is good, but it is not enough. Low prices throughout the entire range of fruits make it of vital interest to growers that the most advantageous terms possible be extended by railroad companies. It goes without saying that the prosperity of the producer means the prosperity of all people, including transportation concerns. When the grower gets just a fair margin of profit on his grains and fruits and so forth, he rarely complains that railroads make even more money by taking his products to market than he does in their cultivation. But when times are hard, and railroads want their usual profit whether or not the traffic will stand it, the yoke becomes very irksome. Some time the patient producer may find some means of unshouldering it.

RAISIN-GROWERS, commission men and railroad men had a meeting in this city Monday, to discuss the freight situation and the present condition of the raisin market. The growers and commission men endeavored to show the railroad representatives why freight tariffs should be reduced. No conclusion was reached, but the outlook is encouraging for concessions by the transportation companies. It is stated by one of the local papers that "a resolution was adopted pledging the producers and packers to fix no prices for raisins before September 1st next, or until a special meeting called for that purpose by the chairman. All the packers present, representing 85 per cent of the product handled by that interest, agreed to join the association and abide by its rules, among which is one imposing a penalty of \$50 a carload on all members cutting rates." The meeting was secret and we cannot confirm the statement.

THE OUTLOOK FOR GOOD HOP PRICES is encouraging. A few sales of new crop are reported at Santa Rosa at prices ranging from 18 to 25 cents.

From an Independent Standpoint.

Events are brewing in Asia and Europe which involve possibilities of great importance to the United States. France has a claim against the kingdom of Siam and last week made certain specific demands, accompanied by a threat of military enforcement if they should not be granted promptly. Siam has responded with certain concessions, but refusing to come fully or even approximately to the terms required. This would appear, as related to the interests of America, a matter very remote; but it so happens that China, backed by England, has espoused the cause of Siam, and a move by France to carry out her threat would unquestionably involve England in the fight. In the event of a passage of arms between England and France, the latter's ally, Russia, would jump into the arena; also the "Triple Alliance" (Germany, Austria and Italy) would join in the melee. Within forty-eight hours after the firing of the first gun in southern Asia, England, Germany, Austria and Italy on the one hand, and France and Russia on the other, would stand with swords drawn, and there would be such a war as the world has never seen. It would be a combat between prodigious forces with such destructive aids, in the way of modern guns and ships, as have not heretofore been tested in actual warfare. Whatever might be the final outcome of such a war, its immediate effect would be to create an enormous demand for the products of our fields and mines. The value of the things we have to sell would go up with a bound, and the present stagnation would give place to high prices and booming times. The balance of trade would at once turn largely to our favor, and we should soon be in a fix to enforce whatever financial policies—including the use of silver—as in our judgment would seem best; and it is not to be doubted that we would employ such an opportunity to restore the white metal to its old place.

All this, of course, is mere speculation, but it rests upon a good basis. France must either take water or fight, and, if she elects to fight, there will be music—and very loud music—in the world. It is the judgment of many able and conservative statesmen both in America and Europe that the fight will come. And if it comes, we are in a position, fortunately, where everything is to be gained and nothing to be lost. It is a notable fact in connection with these rumors of war that the price of wheat at Chicago advanced two cents per bushel on Monday of this week.

The banks of San Francisco and throughout the State, with perhaps a few exceptions, are not doing the fair thing by the producers. Instead of acting upon a liberal policy and thus making matters easier, they are doing the other thing and making times harder. Instead of putting out new money to help the farmers and fruit-growers through the crises of harvesting and picking, they are drawing in their loans, oftentimes enforcing serious sacrifices on the part of debtors. The well-being of California rests upon her crops and it is the duty of everybody who is in a position to help in gathering and marketing them, to lend a hand. The banks, generally speaking, are not doing this; but, on the other hand, are taking a course which adds to the embarrassment of producers. If a grain-grower or fruit-raiser or canneryman applies in San Francisco for the accommodation that is essential to the carrying on of his business, he is blandly informed that there is no money to lend and no grain bags to sell except for cash. Legitimate demands are refused; while, on the other hand, there seems plenty of money for illegitimate speculative projects which will yield Shylock's toll. Certain bankers, we are told, who find it impossible to assist farmers in the way of getting grain bags, are doing a large traffic in claims against a suspended local savings bank, on the basis of 35 per cent discount. It is not surprising, when this state of affairs prevails, that San Francisco is deeply and bitterly criticised in the interior. And it must be added that when her friends would like to defend her, they can find nothing to say.

Ex-Governor George C. Perkins, of Oakland and San Francisco, who has been named by Governor Markham as the successor of Senator Stanford, is one of the "best fellows" in the world. He is an enterprising citizen, a steadfast friend and a man of correct personal habits. Nevertheless, it must be said that the appointment is not a good one. The business interests to which Governor Perkins is closely attached are of a sort already too well represented at Washington; and it would have been much better if, for the senatorial vacancy, Governor Markham had named somebody not related to the great transportation companies and not connected with the capitalist class. We do not expect Senator Perkins to "sell out" or to do any unworthy act at Washington; but he will, in the nature of things, belong to the rank of Senators whose personal and class interests are very often the special subjects of

legislation. The natural laws of association will connect him with the "corporation crowd" at Washington just as they do in California. Many citizens of California will criticise the appointment because they remember that, as Governor of the State, Mr. Perkins espoused without reserve the miners' side of the old debris controversy. It has not been forgotten that he failed to see that there were other rights than those of the hydraulic miners; and that the whole influence of the executive office was thrown into the balance against the farmers of the Sacramento valley. This matter is out of the way just at present, but nobody can tell when it will come up again; and it is not pleasant to feel that the farming interest in the debris matter has an open enemy in the Senate.

While these objections to Mr. Perkins' appointment are entirely natural, they are much less serious than the objections to his chief competitors for the senatorial appointment. He is, at least, a respectable and capable man, which can not be said of some others whose names were prominently urged for the place. He is an improvement on most of our Senators of recent years, and we may hope that as time goes on, one better man will follow another till at last—in some remote future—California may choose her Senators upon considerations of character, ability and accomplishment alone.

In declining to serve as one of the managers of the Stanford estate, Judge McKenna shows a sense of the proprieties of things entirely new to the public life of California. Mr. Stanford saw no incongruity in his own double public character of Governor of the State and president of the Central Pacific railroad; or, later on, as Senator from California and chief owner and manager of the Southern Pacific system; and it was quite in keeping for him to name Judge McKenna as an executor of his will. His reflection was, no doubt, that since the estate had largely been created by combination and co-operation of public and private functions, the same rule would properly apply in its administration. But Judge McKenna, it seems, has a finer and truer sense of things, and has very properly declined the trust. And the act of renunciation is not more creditable than the way of its doing. The average official—if we may assume that the average official could be induced to give up anything with profit in it—would at least have made a scene for gods and men with himself as the central heroic figure personating pure virtue; but Judge McKenna, to his infinite credit, stepped out of the Stanford trust as quietly and modestly as possible in the doing of an act so notable. From the time the Stanford will was read until it was filed for probate, Judge McKenna declined to sit in judgment on any case involving the interests of the Stanford properties; and on the day the will was filed he sent in to the Superior Court the following communication:

In the Superior Court of the city and county of San Francisco. In the matter of the estate of Leland Stanford, deceased.

To the Hon. Superior Court of the city and county of San Francisco. Whereas, I am nominated one of the executors of the will of said deceased in certain contingencies therein expressed, I hereby renounce my right. J. McKENNA.

That was all, but it meant a great deal; no less than a protest against the union of public and private functions which has become the shame and scandal of our political life. We do not know Judge McKenna personally, but would very much like to shake hands with him.

Since nobody can know what Congress will do till it does it, there seems little profit in preliminary speculation; nevertheless, the air is full of legislative talk. It appears to be the universal judgment that the tariff issue will be completely overwhelmed by the financial issue and that the disposal of the latter will be precedent to any consideration of tariff matters. Mr. Cleveland is expected to limit his message to the money issue; and it is of course certain that he will recommend the repeal of the silver-purchasing law. The general belief is that the repeal proposition will be carried, though the silver advocates are preparing to make it a hard battle. After this matter shall be disposed of, tariff revision will no doubt be taken up and it is probable that the session will last till midsummer of next year.

Concerning Pensions.

TO THE EDITOR:—Mr. W. H. Aiken tells us in your columns that "the pension law granting a pension for life to a soldier on account of disability entered into and became part of the contract between the soldier and the Government on enlistment." Will Mr. Aiken furnish us a copy of the contract so made with the Government on enlistment? If his view be correct, where was the need of any subsequent legislation concerning pensions? As I understand the terms of enlistment, a large cash bounty was offered to those who would perform certain services for a certain period at a definite remuneration per diem. If the RURAL would publish a copy of the contract made, in 1863 say, by recruits enlisting in the United States service, with the Government, we should get a clearer view of matters, and know whether the "Independent Standpoint" or Mr. Aiken had the firmer foundation for their conflicting opinions. EDWARD BERWICK.

Pacific Grove, July 25, 1893.

Editorial Correspondence.

Observations in and About the Vaca Valley Early Fruit District.

VACAVILLE, July 22, 1893.

TO THE READERS OF THE RURAL:—If Vaca valley had no claim upon human interest save its charms of contour and color and its glorious vicissitudes of elevation and distance, it would still be one of the rare places of the earth. There are, indeed, few spots in this or any other land which so fascinate the vision and the imagination; for wherever the eye turns—west to the mountains, north to the sloping foothills, east to the Sacramento basin, to the green vale below or to the blue above—there is perfection. All the moods of landscape, ranging from the grandeur of elevated wilderness to the softer charms of orchard and homestead, are ever present; and so happy are the changes from Spring to Summer and from Summer to Autumn that each season in its turn seems best of all. But all this is only the superficial aspect of a beauty that is more than skin deep; and it is my business to deal with the practical rather than the pretty side of things.

Vaca valley is one of the side vales of the great Central California Basin. It lies hedged in between the foothills and the mountain wall which divides Sacramento from Napa almost encircled and completely protected. When the spring winds from the ocean blow fierce and cold even far into the interior, in Vaca valley it is mild and warm, for the mountains stand guard to shelter it. It is its peculiar isolation from the general climatic conditions which gives to this little vale (it has not more than 15,000 acres including its cultivable hillsides) its peculiar advantages, and makes every square yard of its rich soil a precious possession. It is pre-eminently an early district, and the only one, excepting Newcastle in Placer county, that has acquired a wide commercial standing as such. Vacaville peaches, plums, apricots, table grapes, etc., may be found ripe and sweet in the fruit stalls of San Francisco, Chicago and New York, while in less favored regions west, south, east and north, similar fruits are still immature and unpalatable. Since all good gifts are not bestowed together, these early fruits do not attain the size of fruits which grow more slowly and mature later; but the Vacavillites stoutly claim that what they lose in the way of size is more than made up in superiority of flavor and in the keeping qualities essential for long-distance shipping in the fresh state. They claim further that they can and do grow as good a prune as the Santa Clara valley.

I have been attracted to the horticulture of Vaca Valley not more because it has in itself elements of exceptional interest, than because its development has worked a complete revolution in the industrial and social life of a community. Here is illustrated as in no other place that has fallen under my observation, what horticulture under strictly Californian conditions will do for a people. It is true that at Los Angeles, Riverside and elsewhere there has been equal and even greater development of similar industries in larger fields; but in these places horticultural development has followed invasion; new-comers and "outside" capital have done the work and the results as we find them reflected in the conditions of the communities have seemed wrought more by the new blood than by the new industry. In Vaca valley the situation is wholly different; here the personal element is the same as in the days of stock-raising and grain-growing; we have the same people but new conditions. What has been accomplished here is not due to infusions of Eastern blood or importations of Eastern capital, but to the capacity and energy of the people operating upon the resources of the country in which they dwell.

So recently as the early "seventies" the industry of Vaca valley was the ordinary combination of stock ranching and general farming. In the upper part of the valley, and immediately north in Pleasant valley, there were a few orchards, but they counted for little in the general industrial life of the district. However, they did magnificent service in showing what could be done in the way of producing fruit, though nobody supposed that similar results could be attained in the lower or main body of the valley. Still, sales of fruit were constantly made at large prices, it being well remembered that one four-horse wagon-load of grapes and early fruits was hauled into the mountains and sold to the hungry miners for 50 cents per pound. There was no systematic orchard culture; there were no pests, and the crops were enormous. The ease of the business and the occasional heavy profits (resulting from such irregular ventures as the trip into the mines above spoken of) of course attracted notice; and little by little the orchard area expanded. But the main body of the land belonged to large proprietors, and progress was slow till about 1880, when the failure of Dr. W. J. Dobbins, one of the largest land-owners (the Doctor has since happily recovered his fortunes), made a way for distribution of the country into small tracts. One thousand acres or thereabouts of the Dobbins' property were sold in lots of from twenty to forty acres; and from that time on the progress of Vaca valley in fruit growing, in reputation and in wealth has been rapid and continuous. The valley is now an almost unbroken orchard, and the newer plantations are spreading over the hillsides and even far up on the slopes of the high range to the west. No productive industry save fruit is thought of. Fields, pastures and even

kitchen gardens have long been given up to trees; and feed and ordinary farm products are bought from localities where land is less valuable. The annual yield of fruit has steadily increased, last year's shipments of fresh fruit to Eastern markets alone aggregating 800 carloads, yielding to the producers, after paying all charges, a round half million of dollars. It is estimated that shipments to the San Francisco markets, to canneries, and in the dried state, brought in to the producers another half million dollars. Thus we see a community of about three thousand persons (men, women and children) earning an annual income of approximately one million dollars. After hearing these figures the visitor is less surprised at the spaciousness of the dwellings on every hand, and at the manifold other signs of domestic and social luxuriance.

The domestic surroundings of Vaca valley have followed the fortunes of the people and are very noticeable for their approximation to the best American standards of generous living. But he who goes broadly in the community will discover something still more important, namely, the growth of what may be termed the business habit. The horticulturist is a business man as well as a farmer. It is one of the chief merits of the fruit industry that it connects those who follow it with the active world of affairs. Essential conditions of success in it are study, reflection and judgment. The fruit-grower must learn about species and varieties of fruits; he must learn the essential facts concerning soils and climates in their relation to his work; he must keep himself informed as to the methods and results of leading experiments; he must learn the conditions and methods of those who in various parts of the world compete with him in the general markets; he must learn the ways of packing and marketing; he must learn the ways in which general financial and commercial conditions affect his prices from year to year. All this implies persistent study, unremitting industry, the constant exercise of personal judgment and frequent contact and correspondence with men of other callings. There is no need to explain further why a community of horticulturists is always a community of superior men, and why the development of horticulture means advancement along the lines of material, intellectual and moral progress.

There could be no more striking proof of what is here said than the fact that while the people of Vaca valley have been learning the fruit industry and establishing their business connections in a way to make it profitable, they have conducted a series of experiments whose results have measurably widened the boundaries of special horticultural knowledge. In the production of new and useful varieties of fruits the Vacaville men have been exceptionally successful; and the reputation of the district rests in no small degree upon their achievements in this line of experimentation. The list of varieties thus given to the world of horticulture by Vacaville growers includes: The Muir peach (introduced by G. W. Thissell), the best drying peach known. Also, the St. Catharine or Hative plum, introduced by Mr. Pearson. Its characteristics are earliness and fine shipping qualities. Until two years ago it stood first for these merits but it has lately been superseded in point of earliness by the Clyman plum introduced by Mr. Leonard Coates of Napa. Also the Decker peach, introduced by Mr. L. W. Buck, a fine shipper, medium early and of high color. Also another peach, generally known as McKevitt's Cling but rightly named The Miller, for Mr. M. R. Miller, its real discoverer. Its characteristics are large size, sweet flavor and whiteness at the pit, making it especially desirable for canning. Also the Imperial peach, introduced by Mr. W. W. Smith. This variety is extra early, of fine color, of clear yellow flesh and is claimed to be a good shipper. Another very important addition to the list of our finer early fruits is the peach known as McKevitt's Early, a fruit of rich color, fair size, delicious flavor and a good shipper. This peach was introduced by Mr. F. B. McKevitt in 1886 and considerable shipments have been made each season since that date and always with perfect success. It comes in immediately after the Alexander and in its general qualities is unsurpassed by any early peach grown in California. Mr. McKevitt has propagated it largely and makes it the specialty of his nursery business. This list might be largely extended but enough has been said to illustrate the activity of the district in the work of successful experimentation.

There is, perhaps, no feature of the fruit business as it is carried on at Vacaville more interesting and instructive than the methods of marketing. The special value of the Vacaville product is its earliness. Therefore a large proportion is shipped in its fresh state. Long ago and before what may be termed the co-operative boom burst upon the country, the Vacaville men learned the trick of shipping together in such a way that any grower who sends a few boxes has the advantage of carload freight rates; and the further advantage of prompt attention to his interests at Chicago. Shipment under this system is made through any one of several local shipping associations, organized not as shipping merchants, but to promote the interests of the Vacaville growers. Cars dispatched by these local associations are sent through the California Fruit Union of which Mr. L. W. Buck of Vacaville is the manager. It is, perhaps, the equality of market privilege afforded by this system that has enabled the whole dis-

trict, broadly speaking, to prosper and prevented the up-growth of a few rich men at the cost of the many. It is a striking fact that while there are many very well-to-do people in the valley, some, indeed, who are passing rich, there are no lordly millionaires who walk in pride and scorn their neighbors. As yet the profit of the merchant remains with the producer, for under the system which enables every man to send his product, be it much or little, to market on equal terms with every other producer, there is no room for the middleman.

I cannot close this rambling letter without noting a few facts of general interest to fruit-growers which have come under my notice during the past two days among the orchards hereabout. Experience here shows more than ever before the necessity for early and continuous spraying, not only of winter spraying with lime, sulphur and salt or bluestone, which are equally good for fungoid diseases, but the necessity of following this up in the spring with one or two sprayings of sulphide of soda or other sulphur preparations. This applies to nearly the whole range of fruits; indeed, to all, unless it be the fig.

It can now be stated as a fact that the ordinary lime, sulphur and salt compound, liberally employed in winter spraying, is a specific for the curl leaf in peach trees. Experiments in Vaca valley running through three seasons positively demonstrate this fact. Trees of the same variety, and having complete identity of age, soil, culture, etc., excepting that one row has been sprayed with lime, sulphur and salt and the other left unsprayed, show results which leave no doubt of the efficacy of the treatment. The trees that have been sprayed do not curl; those left unsprayed have curled badly and lost the bulk of their crop. This experience in Vaca valley accords perfectly with my own observation in the large orchard of White, Cooley & Cutts (the Marysville merchants) at Live Oak, near the boundary line between Yuba and Butte counties. Mr. Cutts—upon whom falls the management of the horticultural interests of his firm—showed me some weeks ago a peach tree without blemish and loaded with fruit and another beside it curled and barren. They were identical in every respect save that the former had been sprayed with lime, sulphur and salt and the latter left to itself. He showed me also a tree of which one side only had been sprayed, and on that side there was no curl, while the other side was badly diseased. But this is not all. I have it upon unquestionable testimony that in Vaca valley the peach moth has been successfully treated by the same spraying process.

It is the opinion of Mr. F. B. McKevitt, whose standing as a practical and successful horticulturist needs not to be here told, that the bottom cause of the fungoid diseases which require so much fighting on the part of the orchardist is soil exhaustion. These diseases, he claims, were here years ago, but then the soil and the trees were new and strong and so were not affected. The trees now, Mr. McKevitt holds, are weaker and not able to resist attacks as they formerly were. I must confess that the idea of soil exhaustion in northern California orchards is to me a new one, though in common with all the world I have not failed to note that the outside row of an orchard usually shows more vigorous growth than the inside rows, which have neighbors on both sides with which to divide the wealth of the soil. It is further noticeable that the outside row usually bears larger fruit and carries its crop better than any other row in the orchard.

Upon this theory of soil exhaustion held by Mr. McKevitt and some of his neighbors, it has been their practice for some years past to make to the soil an annual return for its annual crop in the form of fertilization; and certainly there can be no mistake in such a policy. Common barn-yard compost, bonemeal and superphosphates are variously used, the former being unquestionably the best. Of course it takes a good while—at least two years—to obtain results from orchard fertilization, but in some Vaca valley orchards which I have seen within the past two days they are clearly evident in increased growth of trees, in their greater healthfulness and in the quality and quantity of the present season's crop.

Whether or not Mr. McKevitt's theory of soil exhaustion is premature, it is quite certain that in time the orchard soils of California will need to be systematically renewed. Thus another element of detail will be added to the miscellaneous work of horticulture in this State. Twenty years ago pretty much the whole of orcharding as practiced in California consisted in planting the trees and gathering the crop. There was no systematic culture worthy of the name; no fighting of pests. Now there must be careful cultivation of every foot of orchard ground from five to nine times each year, there must be persistent spraying, there must be careful pruning, there must be one or more thinnings, in many instances there must be irrigation, and now it would seem that there must be annual renewal of the elements of the soil; in fact, systematic fertilization is already practiced by the citrus fruit growers of southern California. All this means eventually the limitation of holdings; it means that twenty acres is enough for one fruit-grower. With a great variety of small operations, and with the price of fruit upon its ultimate basis, it will not, in my judgment, pay to carry on the business on the wholesale plan. When fruit-growing reaches its permanent basis, it will be found that the "fruit-king" cannot compete with the

plain fruit-grower who does with his own hands practically the whole work of his little tract. It is a safe generalization that any business where success depends upon close attention to and minute economies in small details—and this is the manifest future of horticultural practice in California—must require not only the eye but the hand of the master. There are some, perhaps, who will regard this as a gloomy view, but in my judgment it is the hopeful view; since the future well-being of California must rest upon the general spread of moderate prosperity rather than the up-growth of a few rich men.

In Vaca valley as elsewhere it seems to be the fashion to emphasize the locality instead of the identity of the individual producer. The old ascendancy in the markets of individual brands based upon reputation for exceptional merit seems largely to have been lost. I cannot regard this as a good sign. It seems to me that the standards of cultivation, preparation for market, etc., will be better upheld by a system which gives individual advantage as the reward of special merit. I for one shall be glad to see a revival of the old-time wholesome rivalry among growers for individual reputation in the general markets. A. H.

Gleanings.

THERE IS A WHOLE SERMON in these two sentences of Thomas A. Edison: "I never carried a watch in my life. I never wanted to know what time it was."

A SOUTH SALEM, OR., MAN who has been having his wood stolen right along by another neighbor, has found a remedy by hanging out a lantern all night over the wood pile.

THE GROWING CUSTOM of calling the parson "doctor" is confusing, says the Fresno Republican. The difference is a broad one. The parson preaches and the doctor practices.

THE COLUSA Herald has entered upon a new volume. The Herald is one of the best of the interior papers and deserves all the success it has attained. And its success has not been small.

THE HONCUT Graphic tells of a Butte county twin cucumber "13½ inches in circumference and 2 feet in diameter." Jernshy! Thicker than big around—something like our beloved President. Suppose that cucumber had been born triplets!

PHIL G. SCHLUGH, of SONOMA COUNTY, who is said to have a thorough knowledge of the art of pruning, having served an apprenticeship in Germany, thinks all young trees between one and four years should be summer pruned, especially pears.

AN EXCHANGE SAYS: Hot alum water is the best insect-destroyer known. Put alum into hot water and boil until dissolved, then apply the water with a brush to all cracks, closets, bedsteads and other places where insects may be found. Ants, cockroaches, flies and other creeping things are killed.

ALTHOUGH THE CHERRY CROP is very light in most parts of Oregon this year the local papers report the price very low in many places, says the Rural Northwest. The strawberry crop held on so long and the price of these berries was so low that there was no local demand to speak of for high-priced cherries.

HUMBOLDT COUNTY PAPERS are complaining because the fruit exhibit at the World's Fair is below the average. Fine fruits are raised in Humboldt and the county press justly thinks that something ought to be exhibited besides redwood lumber, wood and butter. There are also no particular flies on Mrs. Herrick's favorite grizzly.

THE FRUIT EVAPORATOR at Anaheim has not started this season, and there is some complaint on the part of the residents of that vicinity. The manager says that, owing to light crop, there is not enough fruit. But the Gazette claims there is plenty, and, besides, points out that \$1000 bonus was paid for the erection of the drier, and it has ground rent free.

HENRY HUGHSON has 3000 acres of wheat near Modesto from which he will realize 30 000 sacks. Last year Mr. Hughson did not sow an acre of his land but plowed it twice. The secret of Mr. Hughson's success is said to have been "thorough farming and never going into debt." The former is in the reach of all, but everybody may not have Mr. Hughson's facilities for steering out of debt.

THE BIGGS Argus offers the following voluntary advice: "The last issue of the Rural Press should induce every fruit-grower in the State to subscribe for that excellent journal. It was a complete thesaurus upon the drying of fruit. The most experienced producers and curers of the State contributed to its valuable columns." Such high praise from so excellent a journal as the Argus is fully appreciated.

THE ENTIRE FRUIT SHIPMENTS FROM CALIFORNIA last year amounted to only about 10,000,000 cans, or one can to every six people east of the Rocky mountains, says the Santa Rosa Republican. As the people there must consume many times that quantity, it is evident that the California crop has little influence on the price of canned goods. It is not the large crop here that affects the market, but the large crop of the Eastern States and the financial disturbances that have demoralized business.

LAST SEASON some 25 of Pomona's deciduous fruit-growers formed a combine for their mutual protection, the result being that they derived better prices for their orchard products than were received by those who were too "devilish sly" to tie themselves up to a union, says the Ontario Observer. This season the union has been reorganized, it embracing all of the prominent growers in that locality. Already dealers are negotiating with the union for this season's crop, the prices offered comparing favorably with those of last year.

THE COLUSA Herald notes that fruit cultivation is making such rapid progress even in that home of the combined harvester that it will soon surpass grain-growing in dimensions and importance. Throughout the county are growing hundreds of handsome orchards and vineyards, giving employment to great numbers in the busy season and presenting a refreshing contrast to the boundless fields of grain. The pruning hook will by no means drive the traction engine out of business, but it seems destined to be just as important a factor in Colusa county's prosperity.

THE FIELD.

A Drought-Resisting Fodder Plant.

TO THE EDITOR:—Enclosed I send a clipping from the *Adelaide Observer* of May 20th regarding the tagosaste plant, written by Mr. A. Robin, a personal friend, and one who probable knows more about the growth of this plant than any one in South Australia. I have myself found that it will bear transplanting successfully, even when in full leaf and several feet high, if cut back well. A farmer in our colony told me that he had actually saved his flock of sheep through having a good fence of the tagosaste bush to cut and feed them with in a time of drouth, and I can endorse all that Mr. Robin says. I may say that local experience in this State is not wanting to recommend the plant. Capt. H. A. Messenger, of Valley Springs, Calaveras county, reported at the last meeting of the State Board of Trade having received seeds from Secretary Le-long of the State Board of Horticulture. These he planted, and, after two seasons' growth, he thinks it a most valuable plant and that it will take the place of chapparral. His stock eat it down and it readily grows again. I am sure, from the similarity of our climates, that the tagosaste will thrive as well here as in Australia. FRED C. SMITH.
San Francisco, July 24, 1893.

The Tagosaste Plant.

Although the tagosaste or tree lucerne is not new to this colony, having been introduced by the late Dr. Schomburgk about 12 years ago, it appears to be very little known as yet, and in very few instances has it received a fair trial. It is, however, deserving of extensive cultivation, particularly by the landholders in the more arid districts, owing to its remarkable capacity of withstanding drought, its prolific yield of nutritious fodder, and number of other uses. Therefore I consider that no excuse is necessary for endeavoring through your medium to bring it more prominently before the notice of the public. The tagosaste is a species of *Cytisus* or *laburnum* indigenous to the Canary Islands, where it is utilized to a great extent for feeding horses and cattle. It forms a dense, spreading tree, with foliage closely resembling that of lucerne, and much relished by all kinds of stock. It grows rapidly upon even the poorest land, and under the most favorable conditions, which comprise a warm climate and loose, sandy soil, it frequently attains a height of from 18 to 20 feet, with a diameter of from 12 to 15 feet, within the short space of five years. However, by close planting and constant cutting or feeding off it can be kept quite dwarf and bushy, and the more often it is cut the more valuable it becomes. In the report of the botanic gardens for 1882 it is stated that stock fatten more quickly on tagosaste than anything else, and it is recommended to mix it when fresh out with half its weight of chaffed straw. Horses are particularly fond of tagosaste, and I have found that they keep in first-class condition and work as well on this as when fed on the best wheaten hay. Although I have many hundreds of tagosaste trees of all ages up to six years, I am still adding to the number every year, and some of my neighbors are now beginning to plant on a large scale. It thrives under conditions that would be fatal to almost every other useful plant, and I am convinced that many of our pastoralists and farmers in the North would find it profitable to lay down large paddocks of tagosaste, which, after the first year or two, would provide a never-failing supply of green fodder in all seasons, and would probably render the stock-carrying capacity of their lands equal to that of much more fertile and humid districts. The seeds may be sown at any time, and the young plants set out during the winter months four to five feet apart each way. It will be necessary to cultivate between the rows occasionally for the first two years, after which stock may be turned in and no further cultivation required. The tagosaste forms a splendid breakwind when planted eight feet apart in single rows. The branches on the outer and inner side may be frequently cut and fed to stock, and this pruning will encourage a more rapid upright growth. The sugar-gum and pepper tree are often recommended for shelter belts, but the great objection to these trees is that their roots spread near the surface, thus rendering the land for a considerable distance on either side practically useless. The tagosaste, on the other hand, sends its roots down deep into the sub-soil, and consequently does not interfere with the growth of adjacent plants. The importance of providing shelter for crops, stock, and especially for young vineyards and orchards, upon our bleak plains is not sufficiently understood, and it cannot be too strongly advocated. The tagosaste is a valuable honey-producing plant, its large, fragrant, pea-shaped flowers, which it bears in profusion just at the time when other flowers are most scarce, being very much in evidence amongst bees. The seeds are excellent for poultry, and the beautiful and striking appearance of the tagosaste—when in bloom lasting for a considerable time in winter—entitles it to a place in every large garden or shrubbery. I am, sir, etc.,
Nuriootpa. CYTISUS.

Resources of Southern Counties.

TO THE EDITOR:—Having traversed the coast counties from Santa Cruz to San Diego, and having seen in my travels almost every farm in all those counties, I am enabled, I think, to give a fair estimate of their resources. So much has been written and otherwise emblazoned abroad touching their wonderful possibilities that another word upon the subject might seem unnecessary, and yet I think certain matters need to be given greater prominence. In what I shall say I do not design to discriminate to the prejudice of any other county. I shall in this communication speak particularly of the counties of Los Angeles, Orange, San Bernardino, Riverside and San Diego. I

find in all these counties a large list of patrons of the *RURAL PRESS*, and of its merits I find (especially among the orchardists) many who speak in terms of highest praise of the *RURAL PRESS* as being the paper which every horticulturist, agriculturist and dairyman ought to patronize above all others. Many have said they hardly ever read a copy of it without finding that which to them is worth more than the value of a year's subscription; not, they say, that the editor "knows it all," but that reports from the various counties upon various subjects and from various stand-points give them suggestions and practical results which they find nowhere else.

Notwithstanding the fact that so much has been said, and truly said, of southern California and its resources, certain adaptabilities of their soil and climate have, I think, been neglected.

The myriads of people in the more eastern States, who are looking westward, want to know what fruits and grains would be most profitable. Some may say (taking a short-sighted or superficial view of the matter) that the orange industry, so far as profit is concerned, is a thing of the past, or, in other words, overdone. They base their conclusion upon the fact that this year oranges are dull sale, etc. While I cannot now stop to discuss this matter, I am persuaded that such conclusion would be a great mistake. An experienced and very intelligent old gentleman of Santa Ana said to me: "I know of nothing that will pay better than oranges, if they are properly attended to." He then showed me a small orchard which had been so neglected and "run down" that none but himself thought it could by any possible means be brought out and made profitable. "But," said he, "two years of good attention made it yield me an immense profit."

But there are other fruits which grow here to great perfection and which are immensely profitable, of which our Eastern friends know little or nothing, and, indeed, of which many in this State know but little. It is of olive culture I wish to speak. I think it is understood generally that it requires from five to ten years for olive trees to get their grounds and to yield profitable crops. I am sure I thought so. A gentleman in Los Angeles county, who is engaged in that industry, told me that his trees at three years old bear a full half-crop, and at five years old a full crop, and that a yield of \$10 to the tree is no unusual price, and this statement was confirmed by others. Many thousands of olive trees are being planted in Los Angeles valley. Almost all fruits and nuts grow in great profusion in all these counties. Some grow better in one locality and some better in others. All a "newcomer" has to do to determine upon all these matters is to ride over the country and see for himself. Pioneer work or experiment has been done and all these matters determined by demonstration. I find, also, that cereals of all kinds are not excelled in any country I have ever known—Oregon excepted, possibly. While at Oceanside I spent the night with my old friend Doniphan Frasee, nephew of Gen. Doniphan of Mexican war fame. Mr. Frasee showed me the bales to prove his assertion that from five acres of land he harvested more than 16 tons of the finest quality of hay. It may be well to say his farm is immediately on the sea coast.

Having extended this letter quite far enough for your convenience, I will close with a promise to write another soon, in which I shall speak more at length upon the resources of San Diego county, for the reason that I am sure they are much greater than many suppose. I will not say San Diego has been misrepresented, for that would be to impeach integrity, but I do not think it has been fully represented. F. D. H.

San Diego, July 18, 1893.

Do Not Pick Hops too Early.

[From Ezra Meeker's New Handbook.]

No matter how well the crop has been cultivated and trained, all the work and care go for nothing if at the critical time the grower inadvertently destroys the value of the crop. This is done to a very great extent by early picking.

We may as well settle down to the conviction that qualities will tell, and that no amount of talking, or printing or whistling to keep our courage up will enable us to as a rule sell inferior, immature hops at a price that can be had for the choice, matured product.

Our own experience is in point in our 1892 crop. The last hop-grower but one in the White River valley had finished picking before we began harvesting our crop on September 17th. We made one sale of 500 bales, or, in round numbers, 93,000 pounds, out of that crop, at 23 cents net at Kent, Wash. Growers can take this home, each to his own case, and readily tell how much they have lost by their early picking.

There is not only the loss in quality, but also that of yield. Hops picked ten days too early will lose fully 30 per cent of the weight which would otherwise result if allowed to mature.

Nor is this all, for the loss is carried into another season by the weakening of the vine, from bleeding when the pole is taken down and cut. I have seen yards that did not yield more than half a crop from this cause alone. In any event, whether the harvesting is done early or late, where the poles are taken down and the vine cut, the same should be done as high as possible; of course this is not done in the stringed or trellised yards, and that alone is one great point in their favor.

Growers almost universally deceive themselves in determining when their crop is ripe, by examining individual specimens here and there through the yard, readily finding some apparently ripe.

It is the mass of hops that should show ripeness, not selections alone here and there. There is more intrinsic value developed in the last few days in the life of a hop upon the vine than in the month's previous preparation for the fruitage.

Ripe hops will be well closed at the points; will be harsh

to the touch and solid, not flimsy and soft; will be of a rich golden color, or will have a strong tinge in that direction. Of course, the seed will be solid and thoroughly matured, though many of these can be found in a yard where the mass of hops are unfit to be picked.

Many growers have a "holy horror" for a "red" hop, as hops are called that are a little late in the picking. Give me the red hop every time in preference to the green, and I can outsell you two to one.

The best crop that ever went out of the White River valley was that of the late Mr. Van Doren, the year his hop-house was burned and he was delayed in the harvest work 17 days, while he was building anew.

Our whole product at that time was shipped to San Francisco, and when those hops arrived there was a regular furor over those grand hops as "rich as cream," as one dealer expressed it to the writer.

"I will never, no never let a wagon go on a hopyard of mine," said a prominent hop-grower to me the other day. He provides a road running around the outside of the yard and one through it, that is kept open and free the year round and the hops are carried to the permanent road. It is folly to cultivate where the wagons have beaten a track, cross lots and every way, bruising the roots, packing down the ground and destroying the vitality of the hills in streaks all over the yard; better employ two men during the picking season to every 100 pickers, and carry the hops to the road.

If the hops are trained on long poles so that the vines must be cut, then by all means cut as high as possible. Hop vines cut near the ground will "bleed" much more than those cut high, and weakens the hill much more. Of course a hill that is cut before the hops are thoroughly matured and the hops comparatively at rest will bleed very much more than one that has performed the season's work, and become dormant. This early cutting tells heavily against the next year's crop.

With the stringed or wire-trellis yard, the vines are never cut at harvest time.

Now is where the "tug-of-war" begins. If ever the pickers once get the upper hand over you, then you are elected to have a dirty crop. Firmness in the start is the only salvation. It would seem to be needless to impress on the growers the importance of clean picking. If they will but spend a few days in the sample rooms and see the difference made in price between clean and dirty picked hops, there would then be no need for caution to have the hops picked clean. The Oregon growers so far are ahead of Washington on this score, but both have much to learn in the way of clean picking.

The practice of hauling the hops to the kiln in the boxes in which they are picked opens the way to avoid detection, unless the picker, boxes and checks are all numbered, in which case it is easy to trace back to the picker. Some are preparing to sack in the field to avoid this difficulty.

Anyway, anything that can be done to better the methods of detection, lessens the chances of dirty boxes and hence lower prices.

Cost of Bean Culture.

I will give you some items about beans, and the probable yield. First, a man owns 80 acres of land between Ventura and Santa Paula, or rents 80 acres, as the case may be, and the land is put in Lima beans, writes J. S. Harkey to the *Venturian*. It requires one man and four good horses to do the work. The list of farming implements to run 80 acres is as follows:

Sulky plow.....	\$60
Chisel and cultivator.....	50
Four-horse harrow.....	25
Drag and hoes.....	10
Bean planter and cutter.....	50
Two wagons.....	200
Supposing everything hired, plowing.....	100
Harrowing.....	20
Chiseling twice.....	70
Harrowing twice more.....	40
Planting, four days.....	16
Cultivating, ten days.....	30
Harrowing twice, 24 days.....	42
Lima seed, 25 to 40 pounds per acre, three cents per pound...	80
Thrashing, 1500 pounds per acre.....	300
Sacks, per hundred pounds 7½ cents.....	90

Total.....\$1,068

Now you have the average cost for 80 acres of land. Of course some years there are more than 1500 pounds to the acre and other years less, but I give that as a fair average in 15 years experience. Now, as to the implements, there are many farmers who use more tools than are necessary. I think the tools mentioned are necessary, except a bean cultivator. The expense is the same on other varieties, except the seed, taking only from 12 to 18 pounds to the acre—about 37½ cents per acre. Now the implements will not be considered, for some of them will last several years.

Beans at 2½ cents per pound (average).....\$3,000
Suppose one-third off for rent.....1,000

Gross total.....\$2,000
Total expenses.....1,103

Hauling to market, 95 cents per ton.....\$897
Contingent expenses.....52

Total profit on 80 acres.....\$800
Two wagons.....200

Total.....\$1,000

This does not include any expense of wagons and tools. The calculation includes two wagons, \$200, which must be added to the total, making \$1000 profit. I do not wish to convey the idea that every man could farm with so little expense, for I know half of the farmers are too extravagant in farming, but I believe I have been liberal enough. This calculation is made on a basis of hiring everything, and I believe it to be a fair one.

HORTICULTURE.

Modern Manufacture of Olive Oil.

The degree of maturity at which the fruit is picked and the method of picking affect very materially the olive oil produced, and, therefore, its gathering requires experience and care, writes Louis Paparelli, of the California Experiment Station, to the *American Agriculturist*. The ripening of the olives is marked by variations in the color of the skin from olive-green to lemon-yellow; from lemon yellow to red or purplish-red; from purplish-red to wine-red, and from wine-red to a velvety black. Generally, under favorable conditions of soil and climate, the velvety-black color will mark the proper time for gathering the olives for industrial uses, though the ripening continues for some time longer. In warm climates, however, if the object in view is the extraction of oil of high quality, the fruit should be gathered before it reaches the velvety-black color.

Olive harvesting should be done in good weather, when the atmosphere is clean and dry, and when the soil is not damp from previous rains. Hand picking is the method most to be recommended, as it neither injures the fruit nor the future production of the trees, as occurs when the gathering is done by beating and shaking the branches. The latter methods should be limited to those exceptional cases where the olives cannot be reached, by any available means, by the hand of the workman. In hand picking, baskets are the receptacles generally used. Cloth sheets are spread under the trees to save the olives from being damaged by falling directly on the bare soil. The olives should be sorted, to a certain extent during the gathering, and more completely afterwards at the oil mill. The selection of the sound and perfect fruit is of great importance, as the fruit communicates to the oil all the good qualities and all the defects that it possesses at the time it is worked.

Olives are best worked immediately after gathering; but as that is not generally practicable, they should be kept as short a time as possible; three or four days should be the limit, for if kept too long the oil will lose in quality. Olive oil is present, ready made, within the fruit, and all that is done is to extract it, just as it is, bursting the cells within which it is inclosed, by pitting and crushing the olives, and then pressing them. It has been known for a long time that

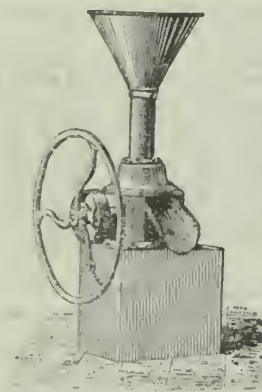


FIG. 1.—OLIVE PITTEK.

an extra quality of the oil is obtained from the flesh of the olive without the pit. Such oil is superior both for its delicacy and for its resistance to rancidity. The best pitter is that devised by Mr. Salvatella, of Tortosa, Spain (Fig. 1). It has a hopper which distributes the olives to the cylinders in the interior of the machine. These cylinders, by a special arrangement, separate the flesh entirely from the pit without breaking the latter. Flesh and pits thus obtained are gently pressed to extract the virgin oil, the best quality of oil of the fruit. The pitter may be worked by hand, by horse, or by steam-power.

The usual stone crushers or mills are being replaced, though slowly, by crushers with iron cylinders, which not only do a better and larger amount of work than the stone mills, but have also the advantage of requiring much less capital, space, and labor of working. Among the crushers of this kind the best are those made by Mure, of Turin, Italy, and by Salvatella, of Spain. Salvatella's crusher (Fig. 2), as well as his pitter, have recently been tried at the Experiment Station of California, and have done satisfactory work. After the virgin oil from the pitted olives has been pressed, the remaining pomace from the basket of the press is taken off and introduced in the hopper of the crusher. The work is done between two grooved cylinders of iron, which, in a short time, reduce the remaining flesh, skins and pits to a very fine paste. The machine has, in one side, two adjusting screws for the cylinders, in order to regulate the fineness of the paste. The latter coming out from the rear side of the crusher, is received in a pail, from whence it is taken to the press. If only a second quality of oil is desired, the crusher is sufficient without the pitter. In this case, when the machine is in operation, a vibrating cleaner separates the largest part of small residues of stems and leaves, sand, and other impurities that may be with the olives. The work with the crusher is very easy. It occupies a space of about three feet square, and weighs about 660 pounds. It may be operated by hand, by horse, or by steam-power. Its work is at the rate of about 45 gallons of olives per hour.

A good type of screw-press now used in olive-growing countries is made of iron, and has a power of about 50 tons, which is sufficient for ordinary purposes (Fig. 3). In the center of the base is placed a sheet-iron basket with perforated sides, that can be opened into two halves. The mass coming out from the pitter is introduced in the basket of the press to extract the virgin oil, or the superfine oil of the pulp alone. In the basket it is divided into several layers, putting between each other layer a perforated sheet-iron

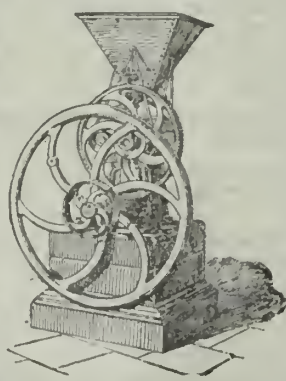


FIG. 2.—OLIVE CRUSHER.

diaphragm. When everything is ready for work the pressure is applied gently and gradually, stopping once in awhile to give time for the oil to flow out from the mass. The pulp is left under pressure for about two hours, the oil being collected into pails of stoneware, or of iron lined with tin, or glazed. After that the pomace is taken out from the basket and introduced into the hopper of the crusher to be finely ground. This being done, the mash is taken again to the press to extract a second quality of oil. In this case the pressure must be strong, but applied gradually; that is

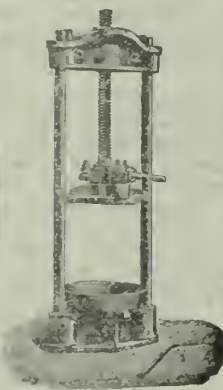


FIG. 3.—OLIVE PRESS.

to say, it is applied little by little, until the maximum is reached. At this time it is stopped and left so for about two hours, or more, in order to get the largest portion of this oil of second quality, which is kept separate from that of the first pressing. The cake left in the basket after the second pressing could be broken up and moistened with hot water for the purpose of obtaining a third quality of oil, as is done in Europe, but as the industry stands at present in this country, it would not pay to produce such an inferior quality of olive oil.

The oil that has been received into the pails is skimmed off by means of ladles, and put into clean vessels or jars. It takes usually from three to six months before the oil has deposited all the matters that are in suspension in it, but this time can be shortened if it is clarified through filters as soon as the largest part of the coarser impurities have been separated. In either case, the oil is finally clarified through filters. A simple and satisfactory filter may be composed of a wooden vat or box tin-lined with a double bottom, rather large, and provided with conical tubes of tin, filled with carded cotton. Care must be taken to leave the cotton loose, for if too compact the oil could not go through. Often both carded cotton and animal or vegetable charcoal are used as filtering layers. Under the tubes there is the second part of the box, to receive the oil flowing from them. The clarified oil is taken off by a cock placed at the bottom of the filtering-box or vat. The temperature of the room, where the oil is filtered, should not be lower than 60° F. The oil thus obtained may be bottled or canned for the market. It is well to note that any olive oil does not improve by ageing.

Ladybird Eats the Red and Black Scale.

Despite an unfavorable start and an impression that the Koebele Australian ladybird had proved a failure, it appears to be doing effective work in destroying the red and black scale. An investigation has just been made at the Kercheval place, near Los Angeles, where the steel-colored parasite was placed last fall, and the result is said to have been most gratifying. A reporter who accompanied the investigating committee says:

"Although it was late in the afternoon, an inspection of the big lemon tree where the colony was placed last year, and upon which the surviving specimens of the bug were found, only occasionally showed they had taken a new lease of life. Upon and under the leaves from top to bottom the steel-blue bug was seen, and there must have been over a thousand on that tree alone. There was still some red scale on the old growth, but not anywhere near the quantity there was last year, and upon the new growth there was scarcely a trace. The lemons were bright, and altogether the tree presented the appearance of a healthy, clean tree.

"But the investigation was not confined to the lemon tree upon which the parent colony had been placed. The surrounding trees were examined, both lemon and orange, and everywhere the ladybird was seen. Upon every tree, as far as they were examined in the orchard, there was specimens of the *orchus chalybeus*. They were not inert and sluggish as when observed last fall, but were thoroughly alive and alert, and the gentleman in charge informed the visitors that during the early part of the day movement of the leaves of a tree would cause a number of them to fly up.

"The bugs have not been watched. No attention has been paid to them, and all by themselves they have been propagating and cleaning up the red scale in the orchard after they had been officially declared to be extinct. Of course the original colony has long since passed away and the present generations have become accustomed to the country of their adoption and are overcoming the obstacles that were necessarily in their way.

"According to the statements, they have but three generations a year, and each female deposits about 250 eggs. Now that the bugs have overcome extinction and are spreading all over the trees in the Kercheval orchard, it would seem that Mr. Koebele's modest claims for them are being verified, and that they will yet prove an effectual foe to the red and black scale pest."

Fighting the Codlin Moth.

Mr. R. Wilken, of Ventura, has had a deal of experience in fighting the codlin moth, and he tells how it is done:

The worms, or codlin moth, that wintered in knot holes or under the bark of apple, pear or quince trees, hatched out just before the trees bloomed and have laid their eggs in the blossom end of young fruit, at which time it should have been all sprayed with Paris green to kill the eggs and young larvae, but, being left, they have entered the core of the fruit, causing it to wilt and drop off. The worms in the fallen fruit will soon become moths and millers and go back to the tree to destroy the balance of the fruit and thus continue to do so during the season.

The fruit-grower should either have hogs in his orchard to eat the fallen fruit or carefully pick it up every day, or

week at most, and burn or otherwise destroy it. All rough bark or hiding places for worms should be removed from trees, and traps kept on them until the fruit is all picked, examining under the traps every week to kill all worms or moths which gather under them. The traps are made by tying rags, pieces of barley sacks or even paper around the tree a foot above the ground, loose above and below the cord which ties it, making it convenient for worms to crawl under and hide. Rags should also be laid in the crotches of the tree where straggling worms may hide themselves. Do not let one worm escape, as one will breed hundreds.

An Australian In Our Orchards.

[Observations of Mr. Fred C. Smith, Horticultural Agent of the South Australian Government in California.]

In a trip to Sutter and Butte counties this month, I visited, along with Mr. Cillie of South Africa, the Yuba, Biggs and Chico orchards. At Yuba, in Mr. Kell's orchards, I saw the Tragedy prune in bearing. In this fruit I had expected to find a valuable early prune—one that we could dry in the sun in the later districts in Australia without running the risks of early rains spoiling them. I was disappointed, however, as the fruit is only like a prune in color, but not in shape nor solidity of flesh. It is too watery altogether for drying and is misnamed "prune." However, it is a splendid plum for early shipping and ripens nicely when picked firm and only just coloring. We shall either have to resort to evaporators to dry our French prunes, or leave the prune industry to those districts where sun-drying can safely be practiced.

Mr. Kells, who is a county commissioner for the inspection of orchards and enforcement of pest laws, has tried many and various sprays, including the patented advertised washes, and has given the palm to the salt, sulphur and lime compound as the most useful of all.

A great deal of fruit here is picked and packed so green for the Eastern markets that it will never have the flavor of ripe fruit. Upon asking why the fruit was put up so unripe, one large grower assured me that they were packed to sell, not to eat. At Yuba, in Mr. J. P. Onstott's vineyard, I saw the heaviest crop of grapes for the age of the vines that I have ever seen anywhere. They were of the Thompson's seedless raisin variety and trellised, and, after looking well around at the crop and going through the rows, I could quite believe the owner's statement that he had picked 15 tons of grapes per acre from three-year-old vines.

Mr. Onstott showed us two varieties of currants that he has there, but they are most certainly not the Zante currant we grow in Australia, being different in several important points. He also pointed out to us beds of seedling figs that he was growing for experimental purposes. Some years ago he got cuttings of fig trees from Smyrna, but says none of them are the right sort. The blastophaga insect was imported here along with the fruit to fertilize it, but seems to have been a failure. The White Adriatic fig is reckoned to be the best yet introduced here, and even that ferments or "sours" while ripe upon the tree in the southern portion of this State. Many growers suppose that the fault lies either with the climate or the age of the trees, and others that the proper variety has not yet been introduced.

On the great estate of General Bidwell at Chico, which we next visited, there are 1500 acres of trees, almonds being the largest variety planted. The Nonpareil and I. X. L. are the two leading sorts grown there. On this estate, among the hundreds of giant cherry trees, I saw a Black Tartarian, which one season produced over 1700 pounds weight of fruit. The head manager, Col. Royce, pointed out, while driving around the property, a large tract of young almonds which had been planted to Muscat grapes; but, raisins not paying, the nuts had been put in instead. This place has a nursery attached to it, and a capital plan for aiding in the description of the varieties of fruits grown is that adopted by Col. Royce of having samples of all the fruits grown in the nursery preserved in sulphured water in large, ornamental glass jars on shelves around his offices, and a glass case with samples of all the nuts and dried fruits turned out as well, all carefully named.

In the Biggs district, some 20 miles from Chico, there are 4000 acres of fruit trees planted in one continuous tract and all belonging to five companies or firms. Mr. Hammon, of Alexander & Hammon, drove us around the Biggs district. He has two million trees in his nurseries for sale this winter and 400 acres of trees, principally peaches, plums, apricots and almonds.

In Mr. Treat's orchard we had a struggle to get through his peach block of 100 acres of five-year-old trees with a hooded buggy and pair of horses. These had been planted 20x20. Mr. Treat holds that to prune back the branches of the trees is unnatural, and he only thins out the fruit. The work costs him \$15 per acre. His peach orchard might truthfully be described as a forest, so immense are the trees and so close together. Mr. Treat thinks that if by this plan he can get two or three enormous crops from his trees (he has already had two), he can well afford, if necessary, to dig up the then possibly exhausted trees and plant fresh ones and so repeat the experience. That may be possible upon the deep and extraordinarily rich loamy and peaty soil that his trees are grown in, but the system pursued by 99 out of every 100 of careful pruning will give the best ultimate returns, I believe, upon clayey or less rich soils. These trees were very evidently running away to the tips and the inner foliage and spurs decreasing. Either the unsatisfactory plan of sawing back too near the main forks will have to be pursued or grubbing out and replanting. Mr. Treat averaged 20 tons per acre last year from his Foster peaches (2000 pounds to the ton), and took \$25,000 from the 100-acre block, or over £5000 sterling. This year prices are lower, and he will not net so much. He employs Japanese laborers at \$1.10 per day of 12 hours, and they keep themselves.

The Hatch and Rock orchards here contain 1750 acres, of which 700 are in almonds. The main track through this estate is two miles long, and this and the principal side tracks are, as I also found in many other places, covered

with straw to prevent dust and the cutting up of the soil. On the tracks leading from the pickers in the orchard to the packing-shed a great street watering cart was in requisition to lay all dust, so that the fruit should be as clean and fresh as possible when packed. The wagons for conveying the fruit to the railway station were provided with such a system of springs as to reduce the jolting to a minimum.

An Average Prune Acre in Tulare.

Mr. I. H. Thomas, of Visalia, furnishes the RURAL PRESS the following estimate upon the cost and net proceeds of one acre of French prunes grown on unirrigated ground for five years; placing the dried product at 6 cents per pound and allowing for the price of the land at \$75 per acre and adding 10 per cent to the cost of land for cultivating the same annually.

This estimate is made on the subirrigated lands within a radius of eight miles from the city of Visalia, where no artificial means are used in drying, as they thoroughly cure in the sun in from three to five days, and orchards have had full crops for the past five years:

Land at \$75 per acre.....	\$ 75 00
Interest one year at 10 per cent.....	7 50
Plowing ground for planting.....	3 00
Cultivating and miscellaneous expenses.....	7 50
Cost of 75 trees, 24 feet apart.....	9 37
Planting trees.....	3 00

Total cost end of first year.....\$105 37

Second Year—

Interest on \$105.37, at 10 per cent.....	\$ 10 53
Pruning.....	50
Cultivating.....	5 00
Replanting dead trees.....	1 00

Total cost end of second year.....\$122 40

Third Year—

Interest on \$122.40.....	\$ 12 24
Pruning.....	50
Cultivating.....	5 00
Miscellaneous.....	3 00

Total cost end of third year.....\$143 14

Fourth Year—

Interest on \$143.14.....	\$ 14 31
Pruning.....	1 00
Cultivating.....	5 00
Miscellaneous.....	4 00

Total cost end of fourth year.....\$167 45

Fifth Year—

Interest on \$167.45.....	\$ 16 75
Pruning.....	2 00
Cultivating.....	5 00
Miscellaneous.....	4 00

Total cost end of fifth year.....\$195 20

CREDITS.

Third year, 75 trees, at 50 lbs. per tree, 3750 lbs., making 1250 lbs. dried prunes, at 6 cts.....	\$ 75 00
Cost of picking and drying at 1/2 ct.....	6 25

Net third year.....\$ 68 75

Fourth year, 75 trees, average 175 lbs., 13,125 lbs., making 4375 lbs. dried, at 6 cts.....	\$262 50
Less cost of picking and drying at 1/2 ct.....	21 87

Net fourth year.....\$240 63

Fifth year, 75 trees, average 325, 26,250 lbs., making 8750 lbs. dried, at 6 cts.....	\$525 00
Less cost of picking and drying at 1/2 ct.....	43 75

Net fifth year.....\$481 25

BALANCE.

Net per acre.....	\$ 68 75
Net per acre fourth year.....	240 63
Net per acre fifth year.....	481 25

Less expenses for five years.....\$790 63

Net profits per acre at end of fifth year.....\$595 43

After carefully investigating the above estimate made by I. H. Thomas, we believe it to be a reasonable and fair estimate as to the cost and production per acre of the sub-irrigated prune lands adjacent to the city of Visalia.

THOMAS JACOB,
G. F. BEAL,
C. J. BERRY,
J. A. PATTERSON,
F. BRIGGS,
Visalia, Cal., July 12, 1893.
Fruit-growers.

To Destroy the Red Spider.

Mr. Dunn, at Bakersfield, gives the following recipe for a spray that will absolutely destroy the red spider: Three pounds caustic soda or potash, two pounds of sulphur; dissolve in two gallons of water; add 25 pounds of whale-oil soap and boil until thoroughly dissolved. Add water to make 100 gallons and spray with it while the mixture is warm.—*Californian*. This mixture has been tried at Greenfields this season with entire success.

WORLD'S FAIR.

California at the Fair.

NUMBER II.

TO THE EDITOR:—Sacramento county has a lofty, pillared rotunda of redwood devoted to photographic views. Adjoining it is a large redwood edifice made with tiers of shelves on which fruit in glass is displayed. Looking down on it from the gallery, one sees tall sheaves of wheat rising to the railing from the top shelf. A booth under the gallery is adorned with clusters of wheat stalks on a purple background and contains stands of dried fruit and globes of seed grain.

Alameda county covers a great deal of space on the

floor. A large relief map is constantly studied by visitors. Over it a placard states the area, population, valuation, acres tilled, annual output of the various products, trees in bearing, etc. There are two large pavilions filled with the usual array of fruits and vegetables in glass. In one of them, a terraced table is devoted to jars of mixed pickles put up with such ornamental effect that ladies were heard to declare them the most beautiful things that they had seen. Sea salt from the Solar Salt Works, in all forms, was a curiosity; also sugar, in its evolution from the beet to the finest grade, shown by the Alameda Sugar Co. An arch with hollow supports, filled solid with all kinds of fruit, called forth many expressions of admiration. Boxes of cherries in fair condition were here offered for sale.

Placer county should be congratulated for her enterprise, having three booths very nicely fitted up, under the east gallery. A banner at the entrance says: "The Gateway of California." Among the things shown are sheaves of oats eight feet high, cut 90 days after the seed was sown. Oranges, lemons, nuts, grains, specimens of clay, a bale of alfalfa, cotton, dried fruit, silk cocoons, petrified wood, wine and brandy, the best lot of dried figs I have seen, a wonderful collection of butterflies from the Sierras, specimens of soils, Rocklin granite, and fresh cherries, peaches, apricots and loquats not only speak well for the resources of the county, but for the efforts of her residents in collecting such a varied display for this occasion. While viewing this exhibit, I heard a shout from a young lady to the rest of her party: "Come and look at these string beans; they are a mile long!" The exhibitor of that jar of wonderful beans would have felt fully repaid for his trouble if he had seen the wonder of these people alone, to say nothing about the crowds preceding and following them. A gentleman from Colusa, in speaking of the Placer county exhibit, expressed great regret that his county was not represented.

A case of cotton bolls was marked from Merced county. If any other exhibits were made from this county, they were mixed up in the State display, and I did not find them. It is an easy matter to overlook locality exhibits as things are arranged.

The above completes the ground floor, with the exception of newspaper exhibits and the lovely white booth filled with the handiwork of southern California women. The most conspicuous articles in the latter are a portiere made of silk cocoons by the Ladies' Annex to the Chamber of Commerce of Los Angeles and a basket big enough for three persons to sit down in made by an aged Indian woman of Temecula.

The entire south gallery is occupied by the State historical exhibit, in charge of Mrs. Mary E. Hart of Los Angeles. The three eras of California history—aboriginal, mission and pioneer—are illustrated by many relics of interest and value, contributed by the various historical and scientific associations of the State, by the priests connected with the Missions (each one of whom has parted with some treasure) and by individuals. Guided by Mrs. Hart, one arrives at an intelligent understanding of the exhibit, and knows something about the history of the State after the tour is made.

The north gallery has been turned into an art room, and is a surprise to many Californians as well as to Eastern people, who had no idea that there was so much good art work done on the far Pacific coast. The large space is covered with paintings which do not suffer in comparison with those shown in the immense art building. The handsome redwood parlor is in the west gallery; this is the ladies' reception room and is elegantly fitted up. The stately mantel is of carved redwood, the piano, plaques, showcases and many of the picture frames are of the same wood, highly polished. On the wall are the famous tapestry pictures made by Mrs. Jenkins of Los Angeles, one representing 7 and the other 14 years' work. Collections of sea moss, shells, cocoons and silk, etc., are examined by many visitors.

Next comes the wild-flower room, with walls of delicate green covered with rustic lattice work and wild flowers in water colors. There is a cabinet of ferns and the furniture and carpet of green matting carry out the wildwood idea. The gorgeous poppy room bears off the palm; it is too rich for the crowd to deface and people are kept at a safe admiring distance by orange-colored silken ropes. The walls are exquisitely draped with orange silk, the ceiling is a painted marvel, the carpet is in white and faintest yellow, the furniture is upholstered in white brocade and orange satin, white cushions, banners, draperies and panels all harmonize and are worked with eschscholtzias. Even the woodwork of the piano is white and gold. A great bowl of poppies (wax, of course) stands on a gilt table in the center of the room. Of course every one exclaims "Lovely!" and asks about the flower, to be told that it is the floral emblem of the State. A large section of bark of the big trees interests people who never before saw it in dimensions greater than that of a small pincushion.

The walls of the west gallery are lined for some distance with slabs of wood, beautifully polished. At the end of the gallery is an extensive historical exhibit made by Wells, Fargo & Co.

The east gallery is occupied by the rooms of the governor and commissioners, the postoffice, a free reading-room and an educational exhibit made by the public schools of California, Cogswell Polytechnic College of San Francisco, the Golden Gate Kindergarten Association, and Throop University of Pasadena. A number of large paintings of California scenes are hung in the most effective places throughout the building, and show up finely.

On the whole, the California building is extremely creditable to the State. No defect is noticeable to visitors, though persons familiar with the section can see a chance for improvement in some details. For instance there ought to be more fresh produce both here and in the Horticultural building. The display of fruit in glass is superb.

The floor of this building is 100,000 square feet, and the value of the exhibit has been estimated to be a million dollars.

CLARA S. BROWN.

Chicago, July 15, 1893.

THE DAIRY.

How to Make Cheese at Home.

Have a tinman solder a faucet near the bottom at one end of an ordinary tin wash-boiler, which will hold five or six pailfuls. Fit a movable tin screen inside, about three inches from the faucet, and extending about the same distance above it, which shall hold the curd away from the faucet. This, with a long, wooden paddle, is all you need order especially for the work except cheese cloth, rennet and a cheese press.

Six pailfuls of sweet milk, with the cream all in it, will make about 15 pounds of cheese. It need not be of one milking if it is perfectly sweet. Put the milk in the boiler on the stove and heat it to 80°. Remove from the stove and add the rennet. The tablets are easiest to use and the directions accompany them. When the milk has coagulated, which will take place in ten minutes or less, it must be cut to the bottom of the boiler each way, making about two-inch squares. The whey will begin to start almost at once. Sink a small dipper into it slowly and the whey may be removed gradually until two quarts or more have been collected. Heat this rather hot, not scalding, and pour it over the curd, stirring it very carefully. When at 100°, open the faucet and allow the whey to drain out, dipping it out from the top as before described. When drained, sprinkle half a teacupful of fine dairy salt on the curd and crumble and mix it thoroughly with the hands. Have a square of strong, loosely woven cloth wet and placed in the cheese hoop, which should be the size of a peck measure. Press the curd into the hoop, adjust the cover, after the cloth has been folded on the top of the curd, and submit the cheese to gentle pressure.

Prepare a bandage of cheese cloth large enough to go around the cheese and wide enough to nearly cover the ends. Lay on the ends another piece and sew to the piece around the cheese. Keep at 70° in a dry room. Too much salt or too much scalding when heating the curd hardens the cheese, while careless stirring starts the "white whey" and allows much of the butter fats to escape.—S. A. Little, Seneca county, N. Y.

Size in the Dairy Cow.

There has been a good deal of controversy about the proper size for a dairy cow. Some contend that she should be big, so that when she has done her work in the dairy, she can be fattened up for beef. Those men object to the Jersey because she is too small—she won't make beef enough. Ever since I began to study the matter, I have been a strong advocate of the special-purpose cow. We want a certain kind of cow for a certain kind of work, and she must do that work better than any other kind of cow; she should be a cow for one kind of dairy business in order to be a good business dairy cow. It appears to me that the extra weight in a dairy cow, over and above what is necessary for her to do the best work, must be fed at a great loss, because it is fed for many years before it is sold. This proposition, it would seem, cannot be successfully controverted. The business cow must pay every year of her dairy life, and we cannot afford to wait till we kill her to get any part of our profit; each year should show a good balance to her credit. And how much profit could we expect from cow beef fed from 10 to 15 years? It is absurd to expect any.—A. L. Crosby in Farmers' Advocate.

POULTRY YARD.

Lice and Warm Days.

It requires but 24 hours for a poultry-house to be overrun with lice when warm summer days occur. The importance of keeping the house clear of lice is, therefore, apparent, says the *Delaware Farm and Home*. It is not difficult to keep lice down if the work of so doing is not neglected. It is due to the delays so often indulged in, which give lice an opportunity to multiply and swarm over every portion of the house, that makes an excess of work. Some persons are satisfied to attempt to destroy lice once or twice during the season, considering that it will be sufficient, but they overlook the fact that lice multiply very rapidly during the prevalence of warm weather, and that only persistence and patience will clear them out. If once the lice are destroyed, the house will need attention once a week only, perhaps, but it is seldom that all of the pests will be reached; and, if but a few escape, they will soon replenish the number that met their fate previously. To keep down the lice is to keep the hens in better laying condition, for, as soon as lice overrun the quarters, the hens will become debilitated and gradually die off.

Table Scraps.

The scraps from the table are quite an addition to the food, and greatly lessen the cost where but a small flock is kept, but they are of no consequence whatever when there are large numbers of fowls, as the proportion to each fowl is too small to be of assistance. There are, however, quite a number of families who delight in the keeping of a few hens, and, as the scraps are then of value, and the labor insignificant, the flock is sure to give a profit. In fact, where there is a large quantity of scraps or other waste, we consider it wise to procure a lot of hens in order to consume such materials.—*Farm and Fireside*.

One Remedy for Lice.

On washdays save the soapsuds, and to each tub of the suds add one or two quarts of kerosene emulsion. Stir the mixture well, dip each hen in the suds and apply to the poultry-houses and yards with a sprayer or garden watering-pot. This may be done on every wash-day for the premises, but the hens should be dipped only once, as they will keep themselves clean with the dust bath.

THE HOME CIRCLE.

The Pride of the Family.

Don't keer whey it is you look,
D'ain't no finer gal 'n Suke—
Leastwise, Susie—'cause she 'low
Suke's a name don't suit her now.

Some folks raise dey gals to be
Rough an' corn-fiel'-like—but we
Got diffunt notions. Me and Luke
'S made a lady-gal o' Suke—

Leastwise, Susie. W'y' de way
Dat ar chile kin do crosday!
Fer her woosteds, at de sto',
Dey's six bits owing'—maybe mo'.

W'en bit comes to readin', Suke—
Leastwise, Susie—teks a hook
An' reads off all dem a's an' h's,
Jes' as natchal as you please.

As fer cookin', washin' clo'es,
Scrubbin'—common t'ings like dose—
Ef ou' chile bawn white an' rich
She couldn't know no less 'bout sich.

Ef you'd heeh ou' Susie talk,
An' see her stylish kin' o' walk,
An' notis what a gal she is,
You'd shore declare she's city riz.

W'en she entytains ber beau,
Evenin's, me an' Luke we goes
In de hack-shed—but my law I
We don't mind dat, me an' Paw.

—Paul Dayce in the Times-Democrat.

The Gateway to Life.

Why should we weep for those who die?
They fall, their dust returns to dust;
Their souls shall live eternally
Within the mansions of the just.

They die to live, they sink to rise,
They leave this wretched mortal shore;
But brighter suns and bluer skies
Shall shine on them for evermore.

Why should we sorrow for the dead?
Our life on earth is but a span;
They tread the path that all must tread,
They die the common death of man.

The noblest songsters of the dale
Must cease when winter's frowns appear.
The reddest rose is wan and pale
When autumn tints the changing year.

The fairest flower on earth must fade,
The brightest hopes on earth must die;
Why should we mourn that man was made
To droop on earth but dwell on high.

The soul, th' eternal soul, must reign
In worlds devoid of pain and strife;
Then why should mortal man complain
Of death, which leads to happier life?

—Alfred Tennyson.

General Lee's Story.

THE narrator hereof knew the late General Lee well, and passed through the war close by him, says a writer in the *Philadelphia Times*. So far as he knows the following brief and, perhaps, not very amusing war story is the only war story that he ever told. It is certainly the only one that the recorder, who heard him tell it, ever did hear fall from his lips.

Lee was never a great talker except under one condition, and that was when he had young ladies to entertain, for then his natural gallantry got the better of him and he was a charming companion, though not what might be called loquacious, and he did not care to talk of the war, preferring to choose other topics. It was in camp, however, that he so far yielded to the desires of a couple of fair visitors as to spin a yarn. He had invited two young ladies, cousins of his, to dine with him, and it was to them and at their persuasion that he told the story of the "Two Confederate Scouts."

Carefully arranging his napkin on the table in front of him, and sitting perfectly erect in his chair, as was his custom, General Lee said: "When this war is over you will hear a great deal of praise given the leaders of the armies, and in the attempt to do them honor the private soldier will, to a certain extent, be overlooked. This is unfortunate, since some of the noblest and most daring deeds of the war were done by privates on both sides.

"I was once in absolute need of positive information as to the movements of the enemy. My regular scouts were out, so I had to select from a regiment of men who were familiar with the section of the country, if not with their mission. Two able-bodied and intelligent men were sent to me, to whom I intrusted the dangerous task of crossing the river and going into the neighboring village to ascertain from stragglers the coveted information. They made the trip successfully and returned the next noon not only with the facts, but with the traps and effects of

four Union soldiers, which they had obtained in a manner creditable to the coolest and bravest men of either army.

"After ferreting out the secrets of the enemy they started on the return trip, but were detained by a terrific rainstorm of several hours' duration, which forced them to shelter until night. When they reached the river they found to their chagrin that it was too much swollen to be crossed in a canoe, and the only thing left was to make a hed of the pine tags on the ground and sleep until morning, when they would proceed unmolested. But they had reckoned without their host. The enemy's pickets, who had also been driven to shelter by the rain, were out early next morning investigating, and seeing fresh tracks suspected something wrong. Five of them started on the trail plain in the soft earth and soon came upon the sleeping scouts. Feeling confident of having their prisoners secure, they thought to have some innocent fun with them, and proceeded to jab them in the back with the points of their bayonets and request them to come in out of the rain.

"Hello, Johnny, what are you doing sleeping out here in the wet like this? You will take cold. Come on with us out of the damp."

"But the sleeping Confederates could not be aroused and the sentinels had a big laugh over it, particularly so when one of them would turn partially over and groan out, 'Oh, stop that! What are you poking me for? It isn't time for reveille yet,' as if he thought he was in his own camp safe and sound. Just in the midst of their greatest outbreak the scouts, with the agility of wild animals, sprang from their couches and with their pistols shot down the two front men, then as quickly dropped the other two as the fifth man hastily retreated, leaving his gun behind him.

"When the scouts heard the federal squad advancing on them they were too close to admit of retreat, so they resorted to strategy and feigned sleep, arranging between them that at a given signal both should rise and fire on different men, taking them so by surprise that the others could be shot also before they could get their guns up. The trick worked perfectly, and to it those men not only owe their necks, but the valuable information for headquarters and four good Snider rifles and warm overcoats.

"I do not believe that any deed of the war surpassed this in coolness and bravery."

What For?

"What is woman for?" was asked at a meeting of the American Social Science Association in Saratoga. The *New York Sun* makes this reply:

"She is for soul, for thought, for love, for bewitchment, for romance, for beauty and for man. She is for this world and for other worlds. She is for all time and after time. She is for memory and for hope. She is for dreams beautiful. She is for poetry and art. She is for the fulfillment of the human imagination. She is for the household and her mate. She is for everything that is worth anything. She is for life. She is for faith. She is for earth and heaven. She is for summer and for winter. She is for the glory of the world, which would be intolerable without her. She is for delicacy and daintiness. She is for youth, for middle age, for old age. She is for the merry-hearted and for the weary-footed. She is for light. She is the crown of creation, the consummate masterpiece of nature. It was Robert Burns who, in an hour of ecstasy, sung:

"Auld nature swears the lovely dears
Her noblest work she classes, O!
Her 'prentice ban' she tried on man,
And then she made the lasses, O!"

To Exterminate Roaches, Ants and Other Vermin.

Sprinkle powdered borax freely about the sinks, on closet shelves, and in cracks about the kitchen where they exist. While destructive to these pests, borax is absolutely harmless to mankind.

Borax is also the best preservative known for fish, flesh or fowl, and for these purposes immense quantities are used; a light sprinkling of powdered borax will preserve them from decay or putrefaction.

Borax is cleanly, cooling and sedative; is good for burns, scalds and wounds. A lump the size of a pea, dissolved in the mouth, will allay coughs and throat irritation; a pinch of the powder used as a snuff is beneficial in catarrh; and a solution of ten grains of borax to one ounce of pure water is a soothing lotion for inflamed eyes. It is an excellent cosmetic, allaying all irritation of the skin, and making it soft and white.

It is said that cleanliness is next to godliness, and borax is one of the most cleanly and cleansing substances known. In the household where it is freely used, dirt can-

not exist, and with the eradication of dirt the germs of many diseases are destroyed. There can be no surer way to preserve the healthfulness of the home than by a free use of borax, which cleanses, deodorizes and disinfects.—A Transcontinental Wayfarer, in *Good Housekeeping*.

Dick Tod.

Dick Tod was one of the characters in a Western town. He was active in politics and horse-races, and was a man who, while not quick to provoke a row, was quick to end it his way when once it started. Everybody in town was afraid of him and his prowess was held to be invincible. On one occasion a new editor, displeased with Mr. Tod's methods, announced in his paper that the gentleman was a liar. Two hours after the paper appeared a man rushed into the editor's office, perspiring like a porpoise.

"I hope you'll excuse me," he said to the astonished editor, taking a tape-line from his pocket, "but I didn't see the paper until a few minutes ago."

"What do you want?" exclaimed the editor.

"Want to take your measure, of course," he said, as if the editor ought to know what he was there for.

"But I don't want any clothes," urged the editor.

"Clothes nothing; I'm no tailor."

"Well, what in thunder are you?"

"I'm the undertaker. Didn't you call Dick Tod a liar?"

That night the editor got out of town and Dick was pacified before he came back.

At another time a political opponent got into a difficulty with Mr. Tod and published a card of a very personal character.

"Hello," said a friend meeting him shortly after the card appeared, "have you seen Dick Tod?"

"No," was the short answer.

"Of course you haven't," apologized the friend. "I'm a blamed fool to be asking a live man a question like that."

Once again Mr. Tod had some trouble over a race.

"How's this?" said a friend to him the next morning. "I heard Blinker say in a crowd last night that you had sold the race."

"Oh, that's all right," laughed Tod. "Blinker's funeral won't take place until Sunday afternoon, as we couldn't postpone the races."

But Mr. Tod went the way of others of his kind. In a saloon one night when he was not expecting it a woman whipped out a revolver and shot him through the body. He lived about ten minutes and his last words were:

"Well, boys, good-bye, and remember that no man ever got the drop on Dick Tod."

Hints to Housekeepers.

A dash of extract of orange in the water in the finger bowls pleasantly takes away the food smell of the hands, particularly in these days of asparagus eating.

Washing in cold water when overheated is a frequent cause of disfiguring pimples. Hot water and a piece of flannel for a face cloth are preferable. Cologne dabbed on the little black spots after the hot water bath will tend to efface them.

To clean mahogany take one pint furniture oil, mix with one-half pint spirits of turpentine and one-half pint vinegar; wet a woolen rag with the liquid and rub the wood the way of the grain, then polish with a piece of flannel and soft cloth.

Linen table centers, sideboard scarfs and doilies with deep machine-made borders of drawn work are beautiful and comparatively inexpensive, and when further ornamented with simple designs in white or yellow silk embroidery are handsome enough for the most ceremonious dinner.

A high heel is injurious enough for adults' wear. For children who are still growing it is even more so, yet there are mothers who let their young daughters wear them. There are also foolish mothers who emulate the Chinese by making their children wear boots that are much too tight for them, and having them buttoned closely up the legs, thus depriving the limbs of their natural freedom. By doing this they hope to keep the feet small, but it ruins the carriage and gait.

To remove the fishy flavor peculiar to wild ducks and some water fowls, pare a fresh lemon very carefully, without breaking the white inner skin, put it inside a wild duck. A lemon kept there for 48 hours will remove all the strong taste often so unpleasant in wild fowl. The lemon should be changed every 12 hours. To flavor and make tender a joint of roast beef, and to give variety to the family table, where beef is the usual meat eaten, nothing more is required than a large lemon; cut it in two

pieces, squeeze all the juice upon the meat, then, after peeling the lemon, roll it up in the joint (ribs of beef, etc.). When the lemon is used no water is required. The joint should be a fat piece of meat, to insure good gravy, the lemon acid removing the oily taste sometimes objected to.

You can tell good beef chiefly by its color; it should be a reddish brown and show no clots of blood. Young, well-nourished beeves have a white rather than yellow fat, which belongs to old, lean animals. Avoid beef of a pale pink color, which indicates disease, or of a dark purple tint, which shows that the animal has not been slaughtered, but has died with the blood in the body. A test to get the odor of meat: Dip a knife in hot water and pass it through the flesh, then try the odor of the knife. Good beef should have little or no smell.

For inflamed and sore eyes take a small basin filled with water. Drop in several red-hot cokes from the fireplace; strain off water and use as a lotion, bathing the eyes with it every hour. It should be made fresh for use every day.—American Cultivator.

Abstracts.

Farm Journal: "A husband's wrath spoils the best broth."

New England Farmer: "Does farming pay? is a fool question."

Farquhar:

Courage, the highest gift, that scorns to bend

To mean device for a sordid end.

Courage—an independent spark from Heaven's bright throne,
By which the soul stands raised, triumphant high, alone.

Rev. Thomas Dixon: "So-called high society is a certain coterie or clique of people in every great city who arrogate to themselves the title.

"The so-called high society of our great cities is in its pretensions a humbug, in its customs the incarnation of vulgarity, in its standard of life essentially immoral and corrupting.

"The question of brains, of capacity, of talent, of power in manhood and womanhood does not enter into the ideals that govern this coterie of men and women.

"These facts are evident in the dissipations of this so-called 'society.'

"That such people who lead such lives should arrogate to themselves the title of society is a piece of 'cheek' whose sublimity at least must elicit admiration."

North American Review: "The most rational modes of keeping physical decay or deterioration at bay, and thus retarding the approach of old age, are avoiding all foods rich in the earth salts, using much fruit, especially juicy, uncooked apples, and by taking daily two or three tumblerfuls of distilled water with about 10 or 15 drops of diluted phosphoric acid in each glassful.

"The powerful solvent properties of distilled water are well known. As carbonate of lime exists in nearly all drinking water, the careful distillation eliminates this harmful element. As a beverage, distilled water is rapidly absorbed into the blood; it keeps soluble those salts already in the blood and facilitates their excretion, thus preventing their undue deposit. The daily use of distilled water is, after middle life, one of the most important means of preventing secretions and the derangement of health. As to diluted phosphoric acid, it is one of the most powerful influences known to science for shielding the human system from the inconveniences of old age."

Their War Record.

There was a little incident not down on the regular program mapped out for the reinterment of Jefferson Davis at Richmond. Leaning against the clerk's desk at one of the leading hotels was a well-known general whose name has been synonymous with bravery in action on the side of the lost cause. Unnoticed by him and equally unmindful of his presence there approached the desk a man who enjoys the rare distinction of having served in the Confederate army as a private. Running his finger down the open register that lay upon the desk, the newcomer halted a moment, and turning to a companion exclaimed: "General Blank; so he's here; well, I should like to meet that fellow again. The last time I saw him was at the battle of Y—, where he was running like a turkey from the enemy!"

Here the general turned, and the two men recognizing each other, the speaker held out his hand in greeting, and instantaneously concluded, "And I was keeping him company!"—Kate Field's Washington.

Killed by Ice-Water.

Cases of death from drinking ice-water when one is overheated have been reported. Great care should be taken in regard to this

matter. The craving for cold water when the heat is great and a person has been exerting himself is sometimes almost irresistible. But the craving should be but sparingly indulged. In fact, it would be better at such times not to drink very cold water at all. Water of only moderate coolness would be a great deal better. One should exercise the restraints of common prudence in such matters. "Killed by ice-water" is a verdict which no coroner's jury should have it in their power to render.

Guarding Against Moths.

If one is not the happy possessor of a cedar closet or chest or a camphor trunk, for storing furs and woollens, she need not despair of protecting them against the ravages of moths, as "Harper's Bazar" points out as follows:

Many people object to camphor-tar balls and also to tar bags. They certainly do have a most disagreeable odor, which clings to one's furs through almost the entire winter. Red pepper and tobacco are sometimes used, but with doubtful advantage.

A woman 75 years old, and with much experience in such matters, said she had never used anything to protect her furs except newspaper and a glue pot. Her method, briefly stated, was first to beat the furs well, getting out all the dust and any moth or eggs, and clean woollens carefully from any spots, for dirt will attract moths. Having done this, she placed them in boxes and sealed them up in newspaper, leaving not a crack nor a hole anywhere.

If one has no boxes, she may take two thicknesses of newspaper, and for heavy articles, such as portieres and fur rugs, wrapping paper. Seal them up also, and put away on a shelf until the time comes back for their use.

A great deal of worry and time will be saved if each package is labelled "Father's coat," "Johnnie's cap," etc. Fur on gowns can in most cases be ripped off, thus saving the garment from being wrinkled by close packing all summer.

Overworking Horses.

You overwork occasionally, do you not? Perhaps you do it habitually; but whether occasionally or constantly, you know that overwork debilitates and opens the way of the attacks of disease. Thousands of men die because of overwork, says an exchange. Well, what is true of men in this respect is true of the horse. We cannot overwork it without danger. The number of horses that are killed by hard work is very large. Outside of humane considerations altogether, it may be said that a man who kills his horse or injures it usually does a very foolish thing. The excuse for overworking our horses is that the work must be done. There is no "must" about it. If a man kills a hundred-dollar horse in doing a hundred dollars' worth of work, he has made nothing, not a red cent. If he kills such a horse in doing fifty dollars' worth of work, he is just fifty dollars out of pocket. If he would be a little more particular in estimating the results of such sacrifices, he would less often make them.

Strawberries and Red Pepper.

It would seem at first glance as though there could be no possible connection between strawberries and red pepper, but with the hope of doing some unfortunate dyspeptic a favor, I will explain. A friend of mine who is troubled with dyspepsia, became convinced that among other things he would have to deny himself the pleasure of eating strawberries, of which he is particularly fond. Some one suggested, however, that if he would sprinkle them very lightly with red pepper, the prurient flavor would not be destroyed, and he could then eat them without fear. He felt incredulous; but then remembered that he had felt exactly the same way when some one advised his eating cream and cucumbers, which, upon trial, he found by no means unpalatable. He therefore tried the strawberries and pepper, and says that the flavor is not spoiled, and he can now eat and enjoy them without fear of indigestion. Thus asserts a writer in the Housekeepers' Weekly.

Dr. Holmes to the School Children.

Our good and genial Autocrat has always the faculty of doing a graceful thing in a graceful way. One of the latest illustrations of this faculty is his letter to some school children, who wrote to him, at the suggestion of their teacher, to express their opinion of "The Last Leaf," which they had been studying. In his reply, Dr. Holmes wrote: "I am glad to be told that I have written what has instructed and gratified you. The poem called 'The Last Leaf' was written sixty-three years ago, before most of your fathers, and some of your grandfathers, were

born. I am almost the last leaf myself now, but I am glad to be reminded that the tree of life is full of young leaf buds, which will spread in the sunshine of the twentieth century, when the bough to which I am still clinging is shorn of its last year's latest leaf."—Boston Journal.

Rest and Labor.

Work not and you shall not eat, said the ancient mandate.

Rest not, and your work shall not be fruitful, says modern experience.

The busiest, most productive age the world has ever seen is this nineteenth century.

Never before has the importance of rest and recreation been so clearly recognized, and in no previous age has such broad and costly provision for healthful pleasure-seeking been made.

Better work can be done by any man in twelve hours than in fifteen.

Six days of work each week are more productive than seven, if they are properly used.

And a year of ten or eleven months devoted to energetic labor, with the remainder given to intelligent recreation, is worth more to mankind than twelve months of steady grinding.

These are modern discoveries, and they are helping to make life a great deal better worth living than it was in the days of old.—Christian Union.

A Curiosity for Mathematicians.

Did you ever notice the combination of mathematical oddities unearthed in multiplying the number 37? If multiplied by 3, or any multiple of three up to 27, the product which results is expressed in three similar digits. See:

37x 3=111
37x 6=222
37x 9=333
37x 12=444
37x 15=555
37x 18=666
37x 21=777
37x 24=888
37x 27=999

It will also be observed that these products succeed each other in the order of digits as read downward, thus: 1, 2, 3, 4, 5, 6, 7, 8, 9; and these, again, being multiplied by 3, their number of places in the column, reproduce the multiplicand of 37, from which they result. Note:

1x3=3
2x3=6
3x3=9

And so on down the entire column.

A Kitchen "Trousseau."

A kitchen "trousseau" is sold by some dealers. The pieces are packed in a trunk and left with the new housekeeper. One of 68 pieces consists of a jelly-mold, teapot, coffee-beggin, pepper-box, flour-dredge, two covered saucepans, preserve kettle, wash-basin, colander, milkpan in three sizes, pudding-pan, gridiron, spout strainer, gravy strainer, biscuit-pans, scoop, two-prong fork, paste-jagger, cake-turner, flat skimmer, ladle, two dippers, oblong pan, fry-pan, tea-tray, crumb-pan and brush, dustpan, coal shovel, tea-kettle, dishpan, basting-spoons, teaspoons, tablespoons, forks, cake-cutters, pie-plates, six of each, and a flour-sieve. The list is complete, but it does not seem to have one unnecessary article.

Kerosene for the Hands.

"Never use turpentine to take the paint off your hands, but always use kerosene," said a pretty and energetic lady who plies the brush most vigorously, albeit in a very utilitarian fashion—painting her boats, doing all the necessary household renovations, and not disdaining even to varnish her own village-cart when it needs it. "Turpentine roughens the hands excessively," she continued, "but kerosene, on the contrary, keeps them beautifully soft and white. For your brushes, you should always keep a small keg of the oil ready, and put them in it directly, until you are ready to wash them. It quite ruins your brushes to let them get dry with the paint on."

A Tongue Twister.

As I was going down the street I saw two bootblacks—one was a black bootblack and the other a white bootblack, and both had black boots as well as blacking and blacking brushes. The black bootblack asked the white bootblack to black his, the black bootblack's black boots, with blacking. The white bootblack consented to black the black boots of the black bootblack with blacking, but when he, the white bootblack, had blacked one black boot of the black bootblack with blacking, he, the white bootblack, refused to black his, the black bootblack's

other black boot with blacking, unless he, the black bootblack, paid him, the white bootblack, the same as what he, the white bootblack, got for blacking other people's black boots, whereupon the black bootblack grew still blacker in the face, called the white bootblack a blackguard, at the same time booting the white bootblack with the black boot that he, the white bootblack, had already blacked with blacking.—London Tid-bits.

YOUNG HOLKS' COLUMN.

A Kitchen Garden Conversation.

The Beetroot met the Celery—

"Good morning I" said the sweet root; Crisply the Celery replied,

"How are you, Mr Beetroot?"

"I'm weary, sir," said Mr. B.,

"Of living near to posies;

I'm always hearing people praise

The lilies and the roses.

"That lily's white and rose is red,

I know by observation,

But why don't folks give us our turn

Of ardent admiration?"

"Surely because," snapped Celery,

"They scarce see past their noses;

I'm whiter than the lilies, sir—

You're redder than the roses!"

—St. Nicholas.

A Boy's Essay on Bones.

"Bones are the framework of the body. If I had no bones in me I should not have so much motion and grandmother would be glad; but I like to have motion. Bones give me motion because they are something hard for motion to cling to. If I had no bones, my brain, lungs, heart and large blood-vessels would be lying around in me and might get hurt, but now the bones get hurt, but not much, unless it is a hard hit. If my bones were burned I should be brittle, because it would take the animal out of me. If I were soaked in acid I should be limber. Teacher showed us a bone that had been soaked. I could bend it easily. I would rather be soaked than burned. Some of my bones don't grow close to my body, snug, like the branches of a tree, and I am glad they don't, for if they did I could not play leap-frog and other nice games I know. The reason why they don't grow close to my body is because they have joints.

"Joints are good things to have in bones. There are two kinds. The ball and socket, like my shoulder, is best. Teacher showed it to me, only it was the thigh bone of an ox. One end was round, smooth and whitish. That is the ball end. The other end was hollowed in, deep. That is the socket, and it oils itself. It is the only machine that oils itself. Another joint is the hinge joint, like my elbow. It swings back and forth, and oils itself. It never creaks like the school-room door. There is another joint that don't seem like a joint. That is in the skull. It don't have no motion. All my bones put together in their right places make a skeleton. Cripples and deformed people don't have no skeletons. Some animals have their skeleton on their outside. I'm glad I ain't them animals, for my skeleton, like it is on the chart, would not look well on my outside."—Hospital Gazette.

One on Depew.

Here's one on Chauncey Depew. The genial doctor had dropped in to see a gentleman on some business at his private residence. An inquisitive small boy was playing in the extension room behind the parlor. He seemed to take a great interest in the visitor and every now and then suspended his sport to reconnoiter him. When Mr. Depew left the lad ran to the front window, and, looking out, asked:

"Who is that man, papa?"

"He's the gentleman your mother and I were talking about at the breakfast table this morning, Mr. Depew, the greatest story teller I ever heard."

A few days after the visitor came again.

The lad was standing on the front stoop, and as Mr. Depew rang the bell he said to him:

"I know you."

Mr. Depew is fond of children, and, patting the little fellow on the head, observed encouragingly: "Come now, if you think you know who I am, who am I?"

"You're the gentleman that tells the biggest whoppers my father ever heard."

A Home Thrust.

Those two boys never did like each other very well, and when they were seen talking together in the schoolyard, a crowd gathered around in expectation of a lively time.

"Hello," said boy No. 1, "got yer hair cut."

"S'pose I have. Is it any of your business?"

"Bet I can guess who cut it in two guesses."

"Go on. I don't want no trouble with you."

"Yer father cut it."

"Naw he didn't. Thought yer was smart an' got fooled, didn't yer?"

"Well, I've got another guess yet. 'Twas yer mother that cut it."

And then the group that had gathered about saw the excitement that they had come after.—Washington Star.

DOMESTIC ECONOMY.

GINGER SNAPS.—One egg, one cup of molasses, one cup of sugar, one cup of butter and lard mixed, one-half cup of boiling water, one level tablespoonful of soda dissolved in water, one tablespoonful of ginger, flour enough to mold out rather soft. Roll out thin and bake in a quick oven.

CREAMED BEEF.—Scrape perfectly lean beef to pulp, mince, put in a pan with salt, pepper, one tablespoonful of water, two tablespoonfuls of rich cream, butter the size of an egg. Cook two minutes, stirring constantly. Add one tablespoonful of cracker dust, one teaspoonful of made mustard.

AUNT ADDIE'S SPONGE CAKE.—Three eggs, one and one-half cups powdered sugar, one and one-half cups cold water, one teaspoonful of cream of tartar and one-half teaspoonful saleratus; put in flour dry, two cups of flour. Beat the whites of the eggs to a stiff froth. Beat the yolks with the sugar. Sift the saleratus.

GOOSEBERRY TART.—Pick off all the stalks and little blossoms, wash the berries, and put them on to stew. A very little water may be put into the saucepan to prevent the fruit burning. Add three-quarters of a pound of sugar for each quart of gooseberries as soon as the berries are broken, and let them cook a little longer. Add more water and strain; return to the fire and boil 15 minutes longer. Line pie plates with paste, fill with the gooseberries, and cross with strips of paste.

MACAROONS.—Two eggs, whites, one coffee-cup level full of powdered sugar, one-half pound of sweet almonds. Pour boiling water over the almonds to take off the brown skin, then put them in the oven to dry; when cold, pound them to a paste. Beat up the eggs and sugar to a stiff froth and add them to the almond paste, mixing them thoroughly with the back of a spoon. Roll the preparation in your hands in little balls the size of a nutmeg, and place them on a piece of white paper an inch apart. Bake them in a cool oven a light brown.

BREAD MERINGUE.—Beat the yolks of four eggs light. Add gradually one cup of granulated sugar, beating all the while, and the grated rind of one lemon. Mix one pint of bread crumbs with one quart of milk; pour this on the eggs and sugar. Mix well, and bake in a moderate oven until stiff. When done make a meringue of the whites of two eggs and four tablespoonfuls of powdered sugar; put on the pudding and brown in a quick oven. When using the cake crumbs, use the yolks of two eggs and a half a cup of granulated sugar.

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder
ABSOLUTELY PURE

PATRONS OF HUSBANDRY.

From Worthy Master Davis.

Two Rock and Petaluma Granges will each make an exhibit at the Sonoma and Marin district fair in August next.

Sonoma county patrons will observe Children's Day at Morris grove, Sebastopol, the first Saturday in August.

Sacramento County Pomona Grange holds its regular quarterly meeting at Elk Grove, on Saturday, July 29th. Prof. Hilgard, of the State University, will attend and lecture.

Magnolia Grange is preparing for a good time on the 11th of August. Its hall is situated in a lovely spot, near Bear river, and its picnic will be largely attended.

The many readers of the RURAL would be more than pleased to hear from the patrons of the San Joaquin valley. There are lots of good writers over there. We know you are busy with the harvest, but do try to give us a few items.

Sacramento county has been keeping in the background too much lately. Tell us, patrons, what the signs of promise are. Encourage us on our way by your kindly words.

Sonoma County Pomona Grange has resolved not to favor any nominee for the Legislature at the next election unless said nominee promises to aid and support an amendment to the Constitution, requiring an "educational test" for voters.

Perhaps by the time these lines are read we will know who is to be United States Senator vice Leland Stanford, deceased. It is high time the people of this State were knowing who is to be senator, for the special session of Congress will soon convene, and the people will need a senator then. They might want to confer with him. We hope the Governor will give us a senator who will be of the people and for the people.

In a little more than two months the California State Grange will convene in annual session. Are you preparing for the meeting? We earnestly hope that each officer will be prepared to report, in writing, at once and when called upon. Let's lose no time in useless labor. Be ahead of rather than behind time. Masters and alternates from subordinates, county and State deputies, and officers of the State Grange, please be ye, one and all, ready.

Are you drying and canning plenty of fruit? If not, why not? It will pay to preserve all the fruit you can this year.

Is there a land anywhere with a more genial climate, more productive soil, more intelligent people, more beautiful harbors, more or better timber, coal or iron mines, than our own fair Union? Industries without number give employment to a thrifty people, who in the main are well fed, well clothed and well educated. Yet there is a feeling of discontent everywhere. The silver man says it is because Wall street wants to demonetize silver, and the gold-standard man says it is because the Sherman Act is flooding the country with a 62-cent dollar. The Republican says it is because the Democrats are in power, and the Democrat says it is because of mismanagement of the Republican party. The tariff man says it is because of threatened free trade, and the free-trader says it is because of the McKinley tariff bill. And so, excuses and accusations might be multiplied. But charges and countercharges will not relieve the oppressed. Talk will not pay for a bushel of wheat, even though it is cheaper than ever before known, nor will it buy the child a gown, though wool is desperately low.

There is, no doubt, money enough hid away in bank vaults and secret hiding-places to start the wheels of trade in active motion. Let us encourage, by word and act, the employment of capital and labor. Don't urge a run on the banks, but urge banks and bankers to send their dollars among the fields of golden wheat, to the ripening fruit orchards, to the deserted canneries, to the well-laden hop-fields, to the shops and factories, to the logging camps and idle saw-mills, to the gold, silver, copper, iron, coal and quicksilver mines—in short, anywhere and everywhere that honest labor can be profitably and honestly employed. Confidence all along the line will soon start the wheels of factories and the sails of commerce. Let's have a long pull, a strong pull and a pull all together, and you will see this distressing load of financial depression started. Let the year 1894, soon to be here, have a right royal welcome for the good times it is to bring to those who toil.

Indications are that State and the several county tax levies will be higher than they were in 1892-93. This is to be regretted, owing to all the surroundings, but the people

have little to say. "The powers that be" fix the levy, and the people pay the taxes. There's another day coming!

Some of our Eastern patrons have lately had quite a series of "personalities" in the grange press of their respective States. Brothers, don't you think you can do more for the "Good of the Order" than to keep on "airing" personalities? Better to discuss in a philosophic and logical way the principles at issue than to lug in personalities and insults. Records speak for themselves when cited and located; principles never die and truth crushed to earth will rise again. Thousands will read an argument who will not read personalities and vituperation. The grange has won many victories and it has other victories yet to win. But it has never won a victory and can't afford to win one by personalities or by vituperative and slanderous accusation. Let's to the work in hand in a manly way; let's be united; let's be fair; let's be just and honest and polite; aggressive, yet modest, standing for principles, not for persons; working for the grange, because it is the farmers' best fraternal organization and the friend of all humanity. Let the more than 2,000,000 members of this modest fraternity put shoulders to the wheel, as one man, and see how soon wrongs will be righted, and see how soon some who hold high places of honor and trust in our judicial, executive and legislative departments will be dethroned and forever retired.

July Letter from New Hope.

TO THE EDITOR:—New Hope Grange does not have so large an attendance as it ought to, many being troubled in securing good help these busy days in harvest-time. But at our regular meeting, July 1st, we initiated three new members in the first and second degrees. We had the pleasure of several visitors from Woodbridge Grange. On Saturday, July 15th, our next regular meeting, as is customary with our order in conferring the third and fourth degrees, refreshments were furnished and a table set; but our new members failed to make their appearance. I believe some were not sorry, as a repetition of a feast will have to be served at our next meeting. This was pronounced one of our best meetings.

Our secretary read a letter from Sacramento in regard to our grange, sending delegates to the convention to be held there Sept. 7th in the interest of improvement of public roads throughout the State. It created considerable comment from different members; some thought we should send two ladies as delegates, while some thought our grange hardly able financially to send delegates at all. The roads north of New Hope are in sad need of improvement, for, as soon as the rainy season sets in, there are many months when teams to Galt, which is only seven miles from here, have to drive eleven miles to Woodbridge, then eight more to Galt. I would add these poor roads are just across the river and only one mile from New Hope, but in Sacramento county. Our farmers are busy harvesting, the yield being good. The potato crop was large—so much so that the market was full and prices were low. Some, I believe, think they will not pay digging, but will leave them in the ground. The fruit is turning out well and is of good quality and fine flavor, owing, I am told, to its not being irrigated. It is not necessary in this vicinity.

CARRIE CARLETON.

New Hope, Cal., July 22, 1893.

Accommodations at Petaluma.

TO GRANGES:—Intending visitors to Petaluma during the coming session of the State Grange can find good hotel accommodations, consisting of room and board, at from \$1.00 to \$1.50 per day; single and double rooms in private residences at from 50 cents to \$1.00. Good meals can be obtained at restaurants from 25 to 50 cents. Members of the State and subordinate granges desirous of engaging rooms and board in advance can do so by addressing the chairman or members of the committee, who will cheerfully attend to all matters pertaining to the accommodation of Petaluma's guests. In fact, the committee would be glad if in any way they could approximate the number of expected visitors, as it will be their earnest endeavor to secure for them the best accommodations on the most reasonable terms. A most cordial and hearty welcome is assured to all grangers.—M. D. Hopkins, Chairman; Theo. Skillman, W. W. Chapman. Petaluma, July 22, 1893.

Sonoma County Pomona Grange.

Sonoma County Pomona Grange met in regular session at Bennett Valley Grange hall on the 19th inst. Glen Ellen, Petaluma, Two Rock, Bennett Valley, Santa Rosa and

Sebastopol granges were all well represented. At noon dinner was served, the attendance being so large that four tables were set before all were accommodated.

The afternoon was devoted to the general routine of grange business. The reports of the subordinate granges in this jurisdiction show hay and grain to be of good quality but very light, grape crop good, fruit generally very good. Sebastopol reports a large yield of blackberries with good prices. A Two Rock Grange representative reported that, while other branches of industry in that section were not paying very satisfactorily this season, the poultry-yard is paying good dividends. It was decided to hold Children's Day exercises at Morris Grove, Sebastopol, on Saturday, August 5th.

The presence of Bro. E. W. Davis and other devoted grange workers made it a lively and interesting day.

The next meeting is the annual election day, and will be held on the third Wednesday in October at Santa Rosa.

July 20, 1893.

W. L. W.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

Palermo Progress: J. Z. Anderson, president of the Anderson Fruit Co., says that in his estimation the fruit crop in Butte county compares very favorably with that of any other locality in the State which he has visited. In point of excellence, Mr. Anderson says that our fruit loses nothing by comparison, and the yield is good.

Chico Chronicle-Record: The supervisors have passed an ordinance fixing the close season for quail and deer, which goes into effect 15 days from date. Sportsmen and others will do well to bear in mind its provisions. The ordinance provides that it shall be unlawful to kill or destroy quail in Butte county between the first day of March and the first day of October of each year. For deer the close season is from the first day of November to the first day of the following August. Thus it will be seen that there are only three months, August, September and October, in which male deer can be lawfully killed.

Colusa.

Sutter Farmer: During the recent fire at Maxwell the large warehouses of wheat were consumed, but the numerous piles of wheat smoldered for some time after the conflagration and workmen were at once put to work gathering it up in new sacks. The wheat has continued burning except as the fire has been put out by water. Rescuers of wheat get one-half. They have been paying \$4 per day for hands and 50 cents per hour at night, and have kept forces running day and night. It has all been scorched or smoked so that it can only be used for feed.

Fresno.

Enterprise: French prunes promise a very heavy yield in this vicinity. Mr. Newell confidently expects to harvest 15 tons from his one and three-quarter acres of eight-year-old trees. His 15-acre orchard of one and two-year-old prune trees is making a magnificent growth. The theory of prunes not being adapted to this climate should be about exploded. Mr. Say has a prune orchard that is a sight, so loaded are the now pendant limbs with fruit, and a like report comes from prune orchards everywhere in this vicinity. Mr. Newell, who is one of the successful apple-raisers of Selma, experimented with Paris green for codlin moth this spring, spraying part of his trees twice. On trees so treated the fruit is entirely free from the pests, while on trees not sprayed there are few perfect apples and the fruit is dropping badly.

Kern.

Delano Courier: Yes, it pays to irrigate grain and right handsomely, too. As an instance of this, H. E. Phillips' grain field, near Poso, affords ample proof. A portion of his ranch is irrigated from a canal from Poso creek, while the balance is yet unsupplied. From the unirrigated area he cut less than a half ton of hay per acre, while from the irrigated acres he harvested an average of eight sacks of good, plump wheat. With such advantages as this section affords, the ground can be irrigated at a comparatively small cost, and, since it increases the producing capacity of the soil several fold, there are no doubts about the profits resulting from irrigating the grain fields. During the winter season there is an ocean of water which might be turned on these fields, and a man is missing it when he fails to take advantage of the opportunity.

Merced.

Modesto Herald: West Side farmers pay \$2.50 an acre per year for water for irrigation, and the supply is limited. This is \$50 an acre in 20 years. Land under the canal sells for from \$100 to \$140 an acre. Land identically the same, but on the upper side of the canal, can be purchased for from \$10 to \$50 an acre. The enhanced prosperity of the West Side during the last few years, the few mortgages on land in the irrigated belt and the steadily increasing population, speak for themselves of the benefits to be derived from irrigation, even at such a heavy rate for water.

Modesto Herald: A few years ago "Dick" Wilson sold to C. C. Easton, for \$34,000, a tract of 1500 acres of land on the West Side subject to irrigation from the Miller ditch, but not having been irrigated heretofore. Mr. Easton

irrigated a portion of the tract, and within two years from the time of his purchase sold to "Dick" Wilson, his grantor, 400 acres of the same land for \$45,000—a net gain of 1100 acres and \$11,000 as the result of the two transactions.

Orange.

A Blade representative drove through the Westminster district and noticed many evident signs of prosperity and growth. The peat-land country at this season of the year is very attractive to the eye and satisfying to the mind, as the corn is well advanced and the crop hides well to be a heavy one. A large acreage is planted to potatoes.

The following is given as a correct statement of the orchard and vineyard acreage in Orange county:

	Acres.
Anaheim.....	2,164
Placentia.....	1,307
Fullerton.....	302
Orange.....	420
Brookhurst.....	296
Total.....	4,489

Anaheim Gazette: It is reported that Richard Gird has sold his Chino ranch to an English syndicate for the sum of \$1,750,000, \$800,000 to be paid in cash. It is said that Mr. Gird will retire from beet culture, in which he has made his fortune, and will go to San Bernardino and assume the presidency of the Farmers' Exchange Bank, which closed down in the recent flurry. He will put the institution on its feet with \$100,000 of new capital, and will doubtless make a success of it. Chino ranch cost him originally a quarter of a million dollars, and his land grant to the Oxnards, as an incentive to their putting up the sugar refinery at that point, amounted to about as much as the original price of the ranch. Mr. Gird is an unusually clear-headed gentleman.

Riverside.

C. H. Condee, general manager of the Camilo Martain tract, near Alessandro, says the Indicator, is cutting 5000 acres of grain, which promises a yield of 50,000 sacks. This large crop will be stored in Riverside. Mr. Condee has been the efficient agent of this fine property for 15 years.

Riverside Press: Five tons of apricots have just been picked from 20 trees on the land of B. F. Burt on Market street. The picking was done by Geo. Robb. The crop, when all gathered, will be found to have yielded quite handsomely. The drying of the fruit is progressing rapidly.

San Jacinto Register: The apricot season is fairly under way. For ten days the fruit-ranchers have been busily engaged in drying the crop. The numerous orchards scattered over different parts of the valley are bearing heavily, and the yield will be the largest yet harvested in this section. The varieties are the Moorpark and Royal, and the size attained by this fruit is much larger than the same varieties grown nearer the coast. In size the San Jacinto apricot resembles the peach; in color it is a transparent yellow and in flavor delicious enough to satisfy the most fastidious.

The Enterprise publishes figures showing the yield of grain for this season in Riverside county. The crop is mostly barley and the average yield is eight to ten sacks per acre, and in a few favored localities it runs as high as 20 sacks to the acre. In San Jacinto valley, the great grain-producing region of the county, 1,000,000 acres were sown to wheat and barley—25 per cent more than last year. Conservative estimates place the total yield of the valley at from 900,000 to 1,000,000 sacks. Harvesting is over on the small ranches, but will not be completed till late in September on some of the larger ones.

Sacramento.

Record-Union: The steamer Modoc Wednesday, July 29th, brought up over 60 tons of fruit from the orchards down the river, and the Apache brought up over 125 tons the day before and took down a load composed almost entirely of box lumber, showing that there must be a very large quantity of fruit still unpicked, which the growers are preparing to ship.

San Bernardino.

Chino Champion, July 21: Beets are ripening very slowly, and the rain of last night will likely still further delay harvest. It is now probable that harvesting will not commence before the last of next week at least. If the rain continues, harvesting may not commence next week.

Solano.

Vacaville Reporter: On Wednesday last John Dickson finished cutting his crop of apricots, which will amount to about 30 tons of dried fruit. Mr. Dickson is one of our most successful fruit-growers, and it is well worthy of mention that he employs white help exclusively. He informs us that a white laborer can do twice the work, and in a more satisfactory manner, than a Chinaman.

Sonoma.

Duncan's Mill Cor. Farmer: Coast fog being naturally one of our belongings, it seems strange to be compelled to make a note of its absence. Usually at this time of the year its visits are so frequent that we fail in our appreciation, longing for sunny days and pleasant breezes. They are ours now and have been for such a long time that we are heartily sick of them and sigh for the refreshing fog and ocean wind. Our breeze is nearly a tempest and the warm sunny days are scorers, drying the scanty supply of food and whirling it so nearly out of existence that the poor dairy cattle are compelled to seek pasturage in the woods or on the swampy lands. This, of course, lessens the dairy products very rapidly. A few of the more

successful dairymen have several acres of green corn-fodder to feed the cows, partially counterbalancing the evil effects of the weather.

Stanislaus.

Modesto News: The prediction and crop prospect of the portion of Stanislaus county west of the San Joaquin river is being more than realized by the harvest of the grain. The largest yield so far reported is from the A. D. Elfers ranch, near Grayson, where the yield is 18½ sacks to the acre on summer-fallow. The summer-fallow throughout that section is going from 15 to 18½ sacks, while winter-sown averages 12 sacks. It is doubtful whether another section in the San Joaquin valley will do as well. Another matter which is most favorable to those residing near the San Joaquin river is the height of the river this season. It has not begun to recede perceptibly, and the prospects are favorable for good shipping by water until after the middle of August. The barge Atlas, towed by the steamer A. C. Freese, is now being loaded at Grayson with 15,000 sacks of wheat. The output from the Patterson ranch alone is estimated at 60,000 sacks. Nearly, if not all of this, will be shipped out by water. Even at the ruling low price of grain considerable will be made by the West Side farmer.

Sutter.

Farmer: The farm of Samuel Hutchinson, below Yuba City, now leased by Johnson & Nelson, has made a fine yield of wheat. From 125 acres there was received 2365 sacks, or about 19 sacks per acre. The wheat was of the Chili variety and of extra good quality.

Ventura.

Democrat: Thos. Thompson, who owns and occupies a beautiful little place in the very garden spot of California—the Upper Ojai—says the fruit crop in his section, especially prunes, is heavy, except apricots, which are to some extent spotted, which means that they are much more abundant on some places than others. Hobart's apricot crop is the best in the valley, and is immense.

Hueneme Herald: Twelve thrashers are now running on this side of the river thrashing out about 10,000 sacks of barley a day. All of the grain is turning out splendidly. Not only is the yield excellent, but the quality is better than ever before. A large proportion of that brought in so far weighs from 115 to 120 pounds to the sack. We have been shown samples of real bright barley weighing from 47 to 50 pounds to the bushel, and there appears but little doubt that quite a lot of our product will be sold this year for brewing purposes at an advance over the prices ruling for the ordinary article. On the Patterson ranch, Mr. Daily expects to thrash 30,000 sacks. Chris Reimann, on the Las Posas, will have 16,000. Close to town, the Donlon boys thrashed out a little patch of between 25 and 30 acres and got 950 cents. It now looks as though 400,000 bags of barley would be hauled in here this season.

Tulare.

Porterville Enterprise: The grain on the Lewis Creek ranch is turning out fine. The 3100 acres will yield 20,000 sacks. The ranch under the able management of W. W. Collins is looking in first-class trim. The orange and lemon and other fruit trees are covered with fruit, and everything has a business-like look about it.

Register: G. W. Johnson, who purchased the Thompson place in Brooklyn addition, had a fine crop of apricots this season. He considered them worth two cents per pound, but as he could not get that he determined to dry them, and now has them on the trays. Mr. Johnson is experimenting slightly for himself. The matter of sulphuring or not sulphuring, and how much, if any, seems to be one on which there are many diverse opinions, and Mr. Johnson will find out about it for himself. He keeps different lots in the sulphur for different lengths of time, and keeps accurate account of his experiments. Next year he will know just what to do.

Yolo.

Winters Express: Fruit-shipping has about ceased, the prices being so unsatisfactory that growers are drying. J. C. Campbell informed an Express representative the other day that he and F. W. Wilson, who have the Goodyear orchard rented, will dry their entire peach crop, which is a large one, and that they have decided to employ none but white help in cutting it.

Winters Cor. Democrat: Watermelons now coming into the market are much larger and of better quality than those that first ripened.

Yuba.

Marysville Appeal: A small limb, about 18 inches long, taken from a prune tree in the orchard of R. O. McMillan, and on which there were almost 100 green prunes, was brought to this office recently. Such specimens go to show the prolific character of the soil.

Marysville Democrat: In conversation with Marshal Waddell of Wheatland, it was learned last evening that our sister town is fast taking on a lively appearance. The hop crop is abundant this year, and a large number of people will be employed in the yards of Dr. Durst, D. P. Durst, S. D. Woods and others.

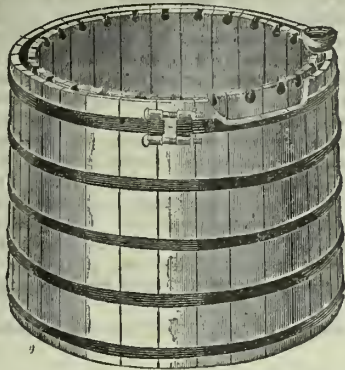
\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California street, San Francisco.

Hay Pressing.

If you are interested in pressing hay write Truman, Hooker & Co., San Francisco. They will save you money.

Patent Non-Shrinking Water Tanks.



WILL NOT LEAK OR DRY OUT.

THE BEST TANK NOW MANUFACTURED.

EVERY ONE GUARANTEED and cost no more than Common Tanks.

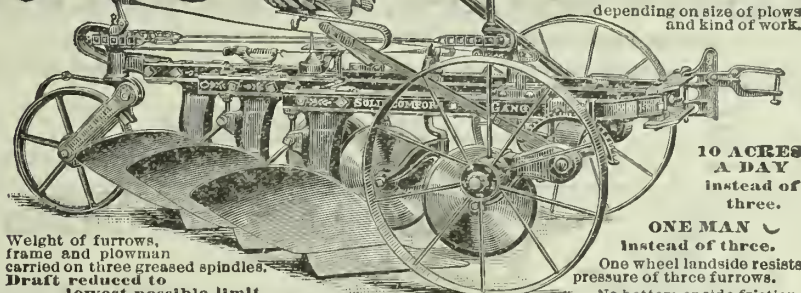
IF YOUR DEALER DOES NOT KEEP THEM, buy no other kind.

WRITE FOR ILLUSTRATED CATALOGUE AND PRICES.

W. E. HAMPTON,

SOLE OWNER OF PATENT AND MANUFACTURER.....27 BEALE ST., SAN FRANCISCO, CAL.

SOLID COMFORT THE "WONDER ON WHEELS"



Weight of furrows, frame and plowman carried on three greased spindles. Draft reduced to lowest possible limit. Foot brake prevents gang running on team. Levers and turning device in easy reach. Can be turned in the length of itself. Easier Driving, LIGHTER DRAFT frame—can be narrowed or widened at will. Made with stubble, sod and stubble, or breaker bottoms, in steel or chilled metal. Ten or twelve inch cut. **ECONOMIST PLOW CO., So. Bend, Ind., or Stanton, Thomson & Co., Sacramento.** Special prices and time for trial given on first orders from points where we have no agents.

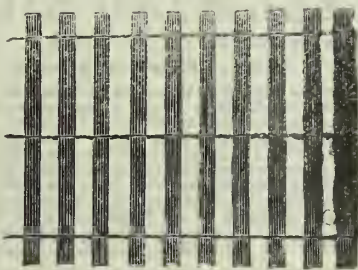
RABBIT-PROOF STOCK FENCE.

Cheap, Durable and Effective.

Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2½ ft., 4 ft., 4½ ft., and 6 ft. high. Send for circulars and price list to

JUDSON M'F'G CO.,

12 & 14 Fremont St. San Francisco.



The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.

Horse Owners! Try



GOMBAULT'S
Caustic Balsam

A Safe Speedy and Positive Cure
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

MAKE YOUR OWN GAS!

BADLAM BROS..

519 Market St., San Francisco,

SOLE MANUFACTURERS OF THE CELEBRATED PEEWEE'S GAS WORKS. New process, safe and inexpensive, from \$100 upward. Light cheaper than coal oil. Send for catalogue and prices.

TREE WASH.

"Greenbank" Powdered Caustic Soda and Insecticide.

T. W. JACKSON & CO..

Sole Agents,

No. 5 Market Street, San Francisco, Cal.

HAY PRESSES.

Eli Challenge Full Circle.
Champion Full Circle.
Junior Monarch.
Petaluma.
Miller Lightning.
Ingersoll's.

ECONOMY HOP PRESSES.

Write for prices and get full particulars.

WE ARE HEADQUARTERS

On Hay Presses and Haying Tools.

BALE YOUR HAY WITH T. H. & CO. BALE TIES.

TRUMAN, HOOKER & CO.,

San Francisco and Fresno.

HAY PRESSES.

The Monarch, Junior Monarch, and other kinds of Presses, made by the Celebrated Hay Press Manufacturer, Jacob Price, for sale by

L. O. MOREHOUSE,

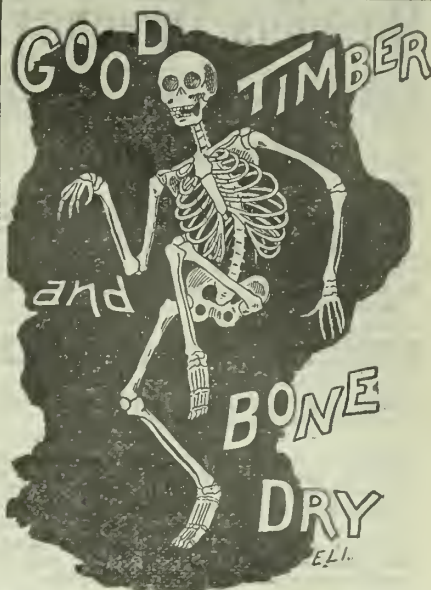
San Leandro, Cal.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos. A. Carey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St., San Francisco.



RUSHFORD FARM WAGONS

LIGHTEST DRAFT WAGONS IN THE WORLD.

EVERY ONE GUARANTEED.

TRUMAN, HOOKER & CO.,

SAN FRANCISCO AND FRESNO.

Deep Well Pumps.



The Valves and working parts of the Fulton Pump can be removed, repaired and replaced without taking the pump out of the well.

Pumps fitted up for all depths of wells, ready to put in.

Send for Circular and Price List to

A. T. AMES,
GALT, CAL.

MANUFACTURER OF PUMPS AND WINDMILLS.

THE ECLIPSE WIND MILL



THE ORIGINAL

SELF-REGULATING WOOD WHEEL.

Will run in Lighter Wind and do More Work than any other.

FAIRBANKS'

GALVANIZED STEEL

Wind Mills and Towers. Pumps, Tanks, &c.

Send for Catalogue and Prices.

FAIRBANKS, MORSE & CO., CHICAGO, ILL.



REGULATE THE STOMACH, LIVER AND BOWELS, AND PURIFY THE BLOOD.

A RELIABLE REMEDY FOR

Indigestion, Bileousness, Headache, Constipation, Dyspepsia, Chronic Liver Troubles, Itziness, Bad Complexion, Dysentery, Offensive Breath, and all disorders of the Stomach, Liver and Bowels.

Ripans Tablets contain nothing injurious to the most delicate constitution. Pleasant to take, safe, effectual. Give immediate relief.

Sold by druggists. A trial bottle sent by mail on receipt of 15 cents. Address

THE RIPANS CHEMICAL CO., 10 SPRUCE STREET, NEW YORK CITY.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Siles, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

JOHN LYNCH, Petaluma. Breeder of Thoroughbred Shorthorns. Young Stock for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER SAKS & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

O. BLOM, St. Helena. Brown Leghorns a specialty.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

JOHN McFARLING, Callistoga, Cal. Importer and Breeder of Choice Poultry. Send for Circular. Thoroughbred Berkshire Pigs.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

O. H. DWINELLE, Fulton, Sonoma Co., Cal. Shropshire and Crossbred Shropshire-Merino. Rams for sale.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

R. H. CRANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

SWINE.

H. J. PHILPOTT, Niles, Cal., Importer and breeder of Teumseh and other choice strains of Registered Poland-China Hogs.

J. E. ALSFORD, Woodside, San Mateo Co. Breeder of Berkshire Hogs and Toulouse Geese.

P. H. MURPHY, Perkins, Sac. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victorias, Essex and Poland-China. Superior Stock, Low Prices.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.



OXFORD DOWN SHEEP FOR THE PACIFIC COAST.

W. A. SHAFOR, Middletown, Ohio, Largest American Importer of O. D. Sheep.

Is prepared to quote prices on the best stock of Oxford Down Sheep to be had in England. Parties wanting first-class stock should write for particulars and induce their neighbors to join them. Import will arrive about August 1st. Write at once.

EGGS! EGGS! EGGS!

S. C. BROWN LEGHORNS.
S. C. WHITE LEGHORNS.
EGGS \$2.50 per setting; \$4 for two settings; \$5 for three settings. White Leghorn pen headed by "Volante," score 95. Brown Leghorn pen headed by "Imperial," score 93. Send for circular. Satisfaction guaranteed to all.
FRANK A. BRUSH,
Care Santa Rosa National Bank.....SANTA ROSA, CAL.

BACK FILES of the PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes) \$4. Inserted in Dewey's patent binder 50 cents additional per volume.

STEVEN'S FRUIT CASE!

A notable invention of the Columbian year, for transporting California's fresh fruit to market. Look into it! It is worthy of trial! Its advantages truly stated are: Fruit can be picked later and ripen; requires no wrappers; no decay from pressure, bruising or rubbing; the ventilation is absolute and positive; it grades and counts the fruit in the carrier; fruit all open to inspection; no rehandling or repacking at destination; no skilled labor for packing. Gives the grower all the advantage arising by arrival of his fruits in markets ripe, sound, luscious and attractive, instead of half ripe, bruised or decaying. It isolates each piece of fruit by double, elastic walls, with air spaces between, over and around it. It is not an untried quantity. Messrs. Brown & Wells, of California Market, San Francisco, say: "We have made shipments of green fruit in it to Honolulu, Panama, Boston, New York, Philadelphia, Australia and Arizona, and have received report to the effect that the fruit arrived in perfect condition. We believe it is surely destined to become in the near future the universal package for short or long distance shipments." Nothing to equal it for fine apricots, peaches, plums and pears. Will carry fresh figs successfully. Carriers now ready for delivery for apricots. Send in early orders to insure supply.

PRICE (for ordinary standard package) \$15.00 per hundred, including outside and inside cases. Call on us or send for circulars.

STEVENS FRUIT CASE CO., 307 Front Street, San Francisco,
Agents for the Pacific Coast.

FRUIT PAPER!

RAISIN WRAPS, SWEAT PAPER
FROM THE MANUFACTURER DIRECT AT LOWEST PRICE.

Raisin-packers are advised that we will make and carry in stock the "Azure Blue" "Top Wrap," which has been used for years by the packers of Spain.

S. P. TAYLOR PAPER CO.,

414 & 416 CLAY STREET.....SAN FRANCISCO.

PROTECT YOUR TREES

— WITH —

GILMAN'S TULE TREE PROTECTOR.

Cheapest, Best and Only One to Protect Trees and Vines from Frost, Sunburn, Rabbits, Squirrels, Borers and Other Tree Pests.

For Testimonials from Parties who are using them send for Descriptive Circulars.

B. F. GILMAN,

Sole Manufacturer of Patent Tule Covers,

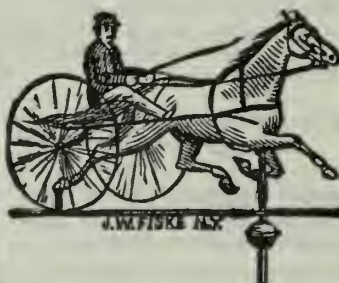
420 NINTH ST., SAN FRANCISCO, CAL.



GEM STEEL WIND MILL WITH GRAPHITE BOXES.

Never Requires Oiling or Climbing of Towers.

Guaranteed more durable without oil than other mills that are oiled. Practically, these mills require no attention. TRULY A GEM, and worth its weight in Gold. It combines beauty, strength, durability and simplicity. Governs itself perfectly, is easily erected and is sold on its merits; in fact, it is the best mill on earth. They are geared back three to one—the wheel making three revolutions to one stroke of pump—making them run in the lightest wind or breeze. The mill is made entirely of Steel and Cast Iron. Each one of our Gem Wind Mills is warranted. If not satisfactory, freight will be paid both ways and money refunded. We also carry Pumps of all kinds, Tanks, Pipe Fittings, Hoses, Etc. **WOODIN & LITTLE, 312 MARKET ST., San Francisco, Cal.**



WEATHER VANES

For the Cheapest and Best

SCALE

Grain & Store TRUCKS

COFFEE MILLS

Of any style known to the trade

GROCERS' FIXTURES

HOWE SCALE CO.

75 Front St., Portland, Or. 3 & 5 Front St., San Francisco.

FRANCIS SMITH & CO.,

MANUFACTURERS OF

SHEET IRON & STEEL PIPE

FOR TOWN WATER WORKS.

Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes
NO. 180 BEALE STREET, SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.



HERRMANN THE HATTER

WILL GIVE YOU A BETTER HAT FOR YOUR MONEY THAN ANY STORE ON THE COAST.

Send for Illustrated Catalogue, mailed free.

332 & 336 KEARNY ST., SAN FRANCISCO.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular.

E. FOUGERA & CO.,

30 North William Street, New York.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STOCKTON, CAL., Dec. 19th, '92.

DR. R. J. KENDALL, CO.
Gentlemen:—Having read one of your Treatise on the Horse and seeing the Spavin Cure advertised, I thought I would try it. I had one horse with a prominent Spavin of 12 months standing. I removed it with 36 bottles. It tied up one fore foot on same side the spavin was and compelling the horse to rest on lame leg while I took a auricircle and drew it across the hock or spavin until the hock or spavin got very warm with the friction, then putting on Spavin Cure. I had a mare that had a running from her nose for 12 or 14 months. I rubbed the Spavin Cure from her eyes down to nostrils, then from back of jaw bone down under the throat for a week. I have not seen any discharge for two months.

Yours truly, HUGH McDADE.

Price \$1.00 per bottle.

DR. R. J. KENDALL, CO.,

Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

Dr. A. E. BUZARD, VETERINARY SURGEON.

MEMBER OF THE ROYAL COLLEGE OF VETERINARY Surgeons, London, England. Late Veterinary Surgeon in the United States Army. Veterinary Contributor to the "Pacific Rural Press." The diseases of all Domestic Animals treated on Scientific Principles. Special attention given to Chronic Lameness and Surgical Operations. 405 BRODERICK ST., SAN FRANCISCO. Calls to the country promptly attended to. Telephone No. 4667.

A BARGAIN!
Two 3-year-old Imported Shire Mares in foal. Also Imported English Coach Stallion. Address W. W. RUSHMORE, Importer and Breeder of Draft and Coach Stallions. P. O. Box 86, Stahle, Broadway and 32d St., Oakland, Cal.

— THE —
HALSTED INCUBATOR COMPANY,
1313 Myrtle Street, Oakland, Cal.
Send Stamp for Circular.

The American Bee Journal,

(Established 1861.)
IS Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample.
\$1.00 BEE-BOOK FREE

GEO. W. YORK & CO., 56 Fifth Ave., Chicago, Ill.

BEE-KEEPERS' SUPPLIES.

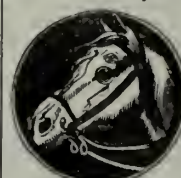
Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Koives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for extracted Honey, Bee Tents, ROOF'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.

Treatise on the Horse and His Diseases.

By B. J. KENDALL, M. D.

85 Fine Engravings showing the positions and actions of sick horses. Gives the cause, symptoms and best treatment of diseases. Has a table giving the doses, effects and antidotes of all the principal medicines used for the horse, and a few pages on the action and uses of medicines. Rules for telling the age of a horse, with a fine engraving showing the appearance of the teeth at each year. It is printed on fine paper and has nearly 100 pages, 7x25 inches. Price, only 25 cents, or five for \$1, on receipt of which we will send by mail to any address DEWEY PUBLISHING CO., 230 Market Street, San Francisco.



S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, July 26, 1893.

The events of the week in the wheat market have been the advance in export tonnage charges and the Siam war news, the latter causing an advance in Chicago figures and a corresponding slightly improved tone in the local market early in the week. Grain markets are always exceedingly sensitive to wars or rumors of wars. An Asiatic war, involving European powers, means an immediate demand for large supplies of American breadstuffs, and continuance of the fight means that America will be drawn upon heavily and steadily to supply the commissariats of the warring powers. It means, further, that cultivation in Europe will be seriously interrupted, and the output there very much restricted. It is natural, therefore, that the appearance of a war cloud, even so far off as Siam, should have a direct and immediate effect upon American prices. If financial conditions were normal, it is safe to assert that a sharper advance and more active speculation would have resulted. As it is, the war news has just created a flurry.

The tonnage situation and its probable outcome is briefly as follows: For several years, vessels have arrived in San Francisco largely in excess of requirements for export purposes. The result has been very cheap freights. This year, for some reason, the grain fleet has been very much diminished, and other causes have brought about a sudden and very active demand for vessels. These causes lie primarily in the financial troubles, which have brought about heavy sales of wheat even at prevailing low prices; that is to say, farmers have been unable to borrow money on warehouse receipts and have had to sell outright, or not at all. Needing money, many of them have been obliged to sell. Commission men as well as farmers have been unable to secure accommodations from banks, and their only recourse has been to get the wheat out of the home markets. In consequence, the volume of wheat now ready for export is very heavy and has been a serious factor in keeping down the price. Tonnage charges have advanced from 175.61 per ton to 181.10, a difference of nearly \$5, and the tendency is still upward. The tonnage figures are given as follows: July 22, 1893, disengaged tonnage in this port, 43,994; July 22, 1892, do, 133,220. July 22, 1893, tonnage chartered for grain, 66,791; July 22, 1892, do, 50,358.

From these figures it appears that the amount of disengaged tonnage in this port is one-third of its volume a year ago, and the chartered tonnage is one-third greater. Further, the disengaged tonnage on the way to this port is very much less than for several years in the past; and the situation as it is likely to remain for some time. The manner in which this condition affects the farmers is by no means in their favor. Increased freight charges mean decreased wheat prices. That is to say, the cost of wheat transportation to the Liverpool market—which is the world's market—deducted from the selling price there is substantially the price here. An advance in tonnage involves a decrease of prices. That is one of the things depressing the local wheat situation at the present time.

The root of the whole trouble, as we have often said before, and as all our readers very well know—many of them, we fear, from bitter experience—is the monetary disorder. Conditions otherwise call for an upward movement in wheat prices. The wheat shortage in the United States is very large. According to the most reliable information, it will be anywhere from 100,000,000 to 125,000,000 bushels—the total output being about 400,000,000 bushels, against a yield of 515,000,000 bushels last year. Latest reports from foreign parts state that the Russian crops are fairly large, India will have an average crop, England's will not be up to the average, France's will not come within 10 to 15 per cent of last year's, and Germany's cereal crops have suffered greatly on account of drought; her product will show a shortage of 25 per cent. On the other hand, the carry-over stocks are still large, being in the United States about 58,000,000 bushels at last reports. But the visible supply has diminished much more rapidly in the past month than for some months previously, and the grain to be taken over from the old to the new year will hardly be an offset to the shortage in the world's crop.

A dispatch from St. Paul tells of the serious damage done to the crops in that section through excessive heat. In some parts of Minnesota the wheat was still in the milk, and the temperature ranging from 94 to 108 degrees has practically ruined a great portion of it, the farmers figuring only on 40 to 60 per cent of a crop. In North Dakota the situation is reported even worse than in Minnesota, the average yield not being expected to go over eight bushels an acre.

Other Grains.

The notable feature of the barley trade for some time has been the heavy export movement. Freighters have been low, and it has been possible to dispose in this manner a large amount of the product that might otherwise remain to glut the local market and further reduce prices. While figures have been down, a fairly good feeling pervades the market, and the volume of trade has been comparatively large. Receipts of barley at this port have recently been very heavy. Feed has a downward tendency.

New oats are coming in fairly well, being quoted at \$1@1.20 per cental. Trade is slow.

Corn is low and dull. There seems to be no disposition on the part of buyers to buy or sellers to sell.

Rye is neglected.

Sales of buckwheat occur occasionally at quotations.

Fruits.

Fruits of the principal varieties are in large supply and the range of prices is low. The chief event of the week has been the reception of five carloads of watermelons Monday and Tuesday—two from Lodi, two from Fresno and one from Los Angeles. Prices were fairly satisfactory, the demand being good. There is some talk of a "corner" in watermelons, but it seems to amount to nothing. Peaches are in large supply and are low and weak. Apricots are still in moderate supply. Figs did not at first do very well, and in consequence shipments

from Vaca valley nearly ceased. The result has been decided improvement, particularly for choice brands. Nectarines have not encountered a very ready demand, being too green. Grapes are to be seen in constantly increasing quantities, but they are small and green and do not sell easily. Bartlett pears have been in considerable supply and prices have been lower. Choice apples have been scarce and the demand good. Currants and cherries are still to be seen in the market. Canners have paid 1@1 1/4c for apricots and \$2 per chest for blackberries.

Dried Fruits.

[From the Bulletin of the Santa Clara Fruit Exchange.]

SAN JOSE, July 26, 1893.

Apricots.—Sales are being made at 8 to 8 1/2 cents for choice, the higher figure only attainable by excellent goods. Some sales have been made at 7 1/2c. The exchange has quoted boxed goods at prices equivalent to 8, 9, 10 and 11 cents in sacks f. o. b. for the four grades of the machine graded apricots, put up at the co-operative driers, and guaranteed to be very fine. The crop is mostly harvested except in this valley, and has turned out even lighter than was expected, but of excellent quality. Driers here pay \$25 per ton, if they cannot get them for less, and canners from \$30 to \$35 for perfect fruit of canning sizes in limited quantities. Growers generally drying.

Peaches.—Except from shipping districts and for shipping varieties, there is almost no inquiry. The crop is generally large, with considerable stocks of canned carried over. Driers here are buying few or none except to obtain prunes in the same orchard, and then at \$10 to \$15 per ton. Canners are buying in a small way at varying rates, say \$20 to \$25. It is probable that some business may yet be done in clings. For dried, choice, 7 cents would be a nominal quotation.

Pears.—Good shipping Bartletts are worth \$30 if buyers can be found. The crop is short, but canners have bought very few thus far, and those at very low rates. About 15 carloads of dried pears were shipped from San Jose last year, and it looks as if more would go this year.

Prunes.—Sales of futures, four sizes, have been made at 4 1/4 cents, sellers doubtless expecting to fill with inferior stock. Good Santa Clara prunes can be contracted at 5 cents to growers, indicating that the buyer expects to get 5 1/2 at least. Buyers here are paying \$30 for green prunes, sometimes getting them for less, and occasionally picking up a snap bargain as low as \$20 per ton. Nearly all who can are drying.

The French prune crop is large, but will run to small sizes, and the four sizes are offered at \$6.50 to \$6.90 per hundred in New York, with very few sales.

The prices of all dried fruits will depend largely on the ability of growers to get on without money until actual consumption begins.

Vegetables.

The whole range of seasonal vegetables is in plentiful supply, and prices are weak. Potatoes have been coming in much more freely lately, and prices have taken a drop. Wax beans are down and so are others. Vacaville tomatoes are in large supply, and yesterday, in some instances, sold as low as 10c per box. River tomatoes, however, were not so plentiful, and went off better. Sweet potatoes have appeared in the market.

Poultry and Eggs.

The range of quotations for poultry is throughout just the same as last week. Dealers complain that business is very dull. On the other hand, receipts are small, and things are thus to some extent evened up. Little Eastern poultry is coming in.

Choice ranch eggs are firm, but the market is quiet.

Butter, Cheese and Honey.

Choice grades of butter are firm in price and meet a very ready sale. Other qualities are weak. Cheese shows no change.

Honey moves along slowly, and prices are a shade weaker. Beeswax has advanced a little, being scarce.

Wool.

Wool quotations have declined a little and trade continues very slow. The weekly report of Thomas Dennigan, Son & Co. says: "During the past week a wool sale was held at Cloverdale, where about 750 bags, say 150,000 pounds, changed hands. Prices ruled so much lower than at any former spring sale for many years, that buyers were found for these wools, which seem to have been in extra light condition, and were certainly good value at 12c to 13 1/2c for the good to extra lots. Prices last spring ranged from 19c to 21c. Locally there is no trade, as much of the stock here, which is large, is made up of shrinky wools."

Miscellaneous.

Supplies of all kinds of fresh meats are plentiful. Receipts of hay are liberal, while the demand is not equal to the quantity offering. Prices are easy, with the tendency of the situation in favor of buyers. Wire-bound hay sells at \$1@2 per ton more than the figures given.

The hop market is assuming a better tone and seems to be getting in good shape for the new season. Flour is steady.

Fruit Crop and Trade Notes.

Under date of June 20th, we learn from Malaga, Spain, that the growing crop of raisins is flourishing under the influence of the most desirable weather. It is expected that shipments will commence earlier than last year. The fruit will run much higher in quality with a large proportion of the best grades of cluster raisins. The yield is estimated at about 400,000 boxes.

Malaga almond trees are well covered with kernels, and a fair yield is expected. Jordan almonds are also doing well, although in some parts of the Malaga district the weather has been a little dry. A fair average crop of Malaga lemons is expected. Some parts near the sea show a diminished yield, owing to the young fruit having withered under the influence of strong winds and sea air. In other parts the trees look well.

From reports to hand, the indications point to a poor apple crop in the State of Indiana this year.

Milford, Del., Correspondence; The peach crop

of the Delaware and Maryland Peninsula is a heavy one this year. Conservative growers and handlers who have been over the ground put this year's peach crop of the Peninsula at between 3,000,000 and 4,000,000 baskets, instead of 5,600,000 by the Delaware railroad.

We have received from Sgobel & Day of this city what is said to be the first fruit sent by mail from California. It was a peach apricot forwarded from Sacramento in a paper box tightly covered, and with a layer of cotton wadding top and bottom. It was at least five days en route, without ventilation, and besides lying in a mail bag in a closed car, which makes it surprising how it arrived in such sound condition. Although at the present writing it is somewhat soft, there is little sign of decay.—New York Fruit Trade Journal, July 15th.

Canned Fruit Trade.

The last circular of the Cutting Fruit Packing Company has the following remarks on the canned fruit trade:

"The season for small fruits, as well as cherries, is practically over. A large pack of cherries and a medium pack of blackberries, strawberries, raspberries and gooseberries is the result. Apricots are later than usual. Eastern green shipments have been quite heavy, and have netted good prices to shippers. The crop, as a whole, is much heavier than was figured or expected, and the price to growers has steadily declined. Only a few growers realized this result until quite recently. Many crops are still unsold, and it is quite probable prices will drop still lower. The demand from both domestic and foreign points is the lightest known for years, and there is no immediate prospect of an improvement. Meanwhile, but few canneries are able to secure banking accommodations, or otherwise put themselves in shape financially, to pack, so that few of them have opened at all for apricots, and even those for a few days only. It is entirely problematical how many will be packed, and the buyer is quite as much justified in holding off as in buying heavily. The peach, pear and plum crops all look finely, and promise to be both large and of good quality. No prices have been fixed to any great extent, although values have declined steadily since the season opened, and it is harder, doubtless, for the grower to make a sale to-day than it would have been a month or two since. We presume that few, if any, contracts have been made, either domestic or export, for the canned product. There would appear to be large stocks of all these varieties on hand, both domestic and in foreign hands, especially of pears, while the very large crop both of peaches and pears promised throughout the East militates strongly against any demand from there. We learn, too, of large foreign stocks. The same conditions as to finances apply to these varieties as to apricots, although it is probable canners will finally secure moderate banking accommodations, as a great pressure will be brought to bear upon banks and capitalists to assist in moving the crops, as well as to realize on cans and other material used in packing. If some such result as this is not undertaken and accomplished, the packing generally, of all varieties, will be the lightest known for years. Whether such a result will cause an ultimate advance in prices of manufactured goods is altogether an open question. If reports are to be believed, the stocks on hand are ample for the balance of the season without any new goods being packed. On the other hand, speculators are always ready to take in new goods if the market promises an advance. So, considering all things, it is practically a "go-as-you-please" season. We are making prices on most lines of futures entirely as a matter of convenience to our friends, as we do not feel that they are at all permanent, but will have to be modified considerably, and quite as likely in one way as another."

The Tonnage Situation.

Yesterday morning the tonnage in port, compared with the corresponding date last year, was as follows:

	1893.	1892.
Engaged—		
Grain, tons.....	68,400	50,400
Miscellaneous.....	9,900	3,500
Total engaged.....	78,300	53,900
Disengaged.....	44,300	133,200

Total in port.....122,600 187,100

The above shows a comparative increase of 24,400 tons for tonnage under engagements yesterday, and of this 18,000 tons is credited to the grain fleet. Last year the disengaged tonnage was 89,900 tons more than at present.

The tonnage of all classes on the way to California compares as follows:

	1893.	1892.
For—		
San Francisco, tons.....	225,700	255,300
San Diego.....	19,200	21,000
San Pedro.....	5,200	4,800
Redondo.....	1,000	.....
Santa Barbara.....	800	.....
Totals.....	251,900	281,100

Showing a comparative decrease of 29,200 tons this year. Adding this to 64,500 tons, the decrease for all tonnage in port, makes a total difference of 93,700 tons.

The statistical position of the tonnage market, therefore, is apparently in favor of a higher tendency for outward freights, and ship-owners have taken that view of the matter. The freer offerings of wheat and the disposition of exporters to make liberal purchases have resulted in a more active demand for tonnage, thus contributing strength to the position now occupied by ship-owners.

The Boston Wool Market.

In a review of the condition of trade in the Boston wool market the *American Wool and Cotton Reporter* for July 13th says:

"There has been some looking round during the week and some buying for immediate wants. Wool is finding its way into the market in small amounts—perhaps, indeed, in greater quantity than immediate or prospective demand requires; so that it may be well to repeat the suggestion which we made to growers and local dealers some weeks since (May 11th), 'To make no effort to force their wools, but to sell simply as the market seems to want them. The effect of crowding of stocks upon the Eastern market will not alone be disastrous to the farmers and local dealers—it will mean loss to the shippers, com-

mission merchants and the general wool trade. Manufacturers are going to restrict their purchases to their actual needs."

"Although the sales of the past week foot up a considerable amount in comparison with the preceding week's record, yet this only means that the consumption of the stock bought a few weeks earlier has brought in a number of manufacturers to purchase each a little for further piecing out. In general the lots purchased are small, hardly enough of any one kind being taken to establish a market. Trade is slow in all departments.

"Nominal prices at the East remain unchanged. At least, we have not felt warranted this week, more than last, in making a general revision of quotations, although prices of some grades are perhaps a little easier. Prices in Eastern markets are in some instances a cent a pound lower than last week.

"A large-sized lot of spring California, for the condition of this market, was sold this week, price reserved, and a smaller lot at 10 to 11 cents. A fair-sized lot of 'fall' has been taken at about the current market price. Oregon wool has moved in larger quantity than has been noted for a number of weeks previously."

Hop Shipments.

In June the shipments of hops from the State by rail, so far as reported by the Southern Pacific Company, were as follows:

	Pounds.
From—	
San Francisco.....	26,000
Sacramento and East.....	262,000
Total.....	288,000
January.....	480,000
February.....	128,000
March.....	158,000
April.....	228,000
May.....	284,000

Six months.....1,566,000

Shipments of 248,000 pounds were also made from Portland by the Southern Pacific during the past six months.

The shipments from San Francisco by sea in June were distributed as follows:

	Pounds.	Value.
June.....	3,099	\$ 624
January.....	33,318	7,670
February.....	10,857	2,390
March.....	22,663	5,376
April.....	9,053	1,977
May.....	11,971	2,259

Six months.....91,961 \$20,296

The shipments by sea and rail compare as follows:

	1893.	1892.
Six months—		
By rail, pounds.....	1,566,000	680,000
Sea.....	91,961	33,187

Totals.....1,657,961 713,187

Showing a comparative increase of 944,774 pounds for the past six months. The total by sea and rail for the same time in 1891 was 601,252 pounds.

Exports of Wine.

The shipments of California wines by sea and rail for June, and for the six months ending June 30th, were as follows:

	Gallons.	Cases.	Value.
Destinations—			
Foreign by sea.....	33,694	620	\$19,249
Eastern by sea.....	250,303	105	97,679

Total by sea.....283,997 725 \$116,928

By rail.....748,200 229,280

Total June.....1,032,197 725 \$416,208

January.....1,152,839 1,226 459,340

February.....854,543 1,457 351,417

March.....1,321,333 1,037 527,321

April.....1,231,676 1,324 500,690

May.....1,107,050 730 448,356

Six months.....6,699,638 6,499 \$2,703,312

The rail shipments are exclusive of quantities forwarded from Colton and Los Angeles, these terminals now being omitted from the railroad reports as furnished for publication.

During the first six months of 1892 the total shipments by sea and rail (six terminals) were 5,100,478 gallons and 8,223 cases, valued at \$2,112,153.

Including all railroad terminals, as given in 1891, the exports by sea and rail during the first six months of that year were \$4,846,841 gallons and 4,824 cases.

Markets by Telegraph.

Visible Grain Supply.

NEW YORK, July 24.—The visible supply of grain is as follows: Wheat, 68,904,000 bushels, a decrease of 464,000; corn, 7,601,000 bushels, a decrease of 1,242,000; oats, 2,168,000 bushels, a decrease of 796,000; rye, 282,000 bushels, a decrease of 82,000; barley, 377,000 bushels, a decrease of 15,000.

California Products in the East.

NEW YORK, July 23.—Canned Fruits—There is no movement of importance. It may be incidentally remarked that new packing will be restricted by unavailable money. This and the carry-over has begun to assume a sort of speculative confidence.

Prunes—For October shipment 5c free on board is the extreme bid for California five sizes. This is the lowest price ever named, and buyers do not seem disposed to open large treaties until nearer completed home and foreign statistics are ascertained.

Peaches—Choice new bleached unpeeled peaches offered for August shipment at 6 1/2c, free on board.

Raisins—Lower: three-crown bags, 4 1/2@4 3/4; new for October offered for 4c free on board; boxes have an easier range; layers, \$1.50@1.60; loose, \$1.10@1.20.

Apricots—Our best bids are 7@7 1/2c.

Fresh Fruits—Late cars made a fine assortment, which readily sold at good rates. Some of the Bartletts were heated and sold low, but the forthcoming regular receipts are expected to do well. The long continuance and fine quality of cherries is surprising. It has hardly paid to pick Eastern grown since the coast has sent any that admit of popular prices. It is interesting to note the surprise with which those pomological marvels of the Pacific are regarded by our average rustic visitor.

Wool—There have been some better indications of a desire to deal, but buyers seem to want longest paper accommodations. This holders will not listen to for certain lines while money is in its present shape, and nothing in view to lift quotations from their present low level. Sales at New York were 214,000 pounds of domestic, 30,000 pounds of which was California secured, 450,000 pounds foreign. Sales at Boston, 1,707,000 pounds Olemerie, 145,000 pounds of which was spring California, mostly on a

FOR THE BEST IMPROVED
ARTIFICIAL LIMBS
ADDRESS
MENZO SPRING,
9 Geary St.
SAN FRANCISCO, Cal.
OFFICE S.

California Crops.

Summary of Report of Observer James A. Barwick, for Week Ending July 22, 1893.

The grain crop is short, but is yielding better than was anticipated a month or six weeks ago. Grapes never gave a better outlook for a large crop. Hops indicate a large yield of most excellent quality.

Sutter County (West Butte)—Wheat and barley harvested. Egyptian corn being harvested mostly by the blackbirds, they having to take to corn on account of the scarcity of grasshoppers. The thermometer during the week has been hovering around the 100° mark.

Lake County (Upper Lake)—Considerably warmer than the rest of the season. Corn is much improved by the heat, and all fruits are ripening more rapidly. Thrashing will soon begin. Grapes are looking well.

Yolo County (Winters)—The grain crop is light—5 to 7 sacks being the average yield, when usually 12 to 15 are harvested. None but the early varieties of grapes are ripening. It will be several weeks before the bulk of the crop is ready for market. The fruit driers are about the busiest people in the whole community. There is not an orchard in the neighborhood in which there is not somebody at work. The hot weather is ripening fruit faster than it can be handled to advantage. (Davisville)—Fruit shipments are light at present. The raisin crop of this neighborhood is said to be the heaviest in several years and the fruit unusually large. (Knight's Landing)—The grape crop promises to be the largest ever known; so say expert vineyardists. In a very few localities there are now and then a few vines that show signs of sunburn. (Blocks)—Grape crop prospects gradually improving every day.

Solano County (Vacaville)—Apricots about all harvested. Crawford peaches now being shipped East, as well as grapes. The crop of grapes is large and the quality fine. (Rio Vista)—The wheat crop of Taylor Bros. on Grand island this year is one of the best in the State. It is now being harvested and will give between 25 and 30 sacks to the acre. (King District)—Yield of grain light and most of what was harvested will be used for seed.

Sonoma County (Forestville)—Grapes promise a large yield in this locality. (Guerneville)—Prunes and peaches are more plentiful than last year. The grape crop is large. The potato fields down the river were never more promising. The apple crop is heavy, although suffering somewhat from codlin moth. (Dry Creek)—Peaches, pears, apples and berries are ripening rapidly and are of good quality. (Petaluma)—Prune orchardists throughout the county say that while the crop of that fruit is not so large as usual, the quality is excellent. (Gold Ridge)—The large hop fields are looking unusually well for the unusually dry season, and promise a large yield.

Mendocino County (Mendocino)—The warm weather of the past week has been most encouraging to our hopmen.

San Benito County (San Felipe)—Heading nearly finished; threshing has fairly commenced, and the yield so far is very good.

San Luis Obispo County (San Luis Obispo)—Barley on the coast is turning out far better than was expected. The grape crop is very promising. Fruit is doing well, but apricots and peaches will be short.

Three and One-Half Days to the World's Fair.

We take pleasure in advising the readers of the PACIFIC RURAL PRESS that the UNION PACIFIC is the most direct and quickest line from San Francisco and all points in California to the WORLD'S FAIR.

It is the ONLY LINE running Pullman's latest improved vestibule Drawing-Room Sleepers and Dining Cars from San Francisco to Chicago without change, and only one change of cars to New York or Boston.

Select Tourist Excursions via the UNION PACIFIC leave San Francisco every Thursday for Chicago, New York and Boston in charge of experienced managers, who give their personal attention to the comfort of ladies and children travelling alone.

Steamship Tickets to and from all points in Europe. For tickets to the World's Fair and all points east and for Sleeping-Car accommodations call on or address D. W. Hitchcock, General Agent Union Pacific System, No. 1 Montgomery street, San Francisco.

Our Agents.

J. C. HOAG—San Francisco.
R. G. BAILEY—San Francisco.
F. D. HOLMAN—California.
Geo. Wilson—Sacramento, Cal.
E. H. SCHAEFFLE—El Dorado and Amador Co's.

ROOFING

GUM ELASTIC ROOFING FELT costs only \$2 per 100 square feet. Makes a good roof for years, and any one can put it on.

GUM ELASTIC PAINT costs only 60 cents per gal. in bbl. lots or \$4.50 for 5 gal. tubs. Color red. Will stop leaks in tin or iron roofs that will last for years. TRY IT.

Gum Elastic Roofing Co.,

39 & 41 West Broadway, NEW YORK.

Local Agents Wanted.

ALAMEDA STEEL WIND MILL.



10, 12 and 14 ft. Cheaper than any First-Class Mill in the market.

Every One Guaranteed.

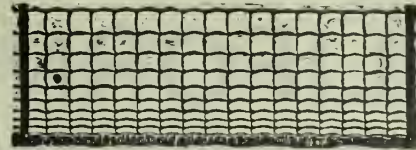
No bearings, no springs, no wheels to get out of order. The simplest mill in the world.

10-foot..... Write
12-foot..... for
14-foot..... Prices

Agents Wanted

— ADDRESS —

FRUMAN, HOOKER & CO., San Francisco or Fresno.



Who Killed Barbed Wire?

I said Coiled Spring.

Woven up in a sling, I gave him a fling.

But I never kill—

Any other thing, nor even blood bring.

Coiled Springs are woven only by the

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

GRANGERS' BUSINESS ASSOCIATION, SHIPPING AND COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.

Full Cargoes of Wheat furnished Shippers at short notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

A. M. BELT, Assistant Manager.



The Anderson Prune Dipper

W. O. ANDERSON, Patentee and Sole Manufacturer.

THIS WELL-KNOWN DIPPER is in use in almost every plum-growing section of the State and has given perfect satisfaction wherever tried.

WE HAVE MADE SEVERAL IMPROVEMENTS THIS SEASON in additional heating capacity, facility for spreading the fruit, etc., which makes the machine indispensable both for the factory and the farm.

We also keep a full line of FIELD CARS, TURNTABLES, TRANSFER CARS, Etc.

For further information address the Manufacturer,

P. O. BOX 970, SAN JOSE, CAL.

Send for Price Lists

OF GUNS
And all Articles used
by Hunters and
Anglers.



GUNS SENT ON
TRIAL.

OLD GUNS TAKEN
IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO

Educational.

Bowens Academy,

University Ave., Berkeley.

BOARDING AND DAY SCHOOL
For Boys and Young Men.

Special university preparation, depending not on time but on progress in studies.

T. S. BOWENS, M. A. Head Master.

Belmont School.

BELMONT SCHOOL, most delightfully and advantageously located 25 miles south of San Francisco, prepares for any college or school of science. The consolidation of the Hopkins Academy with it brings \$66,000 to the \$100,000 already invested, and so greatly adds to the resources of a school already well equipped as to place its permanence and its ability to offer the best and the broadest instruction beyond question. Twenty scholarships invite earnest and able young men of slender means. A gymnasium and athletic grounds, unsurpassed by those of any secondary school in the entire country, under the direction of the present physical instructor in Williams College, insure unexcelled physical training. The school invites inspection. References required. For Catalogue address, W. T. Reid, A. M. (Harvard), Head Master, Belmont, California.

HEALD'S BUSINESS COLLEGE,

24 POST ST., S. F.

FOR SEVENTY-FIVE DOLLARS THIS College instructs in Shorthand, Type Writing, Book-keeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business for six full months. We have sixteen teachers, and give individual instruction to all our pupils. Our school has its graduates in every part of the State.

SEND FOR CIRCULAR.

E. P. HEALD, President

O. S. HALEY, Secretary.

WELLMACH'Y

All Kinds, Water, Gas, Oil, Mining, Ditching, Pumping, Wind and Steam Heating Boilers, &c. Will pay you to send 25c. for Encyclopedia of 1500 Engravings. The American Well Works, Aurora, Ill. 9500, Chicago, Ill.; Dallas, Tex.; Sydney, N. S. W.

Commission Merchants.

DALTON BROS., Commission Merchants,

CALIFORNIA AND OREGON PRODUCE, Green and Dried Fruits, Grain, Wool, Hides, Beans and Potatoes. Advances made on Consignments. 308 & 310 Davis St., San Francisco. (P. O. Box 1986.)

Consignments Solicited.

P. STEINHAGEN & CO.



404 & 406 DAVIS ST. S. F.

ALLISON, GRAY & CO.

501, 503, 505, 507 & 509 Front St., And 300 Washington St., SAN FRANCISCO.

GENERAL COMMISSION MERCHANTS GREEN and DRIED FRUITS, POULTRY, EGGS, GAME, GRAIN, PRODUCE AND WOOL.

MOORE, FERGUSON & CO. WOOL, GRAIN, FLOUR

General Commission Merchants, 310 California St., S. F.

Members of the San Francisco Produce Exchange. Personal attention given to sales and liberal advances made on consignments at low rates of interest.

GEORGE MORROW & CO., HAY and GRAIN

COMMISSION MERCHANTS, 39 Clay Street and 23 Commercial Street SAN FRANCISCO, CAL. SHIPPING ORDERS A SPECIALTY.

LINDSAY & CRAIG, Crocker Building.....San Francisco.

Mortgages Bought, Loans Negotiated. Several buyers on hand for desirable Fruit and Grain Ranches.

GRANGERS' BANK OF CALIFORNIA.

SAN FRANCISCO, CAL. INCORPORATED.....APRIL, 1874



Authorized Capital.....\$1,000,000 Capital paid up and Reserve Fund 800,000 Dividends paid to Stockholders.... 720,000

OFFICERS. A. D. LOGAN.....President I. O. STEELE.....Vice-President ALBERT MONTELLIER.....Cashier and Manager FRANK McMULLEN.....Secretary General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on wheat and country produce a specialty. January 1, 1893. A. MONTELLIER, Manager.

THE CALIFORNIA STATE FAIR

Of 1893 will be held at SACRAMENTO,
SEPTEMBER 4th to 16th ::::::::::: TWO WEEKS.

\$20,000 IN CASH PREMIUMS \$20,000
FOR CALIFORNIA PRODUCTIONS.

FARMERS AND HORTICULTURISTS!
As well as MECHANICS AND ARTISANS!

Should make preparation to exhibit at THE ANNUAL FAIR as the opportunity is specially given to show CALIFORNIA'S CAPABILITIES.

INVITE INVESTMENT of capital by showing the products of your section. INQUIRIES AS TO LOCALITIES are being constantly made. We reply by sending reports of exhibits, which speak for themselves.

OBJECT LESSONS are valuable, and when written upon and their description heralded, they become a standing advertisement.

SHOW WHAT YOUR COUNTY can produce, and capital will flow in the direction thereof.

LANDS HAVE BEEN IMPROVED by the hundreds of acres in tree and vine planting through capital attracted by exhibits made at the State Fair.

MECHANICAL PLANTS HAVE BEEN ENLARGED by means of extra capital attracted by exhibits made at the State Fairs.

THE STATE FAIR is the stimulating agent of progression.

THE STATE FAIR is the medium that brings the two electrical currents—labor and capital—together each year.

THE STATE FAIR aids all classes. It is the recreation ground of the farmer, the school of information for the breeder, the point of observation for the mechanic, and the period of investigation for capital.

FAILURE TO EXHIBIT is an acknowledgment of weakness.

KEEP YOUR PRODUCTIONS before the people, and the people will always keep your locality in view.

THE USUAL EXTRA ATTRACTIONS for entertainment of visitors at the State Fair of 1893 will be furnished in keeping with the occasion, that exhibitors may benefit thereby.

Information furnished upon application to the Secretary, at Sacramento. Send at once for premium lists.

JOHN BOGGS, President.

EDWIN F. SMITH, Secretary.



NOW! NOW!!
IS THE APPOINTED TIME.
Less than Actual Cost.

No. 542
"MAUDS" Double-Axle Sulky

Acknowledged by Leading
Horsemen to be the

STIFFEST AND BEST

Track Sulky Now Made at
Any Price.

WE HAVE AN OVERSTOCK
OF THE

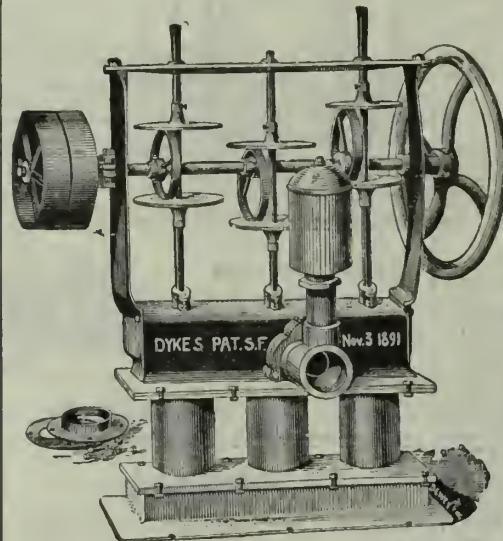
Regular and Pneumatic Tire Sulkies,
And for a Limited Time Will Sell for Less
Than Actual Cost.

NANCY HANKS
Record 2:04

TROTTED THE FASTEST
mile on record when hitched
to a Sulky with Ball
Bearing, Pneumatic Tired
Wheels. We can furnish you with a No. 24 Nancy
Hanks Sulky with Pneumatic Tired Ball Bearing Wheels.
This price includes the regular Sulky wheels as well
and either style may be used. We solicit your order.
Remember we give you the regular wheels in addition to
the Pneumatic Tired Wheels. So you have two sets of
wheels with each Sulky.

WRITE TO US FOR PRICES.

Truman, Hooker & Co.
SAN FRANCISCO and FRESNO.



Dykes' Improved
TRIPLEX PUMP

Medal and Diploma awarded at Mechanics'
Industrial Exposition, San Francisco, 1893.

The Best Well Pump, Windmill Pump, Irrigation or Drainage Pump.

It is more simple than any other pump. Any one who can use a wrench and a hammer can take it apart and put it together with ease and correctness. It will very seldom need repair, and will not break, except for rough usage. But about three lines of instructions of how to set it up and use it are needed, as follows: Fasten it to your platform; attach your suction and discharge pipes; put in a bucket of water; start your power, and your pump will do its work. It will deliver more water with the same power than any other pump.

Careful inspection is what we want. Give us a chance to bid on the work you want. Any size pump made. We were awarded two First Premiums at the California State Fair, 1892, and one First Premium at the Stockton Fair. Send for circular.

TROWBRIDGE & DYKES,
Manufacturers, West Berkeley, Cal.

A SUBSTITUTE

Advantages of this Paper for
a Drying Surface.

ABSOLUTELY ODORLESS.

WATER, ACID AND
ALKALI PROOF.

WILL IMPART NO TASTE
NOR ODOR TO FRUIT.

CHEAP AND DURABLE.

ITS BRILLIANT BLACK
SURFACE, which absorbs
the heat, drying both sides
of fruit at the same time,
and rendering the labor of
turning unnecessary.



FOR TRAYS!

Unequaled for
DRYING GRAPES.

Write for
SAMPLES AND CIRCULAR.

Paraffine
Paint Co.

116 Battery St.
SAN FRANCISCO.

ARE YOU A

Hay Baler? If so, do you use our Patent

Steel Wire **CROSS HEAD** Bale Ties?

IF NOT, WHY NOT?

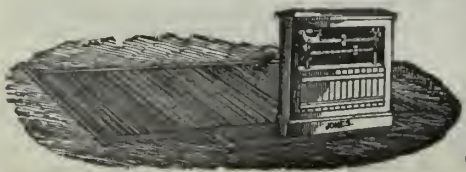


— MADE ONLY BY —

THE WASHBURN & MOEN MFG. CO.

San Francisco Office and Warehouse

8 and 10 Pine Street.



THE JONES 5-TON WAGON SCALE.
Price \$66, Delivered Anywhere in the
United States.

These Scales have STEEL BEARINGS, Not Wood—
BEAR THIS IN MIND.

From 25 to 50 per cent cheaper than any other
Scales of like quality. All sizes and kinds
of Scales always in stock.

Truman, Hooker & Co., San Francisco.

ONLY 25 YEARS OLD
AND A GIANT!

THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS'
USE AND TO-DAY IS BETTER KNOWN AND MORE
EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.



Vol. XLVI. No. 6.

SAN FRANCISCO, SATURDAY, AUGUST 5, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market St.

Work of a Leaf-Cutting Bee in a Peach.

Mr. Fred W. Spencer, of this city, brings us a peach which naturally excited the wonder of the finder and is worthy of remark. It is a yellow peach, which on being broken open disclosed a "split pit," but instead of showing the kernel, as is usual with split pits, the interior cavity of the pit was closely packed with leaves, regularly arranged in rolls, the leaves so tightly packed that they expanded somewhat when pressure was relieved, and seemed to be a larger bulk than the area of the cavity in which they had been placed. Replacing the parted halves of the peach and pressing them until the edges met, there was seen to be no opening except the small aperture at the stem end which is usually seen in a peach with a split pit. Evidently, then, the leaves had been introduced to the interior of the peach pit through this aperture. The phenomenon thus described is an instance of the work of a "leaf-cutting bee," probably of *Megachile fidelis*, a species known to exist here. The leaves in the peach were not from the peach tree, but were rose leaves, or portions of rose leaves. This insect has a peculiar preference for rose leaves, though we have seen cases in which other leaves have also been used. It is very apt in cutting out pieces of leaves and as they are severed they are carried considerable distances sometimes, and packed away in some crevice or cavity in the same manner as shown in the interior of the peach. The insect uses many kinds of cracks or crevices. Sometimes it uses a crevice between the boarding of a house or other structure; sometimes it mines out the pith of an elder stem or of a raspberry cane and fills its tunnel with the leaf fragments. We have seen a raspberry cane in which pieces of apricot leaves had been stored. This wonderful leaf cutting and storage is done for the protection of its young, as the insect places its eggs in the snug retreat which it thus laboriously upholsters with leaf fragments. If our young people desire a demonstration of this curious work, let them watch the rose bushes for leaves, portions of which have been freshly cut out, and then patiently wait for the insect to return and secure another fragment from the same vicinity.

IT COSTS TEN CENTS A BOX FREIGHT to land thirty pounds of Spanish raisins in New York; and it costs thirty cents freight for twenty pounds of California raisins across the continent. In other words, the disadvantages under which California producers are placed is over one cent per pound in the matter of freight alone, though the distance from Spain and California is practically the same. It is obvious that unless some artificial means are devised to equalize conditions between the foreign and home producers, California raisin-growers will be driven completely from the home market. There are several ways in which the distinctions can be measurably leveled. One is by a heavy cut in the railroad freight rates. A second is by lowering the cost of American production. A third is by a protective tariff. The first railroads cannot do sufficiently without heavy loss to themselves. The second

can be accomplished only by an enormous lowering of the remuneration for labor, which is not practicable nor desirable. The third is feasible, commendable, customary and patriotic. Without such protection, an important American industry is in danger of ruin. Californians believe they should be at least placed on a level with for-



OLD OLIVES AND PALMS AT SAN FERNANDO MISSION.

eigners in selling their products to their own people. The tariff should be at least three cents per pound.

SECRETARY OF STATE GRESHAM has directed all diplomatic officers of the United States to notify the foreign powers to which they are accredited of the meeting of the International Irrigation Congress at Los Angeles, October 10th. Their interest and co-operation are solicited.

THE VARIOUS PACKING HOUSES AT FRESNO have, with one exception, discarded Chinese and Japanese assistance, and given employment to several hundred white men and women, boys and girls. It is partial compensation for the masterly inactivity of the canneries.

Mission Horticulture at San Fernando.

We give on this page another view of some of the famous horticultural centenarians at San Fernando Mission in Los Angeles county. The view is between two rows of hoary olive trees upon a pair of lofty fan palms with the arches of the old Mission building at the horizon. The photographer chanced upon the spot when the young grain spread its green carpet over the earth, and though it doubtless added to the beauty of the scene, it but enforces the fact of the abandonment of the site—the garden of the padres turned into a grain field. But even this neglect is milder than that which has befallen some other legacies of the Mission era in California horticulture.

One can draw a lesson from the thrift of the old olives under such trying conditions. The tree is wonderfully hardy and enduring. Even fire and stock and seekers for firewood and cuttings in all their combined destroying strength have not obliterated the original plantings of olives at San Diego Mission, and elsewhere they have shown similar endurance. As horticulture has revived during the present era in California, it is fitting that steps should be taken to protect these early growths from destruction. At San Fernando, a Mission with an exceptionally rich horticultural history, there should be a rescuing enterprise of this kind, and as the valley is being developed in fruit lines and as a place for hundreds of prosperous homes, there is a prospect that the interest of the past will be conserved in the prosperity of the present.

IT IS GRATIFYING TO NOTE that California exhibitors of citrus fruits are to have an expert and disinterested judge of their exhibits at Chicago. There has been much anxiety among exhibitors lest the judges should be directly interested or prejudiced in favor of Florida fruits. This seemed likely at one time, and a vigorous protest was lodged with the Awards Committee. The result is that Signor Zanon, an Italian, was instructed to judge the citrus exhibits. It is reported that this gentleman is very careful and painstaking in his examination and that he handles a citrus fruit as a master. We trust that such will be the method of judging at Chicago. Californians have all along claimed that a haphazard judgment by an "impressionist" judge was most undesirable. For this reason a most searching scale of

points was proposed by Californians. The Floridians have refused to sanction it and proposed a "lump" method of judging. If we cannot get our scale adopted it is consoling to know that the judging will be done by an expert who looks closely into things. We want the awards after such a test. They are more significant.

A LOS ANGELES PAPER ANNOUNCES that the "operations of the Cudahy packing establishment has made hogs scarce." That is not quite correct. Hogs are scarce because there has heretofore been no establishment in California like the Cudahy's, and, consequently, no adequate market. But, under the stimulus of an assured steady demand, the supply is likely to be largely increased.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half Inch (1 square).....	1.00	2.50	6.50	22.00
One Inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager

San Francisco, August 5, 1893.

TABLE OF CONTENTS.

EDITORIALS.—Work of a Leaf-Cutting Bee in a Peach; Mission Horticulture at San Fernando; Miscellaneous, 101. The Week; Grains of Comfort; Summer or Winter Irrigation; Miscellaneous, 102. From an Independent Standpoint, 103. Miscellaneous, 104.
ILLUSTRATIONS.—Old Olives and Palms at the San Fernando Mission, 101. Cluster of Mammoth Apricots, 104.
CORRESPONDENCE.—The Pension Law, 103. Fruit Must Be Dried, 104.
HORTICULTURE.—State Horticultural Society; An Australian on Our Fruit Methods; When to Kill the Apple Aphid; The Cause of Root Knot, 105. That New Australian Ladybird; Eight Rules in Drying Prunes; Curing Figs, 106.
THE DAIRY.—World's Fair Dairy Tests; Who Knows What's the Matter? The Performance of One Dairy Cow; The Cow End of the Dairy Problem, 106.
POULTRY YARD.—"Swelled Head" in Poultry, 106. Poultry Notes; Give the Fowls Fresh Water; Killing the Lice; Tobacco for Gapes, 107.
WORLD'S FAIR.—California at the Fair, 107.
THE HOME CIRCLE.—108-109.
DOMESTIC ECONOMY.—109.
PATRONS OF HUSBANDRY.—From Mr. Ohleyer; From Pescadero Grange; Grange Institute at Elk Grove; From Live Oak; Protection for Home Boys; From Vacaville, 110.
AGRICULTURAL NOTES.—110-111.
MARKET REPORTS.—113-114.

BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

	PAGE.
Dormant Buds—F. S. Phoenix, Bloomington, Ill.....	114
Poultry—Frank A. Brush, Santa Rosa.....	115
Pink Pills—Dr. Williams Medicine Co., Schenectady, N. Y.....	114
Situation Wanted—Joseph A. Frank, Santa Cruz.....	115
Situation Wanted—G. C. M.....	115

See Advertising Columns.

The Week.

The financial situation fills all minds and mouths. If the ship of state needs new impetus it can certainly be had in the many winds of financial doctrine which are tossing the people about. Every country cross road has its zephyr; every metropolis its convention blast. Where all this agitation will land us seems to be quite as obscure as the source whence all the disturbance has come. Meantime, all the people wonder and talk and scratch their heads, and next week Congress will do the same thing officially and throw the dust in the eyes of the world. This is the only thing which seems worthy of any one's attention at present, and, after all, there is some comfort in being able to charge up one's poverty and discomfort to the general condition of mankind. We imagine Adam indulged in it when he fell out of Paradise. It has been more or less fashionable ever since, and this year it is the height of fashion. On the whole, it is better for the race than to be cracking skulls in Parliament or murdering Siamese, or other summer sports which our elder national brethren indulge in. Enjoy it while it lasts.

The Sacramento Fair.

The several counties of California will have two fine chances for advertising themselves this season—one at Sacramento and the other at the great Midwinter Fair in this city. There will be economy in making for the Sacramento fair, which comes first, an exhibit that can be used again later in San Francisco; and this will, no doubt, be the general policy. The prizes offered for county exhibits at Sacramento aggregate \$3500, and this of itself ought to stimulate effort. It is a case where it will pay better, as a mere matter of dollars and cents, and independent of the larger purposes of the exhibition, to put forth the best possible effort, since the highest prizes go to those who make the best showing.

Secretary Smith announces that arrangements have been made with the Olympic Club of San Francisco by which the "Circus Maximus," recently given in this city with great success, will be reproduced at Sacramento; and that it will be one of the great attractions of the pavilion, involving no extra cost to visitors.

Unusual efforts are being put forth to make the coming fair a great success; and unless all signs fail, it will equal or surpass any of the long list of State fairs that have preceded it.

Grains of Comfort.

Whatever may be the ultimate causes of the present state of business affairs, and whatever legislative remedies may prove helpful, there is a simple personal duty the discharge of which will minimize the danger of the passing days and hasten better times.

It is generally conceded that the greatest evil in the situation is lack of confidence. It does not appear that any general unsoundness exists. There is a tremor in the air which creates fright and paralyzes effort. There have been commercial and financial disasters, of course, but those who have fallen thus far have by their acts invited collapse. They have so laden themselves with wild speculations and baseless ventures that the wonder must be, not that they have gone down but that they held up so long. Though it is clear that serious errors have been committed in the conduct of public affairs, it is also plain that the country could endure their consequences and apply the remedies without general disaster and demoralization, provided the people did not yield to distraction and distrust.

Everything indicates that our agricultural producers should retain confidence in themselves and in the situation. There are hardships which must be endured, it is true, and in many respects it may prove a year of little things, but that can be endured and the reaction will in part compensate for it. The wheat-grower finds little to console him for his losses and hardships, and we can see little consolation to offer him if he is obliged to sell at ruling rates. If he has strength to pick his flint and fire again, he has that, at least, to be thankful for.

The fruit situation, with all its darkness, might be far worse. Fruit sales at the East have covered already a vast amount of the fruit crop. That the cholera has not placed a quietus upon Eastern fruit consumption should remind growers that there might be things worse than we are undergoing. We are having a small fruit pack so far, local prices are depressed thereby, but there are sure to be prices within the next six months which will yield large rewards to those who are fortunate enough to own supplies of canned fruit, and the short supply will give early orders for next year's pack. The benefit of this to the grower will be remote, it is true, but a more direct effect will be the increase in the demand and price of thoroughly good dried fruit. Already the Eastern situation in dried fruits is reported as strengthening, and it is more than likely that values will be stronger than the despondent now think possible.

This week there is a collapse in pork products and colossal failures among Chicago dealers. This is not based upon any excess of pork or any loss of the popular appetite for delectable pork products. It is simply because those Chicago pork-packers and dealers, knowing that available pork material is short, gave rein to their insatiable greed for gambling, and in their ambition to corner the American hog, the beast did turn and rend them. It is the curse of the time that successful men cannot content themselves with legitimate production and trade but rush to vain attempts to control through gambler's arts and devices. Coming just at this time of distrust and apprehension, this collapse in Chicago hog circles is calculated to add to the discomfort, but it should have no thought except to wider inculcate the lesson that such undertakings should be made illegal.

Let all draw confidence from the fact that, so far, serious trouble has come alone upon those whose deeds have invited it. We believe the trouble will not go farther unless the people should lose their wits and crowd and jostle each other. If mutual forbearance prevail, if all resolutely determine to adopt the Golden Rule in their transactions with their fellow-men in every-day trusts and confidences, and if all will contribute so far as they can to maintain and promote the operation of worthy productive enterprises in their communities, there will be bread and shelter for all until public affairs readjust themselves upon a basis upon which it will be possible to erect a new era of prosperity and progress.

Summer or Winter Irrigation

At the meeting of the State Horticultural Society last week there was some discussion on "summer irrigation," and the point was made that for summer irrigation the water ought to be applied in the winter—an apparent paradox which, like others of its class, really involves no contradiction. Mr. Maslin modestly remarked that he "had a theory" that water should be applied in winter rather than in summer, as our report on another page of this issue shows. Mr. Maslin might have spoken less reservedly, and declared that winter irrigation is really a better practice than summer irrigation and has been shown to be so in the experience of many California fruit-growers. But in this, as in all other irrigation policies, the value and sufficiency, or in popular phrase the practicability, of

the method depends upon local conditions of soil and rainfall and characters of seasons under which one is working. Therefore Mr. Maslin's theory will be true in whole or in part according to local conditions, and must be rejected or adopted in accordance therewith.

There is abundant evidence in successful practice on valley lands with sufficient depth of fairly retentive soil, that the grower may artificially supplement a scanty rainfall by thoroughly soaking the land by winter irrigation, and then by careful summer cultivation he will be able to conserve enough water in the soil to carry deciduous fruit trees or vines through bearing and autumn bud formation without further water supply. This is not a theory in the sense in which the word is commonly used; it is the record of successful practice here and there throughout the State, both north and south. It has obvious advantages, too, which we need not now stop to consider at length. The secret of the success of the practice lies in the fact that it produces in a region of scanty rainfall the same conditions of water-supply which enable the fruit-grower on deep soils in regions of generous rainfall to carry on his work without any irrigation whatever.

But Mr. Maslin illustrated his "theory" by reference to the free use of summer irrigation in the foothill orchards of Placer county, which he thought might be profitably replaced by application of water in winter. In this phase of his argument we grant him the privilege of calling his view a "theory" in the common acceptance of the term, and admire the hesitation and modesty with which he advanced it, because the substitution of winter for summer irrigation in many foothill situations will not work well in practice. There are foothill orchard areas in which the winter rainfall is two or three times as great as in the valley situations where fruit is successfully grown without irrigation, and yet water must be applied in summer on those foothills or the fruit would be unmarketable and the trees in distress. In such a place it is not wise to preach winter irrigation. The 40 or more inches of rainfall falling on a shallow soil underlain by a sloping bedrock in some cases nearly sluices the cultivated soil from its foothold, and yet the over-saturation avails nothing for summer growth, because most diligent cultivation cannot retain moisture enough in shallow soil thus situated to sustain bearing trees in good crops of full-sized fruit. In such cases, winter irrigation could add nothing but distress to the soil over-soaked by rainfall, and summer irrigation, well timed and adequate, is the secret of success in the orchard.

But even this generalization must be accepted only for situations endowed with conditions which justify it. There may be sloping hills with shallow soil where winter rainfall does not amount to saturation. Then winter irrigation to supply such saturation is desirable, and then, too, summer irrigation, in proper amount and at proper intervals, will also be demanded. Among the foothills, also, there may be localities with depth of retentive soil in which water enough can be applied in winter to carry trees through the year. Thus we come again to the only safe generalization which can be made and that is, that water must be adequate to the demands of the tree at the time it is needed, and whether it can be best applied in summer or winter, or both, or whether it is not necessary to make any artificial application at all, depends upon existing conditions which the grower must ascertain and to which his policy and practice must conform.

NOTWITHSTANDING A VERY DISCOURAGING SEASON, the Riverside orange-growers appear not to be very deep "in the hole." The *Press* gives an instance of the owner of one of the oldest and best small orange orchards who was convinced that he was out of pocket on the season, until he began to figure up on actual results. He has five acres, planted about equally to Seedling and Navel oranges. The total receipts up to July 3, 1893, after deducting all the charges connected with the packing, were \$1831.40. The bills paid were for plowing \$6, bone meal \$20, fertilizer \$174.50, fumigating \$37.80, water \$35, cultivating and irrigating \$125, pruning \$45, picking fruit, \$98.64, hauling fruit to packing house \$49.46. Total expense, \$581.40. This leaves a net income, from five acres of full-bearing trees, of \$1240, or \$248 per acre. The grower did not make as much as in some former years, but it does seem at these rates he should be able to prevent the wolf breaking in at his door.

Railroads not Warships.

TO THE EDITOR:—It is pleasant amid the gloom that financial troubles have cast over this nation to see one bright spot on the horizon. The English House of Commons lately passed a resolution to accept the noble offer held out by the American people to conclude a treaty engaging in future to refer all international difficulties that ordinary diplomacy could not settle to the decision of a Court of Arbitration and *not by war*. The crying want of our agriculturists and horticulturists today is cheaper transportation. May we hope now that as the need for warships is that much diminished, our Government may see its way to spending on transcontinental railroads the money it proposed spending on ships of war.

Carmel Valley, July 31, 1893.

EDWARD BEERWICK.

From an Independent Standpoint.

The past week (we write on Wednesday) has been a very troubled time in the business world. There has been no desperate crisis like the Black Friday of 1873, but the strain upon the national financial nerve has been persistent and intense; and its effect is manifest in such paralysis of business as the country has not seen for many a day. Securities in every form, including the bonds of the Government, have sensibly declined; bank failures have been many, and business houses in large numbers have practically suspended cash payments. Markets have been dull almost beyond precedent and every form of commodity has gone down in price, wheat having touched the lowest point in the history of commercial transactions. California, though not exactly in the storm center of these trying times, is suffering her share in the universal hardship. Thus far we have had few failures; and it is hoped that we may pull through without effects more serious than those already upon us. What these are it is scarcely necessary to remind our readers, for, as producers and sellers, they have no doubt consulted the market reports before reading this page.

The causes back of this condition of affairs are matter of universal dispute, but it seems clear to us that in an immediate sense the trouble rests upon uncertainties of financial and tariff legislation. Broadly speaking, the money question is the paramount issue of the time; and the settlement of business affairs to normal conditions awaits upon legislation calculated to maintain equality of value between our several forms of money. In other words, the times will remain abnormal and disturbed until such time as Congress affords the country assurance that every American dollar is and shall continue to be of equal worth with every other American dollar. This will leave the tariff question as a business disturber, but such discomfort as it can make will seem trifling after the stress in which we are now living.

The first thing to be accomplished, in our judgment, is the repeal of the purchasing clause of the Sherman law; and, as part of the same proceeding, the re-affirmation and re-adoption of the principle of bi-metallism. We must quit dissipating our national resources in the useless effort to hold up the price of silver bullion; but at the same time we must declare it to be the ultimate policy of the American Government to employ the two metals—gold and silver—concurrently in its coinage. This, we believe, will restore public confidence, enable business to move in its accustomed channels, advance to some extent the prices of general commodities and put us in the way of return to substantial prosperity. We say it will "put us in the way of return to substantial prosperity" because we cannot agree with those who claim that this is *all* that is required; in our view it is only the first move toward bi-metallism, upon which our national fortunes ultimately rest. We cannot believe that there will be a return to really good times with free markets and good prices, with justice to producer, seller and debtor, until silver shall be restored to its old rank as a money metal upon terms of relative equality with gold; and such equality can only be maintained by free coinage of both metals at a fixed ratio. This end—the free coinage of gold and silver—must be kept in view; but creeping comes before walking, and we must re-establish the value of silver before we can open our mints to its free and unlimited coinage. The first step toward re-establishment of the value of silver must be the restoration of business confidence at home; and the next step must be to bring England or the Latin Union or both into an agreement with us looking to the concurrent coinage of gold and silver upon a fixed ratio.

There is a large body of American sentiment, particularly strong in silver-producing districts, which holds that the United States alone can, by the easy process of opening its mints to free coinage of silver, restore to the white metal its old-time and rightful money character. With those who thus believe, it is a favorite remark that those who hold a different view are lacking in patriotic spirit; in other words, that they are shamefully subservient to Old World influences in allowing "England to fix the price of silver." Now, as a matter of fact, we can no more prevent England fixing the price of silver than we can prevent her fixing the price of wheat; that is a thing of the world of commerce wholly beyond regulation by American statute. The United States can, we believe, by legislative diplomacy backed by our strength in the commercial world and by our national resources of resolve and fortitude, accomplish all that is desired for silver; but as matters now stand, to open our mints to free silver coinage would be to corrupt our standard of value and open the floodgates of confusion and disaster. This is the opinion of those who are best qualified to give judgment; and as we view it, it is in accord with the common sense of things.

This financial question has done one good thing for the

American people—namely, it has set them to thinking; and it is making new lines for the politics of the country. On this question people are taking their stand on the basis of things present and to come, rather than on the basis of things past. Prejudice is giving way to judgment; and for the first time since the war there is a radical division of the people on a great question of public policy outside of party lines. This is well, for it gives promise of a new and, as we regard it, a more rational and wholesome political life. Furthermore, popular study of this currency question is doing an immense amount of good to the individual citizen by opening his mind to new information and clearing it of preconceived notions. So recently as two years ago it was not possible to discuss the silver question with candor without giving offense; now the whole country stands ready to hear with respect anybody who speaks from conviction and who can bring new information or new reflection. The temper which characterized the earlier silver discussions, and made them mere contests of spleen and acrimony, has given place to a receptive pose of the public mind, willing to give heed and respect to honest differences as well as to coincidences of opinion. The passion has gone out of the matter and the people are soberly and sensibly reasoning together. And when the American people put their whole mind to a project, they never fail to work it out to a practical and just result. Even where opinions and interests seemed as wide apart as the poles, in times past, harmony and co-operation have been attained. And in view of this, who can doubt that in the present situation, in which as a people we are practically agreed as to the *end*, and in which we differ only as to the *means*, a way will be found to yield justice and satisfaction to everybody. That either one way or another we shall get what we all want—the concurrent and relatively equal money use of gold and silver—is beyond question, for it is a certain outcome of our national earnestness, common sense and honesty.

In an address delivered in this city last week, and later in an interview printed in one of the city dailies, our new senator, Hon. Geo. C. Perkins, gave expression to a series of opinions which naturally will interest the people of California. As to the currency question, Senator Perkins declared himself a bi-metallist; he regards the Nicaragua canal as a thing of vast importance and properly to be urged at every opportunity; he is heartily in favor of the improvement by the Government of the Sacramento, San Joaquin and Feather rivers; he believes that United States Senators should be elected by popular vote, etc., etc. In regard to hydraulic mining, his expression was as follows:

The regulation of hydraulic mining concerns largely the wealth of this portion of the country. I believe that there should be no restriction where mining can be carried on without positive injury to other industries of equal importance. Even the smaller interest of a farmer must be protected, however, when the mine-owners encroach upon his rights without giving just compensation.

This, like platforms in general, is too indefinite to mean anything in particular. As to the currency, bi-metallism, whose cause the new senator espouses, is the universal American doctrine; and what the public would like to know from Senator Perkins is his idea as to how bi-metallism is to be reached. We are all agreed as to the object to be attained; the question now is how to do it. Upon this Mr. Perkins is silent; it is impossible to know from what he says whether he is for or against the repeal of the Sherman law. As to hydraulic mining, the senator is again indefinite. It cannot be admitted that the interest of the farmer is "even smaller" than that of the miner; and the mine-owners must not be allowed to "encroach upon their rights" with or without compensation. It is evident, especially in the light of Senator Perkins' past associations and of the policies of his State administration, that the anti-debris interest has no friend in him.

The European warcloud, to which we referred last week, has blown over as war clouds generally do. England failed to come to the scratch in opposition to France's pretensions in Siam, and the last-named country, thus left helpless, has had to give in. She concedes all the points in dispute; in fact, humbles herself for the sake of peace. This is the usual end of "war scares" where England is one of the parties in opposition to a nation of her own size. Among the little principalities Britain is a prime bully. Recently we have seen her cuff the South African Boers about the ears, knock down the outworks of pauper Egypt and march against the Soudanese; and we have seen her take one bit of the earth after another from peoples too weak to hold them. But when it comes to France or to Russia or to anybody else big enough to make a fight, the Lion ceases to roar, curls its tail between its legs and hunts a hole. The reason for this is that England has subordinated everything, including national pride, to her commercial interests. Her ships are on every ocean, her merchants are in every land, her insurance funds are

pledged in every commercial capital. To get into a fight would be to hazard these huge capitalistic interests, and this she cannot afford to do. She is as martial as ever in spirit; she would like to fight and is capable of fighting; but it would cost more than she can afford. Her government knows this better than her people; so from time to time the popular vanity is tickled by war talk; but it never comes to anything and never will. The Lion's tail may be twisted, he may be kicked in the ribs and his nose may be prodded with bayonets, and in reply he will only roar; like a barking dog, he never bites.

A sufficient fund has been pledged to justify the committee of management in announcing positively that a Midwinter Exposition will be held at San Francisco, beginning about Christmas and continuing for sixty or ninety days. A fine site in Golden Gate Park has been secured, and plans are now maturing for the buildings, construction of which will soon begin. All the most notable exhibits at Chicago, including the attractions of the "Midway Plaisance," have promised to come; and it is proposed to supplement these with such a display of Californian productions as has never before been brought together. It is confidently believed that the Exposition as a whole will equal in interest its great original at Chicago.

Already there is a controversy as to Sunday opening similar to the Chicago fight on the same issue; and it will no doubt end in the same way. It would be as difficult to shut up the Exposition as it would be to shut up the park itself; and it seems to us that there would be about as much reason in one proposition as the other. A fair compromise between the extremes of sentiment in this matter would be to keep the doors of the Exposition open on Sundays as on other days, but to stop the machinery, thus eliminating the element of noise and conforming to the usual decorum of the day. Those whose consciences would be offended by this plan will have a perfect right to stay at home on Sundays, reserving their attendance for the other days of the week.

There was a scene in the British House of Commons on Thursday of last week which shames the whole English-speaking world. The Irish Home Rule bill was under discussion, and a member in opposition (Chamberlain) was saying some severe things about the Ministry, when an Irish member (T. Power O'Connor), rising in his seat, cried out "Judas." The Irish members took up the cry in chorus, and "Judas," "Judas," "Judas" filled the air. All the members rose and shouted madly, and a few specially heated partisans began to pummel each other. Assisted by Mr. Gladstone, the speaker finally restored order; but not till there were several smashed hats, broken heads and bloody noses. Of course, there is intense humiliation in the Empire at large as well as in Parliament, for it is rightly regarded as a most indecent and shameful thing that the lawmakers of Great Britain should fight like a crew of coal-heavers; and that, too, in open parliamentary session. It is recalled that nothing like it has occurred for more than two centuries; and there are not a few who regard it as a sign of national decadence. Broadly speaking, Americans have the same reason as their British cousins to regret the incident; but it is only natural that we should make comparisons between Parliamentary and Congressional practice not unfavorable to our own way of doing things.

The Pension Law.

TO THE EDITOR:—Mr. Berwick is mistaken in thinking that there is a legal contest between us on this matter. In an off-hand way you rather gave an idea, with editorial license, of what the law ought to be. I replied, stating the law of pensions as it was during the war, is now and ever will be. Amen.

Let us turn to the law itself and read: "If any officer or soldier has been, since the 4th day of March, 1861, disabled by reason of any wound received or disease contracted while in the service of the United States and in the line of duty, he shall, upon proof of the fact, be placed upon the list of invalid pensions and receive a rate of pension according to his rank and disability from date of discharge during the continuance of his disability."

No such condition as "need" is attached to the "right" to pension under the law, and it certainly would not be right for the Government to make "need" a condition precedent to granting a pension after the right had accrued without any such condition. Such an attempt by Congress would be void, as unconstitutional.

I have no form of enlistment to put in evidence to satisfy Mr. Berwick and none is needed, because the law entered into and became a part of the contract of enlistment by operation of law to the same extent that it would if the law had been copied in full in the contract.

The policy of paying pensions to soldiers was established in 1806, and the Government has ever since paid them. Pensions are and have been paid Revolutionary, 1812, and Mexican war soldiers because of the fact of service in the army without claim or proof of disability. This pension might be considered a gratuity and was not promised the soldier on enlistment.

The Act of June 27, 1890, is a departure from the general pension law quoted above in this particular: no claim or proof is required from the claimant that the disability for which pension is asked was contracted in the service of the United States.

Of course it was competent for Congress to waive proof of disability in the service and grant pensions to all disabled soldiers, rated according to their disability. The pension roll is soon to be rolled up, for the soldiers of the late war are now over 50 years of age and are fast rallying to the standards of Grant, Sherman and Sheridan on the other side, answering the call of Lincoln: "Come to me, the battle of life is over; rest in peace."

W. H. AIKEN,
Wrights, July 31, 1893.

The Mammoth Apricot.

We give on this page an engraving of the Sparks apricot which originated from a seed planted on the place of the late W. W. Sparks, at Ventura, more than 12 years ago. It has attracted local attention for several years and has recently been chiefly grown by N. B. Smith of Ventura, to whom we are indebted for the engraving and a box of the fruit which clearly demonstrated the excellence of the variety.

The Mammoth is extra large, exceeding, we believe, even the Moorpark. It is of very symmetrical form, high color and seems to ripen fully and evenly, which is, of course, a very important point. It is very rich and juicy when fully ripe and it has exceptionally good keeping and shipping qualities. It ripens about the same time as the Royal.

Mr. N. B. Smith has grown this apricot for a number of years and has fully demonstrated its value. In a letter just received from him he gives the following information about the variety:

It is excellent for canning as well as for drying, but particularly for shipping green. I have sent by express several boxes to Chicago for the World's Fair exhibit and they report it has the best "holding up" qualities, and it has attracted much attention at the Fair. It is evidently a good shipper. If it can go through in a hot express car in good condition, what would it do in a fruit car which has proper ventilation?

I believe this is the coming apricot, judging from its size, general appearance, flavor and bearing. I have 50 or more trees which this year have averaged 170 pounds per tree, and you know the apricot crop is very short this season. The Cutting Packing Company of Colton bought my fruit this year and they pronounce the Mammoth the finest apricot for canning and a fine shipper. This is certainly a credit coming from a well-known house.

My Mammoth trees begin bearing at four years old, have proved vigorous growers and have averaged over 200 pounds per tree; some years more, according to the season. To witness the growing fruit is something marvelous. It is admired by all who see it. The variety is a very regular bearer.

Mr. Smith has propagated quite a stock of the Mammoth which he offers for this year's planting. No doubt all apricot growers will desire to try this promising variety. If it does everywhere as it does in Ventura it will be a great acquisition to the apricot list.

Fruit Must Be Dried.

TO THE EDITOR:—The fruit-growers are beginning to realize that they must dry their fruit on their own place to secure the best results. It is cheaper, more sure and done within their own families. But pure fruit is the watchword—no sulphur, no potash, no glycerine, no alum, no sulphurous acid, no salicylic acid—nothing to adulterate.

J. H. MONTEITH.

Los Angeles, Cal., July 28, 1893.

A NOVEL AND SOMEWHAT DELICATE TASK has just been performed by Mr. Leonard Coates, the well-known nurseryman and orchardist of Napa. A prize of \$100 was offered for the best cultivated orchard in Capay valley, Yolo county, and Mr. Coates was selected to make the award. He made a thorough investigation of the valley orchards, and finally decided that B. F. Davisson, of Guinda, should have the \$100. Mr. Coates found many orchards in almost perfect condition. The orchard of J. O. Woodbury, at Guinda, was at one time almost marked for the award. Those of Buck and Stitt, J. H. Sharpe, H. Galvin, Wm. Sproule, C. Y. Hamilton, E. F. Haswell, W. E. Cole and others were in fine order. The fact of Mr. Haswell's orchard being cultivated by his fourteen-year-old boy is not to be overlooked. The Tancred colony comes in for special mention. But, says Mr. Coates, Mr. Davisson's orchard is as near perfection as can be.

PALO ALTO STOCK FARM, the lovers of first-quality horses will be glad to learn, is to be maintained by Mrs. Stanford, who regards the further development of the senator's theory of fine racing stock both a duty and a pleasure. Among novel things proposed to be done by Mrs. Stanford is the exchange of a stallion and two mares from Palo Alto for two stallions and two mares of the Orloff breed from Russia. The Russian animals are now on their way to this country and will be exhibited at Chicago for six weeks. The Palo Alto stallion to be sent to Russia is Good Gift, by Electioneer, first dam Miss Gift, thoroughbred by Wildidle, foaled 1886. One of the mares is a three-year-old out of Bertie by Piedmont. The other is yet to be chosen. The Russian horses are from the imperial stock farm. The two stallions rejoice in the somewhat awkward names of Ouriadnik and Verboostchik.

ORANGE SHIPMENTS FROM RIVERSIDE for the current season were in full as follows:

Crop of 1892-93.	Boxes.	Cars.
January shipments.....	37,466	131
February ".....	57,772	202
March ".....	109,431	382
April ".....	109,143	591
May ".....	193,021	675
June ".....	106,849	374
July, to 13th ".....	30,443	106
Total.....	704,170	2461

MR. C. P. BAILEY, OF SAN JOSE, the well known Angora goat farmer, proposes to ship 35 goats and 10 fat-tailed Persian sheep to the World's Fair. They will first be exhibited at the California State Fair.

Gleanings.

—Forget a favor soon as granted others. Never forget a favor granted you.

—A little faith-cre applied to the present monetary disease would do a vast amount of good.

—Penryn and the Penryn Fruit Company claim the honor of shipping the first Early Crawford peaches out of Placer this year. The date was July 24th.

—A prominent hop-grower of Sonoma county tells the *Democrat* why he does not employ white hop-pickers. The reason is simply that he cannot get them.

—The Yuba City Cannery has begun putting up peaches. The run will continue through the season, but not more than half the force of last year will be employed.

—The California starch factory at Petaluma will begin operations about the first of August. Farmers who have potatoes to sell can find a market for them at this factory.

—It has been estimated that there is not more than a fiftieth part of the orange crop left in the valley, amounting to perhaps 50 carloads, says the *Riverside Press*. The most of these are controlled by the different packing firms.

—The Ukiah *Republican-Press* moved into a fine new building, all its own, and came out in new form. The *Republican-Press* is 17 years old, grows handsomer and better with age, and is destined to a career of continued profit and usefulness.

—The Loomis Fruit Association has been formed, with the



CLUSTER OF MAMMOTH APRICOTS, GROWN BY N. B. SMITH OF VENTURA.

principal place of business at Loomis, Placer county. J. O. Barton is president and W. A. Lavers, secretary. The directors are J. O. Barton, W. A. Lavers, Alex. Scroggs, Wm. Tadsbury and F. C. Laird, all of Loomis.

—The *Saratoga Standard* is now under the management of D. D. Bowman, an experienced newspaper man. Judging from its recent number, the *Standard* reflects in a most complete and satisfactory manner the life and progress of an enterprising community. It is a good paper.

—A preliminary statement from the National Statistical Bureau makes the year's exports of wheat nearly 116,000,000 bushels. This quantity has been exceeded but four times in 20 years. The wheat flour total is about sixteen and three-quarter million barrels, the largest in 20 years.

—A company has been organized in South Dakota, with a capital of \$6,000,000, for the purpose of counteracting the hot winds of the Middle West by cold waves. That concern would make a ten-strike if it would turn loose on the agitated public a successful counter-irritant for the prevailing financial simoon.

—A statistical writer figures out that the United States produce: 2200 pounds of grain to each inhabitant; Denmark, 2005; Canada, 1500; Russia, 1200; Rumania, 1150; Spain, 1100; France, 990; Sweden, 930; Argentine Republic, 850; Australia, 760; Germany, 700; Belgium, 600; Portugal, 550; Ireland, 500; Scotland, 490; England, 360.

—The Sonoma County Hop-Growers' Association has elected the following officers: President, Gny E. Grosse; vice-presidents, Otis Allen, R. W. Peterson, J. F. Burgess, T. B. Miller, Jr., A. Ludolph and L. Ross; secretary-treasurer, J. W. Hall. The price for picking was fixed at one cent per pound, which is the same as was paid last year.

—Here is a girl considered from the unromantic standpoint of science: "A young lady weighing 154 pounds shows by analysis to be composed of 96 pounds of water, 3 pounds of white egg, a little less than 1 pound of pure glue, 34 pounds of fat, 8½ pounds of phosphate of lime, 1 pound of carbonate of lime, 3 ounces of sugar and starch, 7 ounces of flouride of calcium, 6 ounces of phosphate of magnesium, and a little ordinary

table salt." And that's the *ignis fatuus* every young man chases into the swamp of matrimony!

—Work has begun on the Napa Company's fruit drier. Its capacity will be 1530 trays each day, which will equal three tons or 6000 pounds of green fruit. The building will be so arranged as to receive fruit either from the railroad or from wagons. All kinds of fruit will be dried, and the company will be ready for business within three weeks' time.

—The Lucerne Valley Horticultural Society has issued a call to the raisin-growers of Kings and adjoining counties urging the necessity for various localities to call meetings for the purpose of effecting a better and more effectual organization of the fruit-growers. Organization is the watchword of fruitmen throughout the State. They have found that it pays.

—Experienced irrigationists in the San Joaquin valley think it possible to work an improvement in the system in two directions, says an exchange. One is to make use of the high waters of winter and spring, which now run to waste; the other is to dispense largely with surface wetting of the ground, which produces sickness and calls for much work that can be done away with.

—A startling wolf story comes from Oroville. A party of gentlemen was fishing at the headwaters of the South Fork of the Feather and encountered a large gray wolf. A bullet broke a leg of the animal at the first joint. Enraged and inflamed with pain, the wolf deliberately took the wounded member in his teeth and tore it from his body. Then he ran away, but returned in a shower of bullets, picked up the detached limb in his month, made for the brush and disappeared. It was a fishing party which saw and did all this, and the question now arises, Is this a fish story, or otherwise?

—J. D. Culp, of San Felipe, San Benito county, is a pioneer tobacco-grower of California and the most extensive producer of the weed on the Pacific Coast. In an interview with a reporter recently he said: "I have 50 acres of my ranch in San Benito county planted in Havana tobacco this year, and have already sold my crop of 60,000 pounds at the rate of 50 cents a pound."

—If you desire good fruit, do not let your trees overbear, advises the *Willows Journal*. One good fruit tree is worth a dozen scrubby specimens. Where the fruit is too thickly set on the trees, thin it out, leave a hand's breadth of space between the fruits, and some experienced growers even recommend six inches. It may hurt your feelings to apparently waste so much good fruit, but the result will pay you.

—Messrs. Fred C. Smith of South Australia and P. J. Cillie of Cape Colony, South Africa, horticultural commissioners of their respective governments, are pursuing their investigations together in southern California. They expect to travel together until October, and will part at Chicago. Australia and Africa know a good deal about horticulture, but it is evident that they think they can learn something in California.

—The *Sanger Herald* tells the following, and says it is an actual occurrence: "A young lady visiting at a big vineyard north of Sanger went out among the vines early one morning last week, and her dress becoming quite damp, she remarked to the owner that the dew was quite heavy on the place. 'Yes,' said he, 'there's about \$8000 due on this place, and it is drawing eight per cent interest.' The fall due is the kind that hurts the worst."

—At the recent meeting of the Butte County Horticultural Society held at Biggs, resolutions declaring war on the English sparrows were adopted, says the *Biggs Argus*. It was decided to prepare an article to be sent to all the papers and placed in the hands of horticulturists all over the country urging the destruction of the fruit enemy. On motion, Mrs. Bidwell was requested to prepare a paper on the life and habits of the English sparrow, which will be read at the next meeting of the society.

—When testing for a ripe watermelon I draw my thumb-nail over the thin, green skin, says a writer in the *Southern Stockman and Farmer*. If the edges of the skin on each side of the scar are left ragged and granulated, and the rind under the scar is smooth, firm and white and has something of a glassy appearance, the melon is ripe; but if the edges of the scar are smooth and the rind in places and the skin does not come clean, then the melon is green. You can easily learn on two melons—one ripe the other green—noting the difference after they have been cut open.

—One more short road to wealth through a new butter-making process has been discovered. One Dr. Vaugbu alleges that he has a process of churning milk that develops an alkaloid, the effect of which is to separate the butter from the milk. The doctor claims to be able to discard the churn entirely, by dropping a little of the needful alkaloid into the vessel of milk and immediately thereafter taking out the butter. The doctor's scheme is very brilliant, but it has a very suspicious black-peppin look. It is a safe rule always to keep your hand on your watch, put your purse under the bed-tick, and lock up the cellar, poultry-house and all movable things about the place when you learn the agent of one of these bogus butter-making frands is in the neighborhood.

—The shipments of fresh fruit, in pounds, from Suisun from July 12th to July 26th (the latter date inclusive), are as follows:

Apricots.....	493,550
Peaches.....	63,895
Pears.....	418,075
Plums.....	29,245
Apples.....	12,480
Prunes.....	1,810
Nectarines.....	275
Figs.....	2,715

Amount shipped since July 12th.....1,022,045

Amount shipped up to July 12th.....1,558,761

Total to date.....2,580,806

HORTICULTURE.

State Horticultural Society.

Several important and interesting points were brought out at the regular monthly meeting of the State Horticultural Society Friday, July 28. The attendance was good.

The secretary read a letter from the secretary of the American Pomological Society, suggesting that several prominent members of the society favored holding one of its biennial sessions in San Francisco in February, 1894. It was decided to extend an urgent invitation to the society to convene here, and Prof. E. E. Smith, A. L. Baucroft and Prof. E. J. Wickson were appointed a committee for that purpose.

Peach Trees on Apricot Roots.—President Lelong submitted to the society the question, which had been sent him for that purpose, as to whether or not the apricot is more exempt from the root knot than the peach, and might therefore be better stock for orchard trees which are now commonly grown on the peach root.

Mr. Maslin suggested that the question should be as to whether the peach can be profitable worked on the apricot root. In Mr. Maslin's opinion, it could not. The growth of the top would be so great that it would overlap the apricot stock and the root would not be able to support the tree after a few years.

Leonard Coates said there were several valid objections to apricot roots for such purposes. Peach stock should be used for the sufficient reason that it is the best. He would not advise any one to use apricot roots instead of the peach.

H. P. Brainerd remarked that the apricot root is exceedingly tender, and, in transportation from the nursery to the orchard, the tree must be handled with very great care, "or," said Mr. Brainerd, "you won't have any roots left." One trouble with apricot roots is their tenderness.

Several other objections were noted by other speakers, and finally it was decided as the sense of the society that the peach root is superior to the apricot for the purposes for which it is generally used.

Orchard Irrigation.—The subject of orchard irrigation being taken up, Mr. Brainerd told of the experience of Santa Clara valley last season. The rainfall was so distributed in small storms, yielding usually only a fraction of an inch of water, that it evaporated before it had time to become thoroughly soaked in the ground. The orchards very early disclosed indications of suffering from drouth. Some orchardists were ready to irrigate and turned on the water as soon as there appeared need of it. The result was that such orchards yielded full crops; others did not, but their fruit did not develop proper size. It is true that it contained very little water and yielded in some cases one pound dried for two pounds of fresh fruit, but the fruit was too small. The irrigated fruit was just as marketable as that grown without irrigation.

Mr. Maslin gave what he termed his "theory" of irrigation, as adapted to foothill lands. In Placer county he found that people irrigate mostly in the dry season, when nature's reservoirs are closed. He was strongly of the opinion this method was improper; that the land should be plowed in the fall; then there should be free irrigation in the winter and cultivation in the spring. On shallower and non-retentive soils, some summer irrigation will also be needed, but where the soil has sufficient depth and retentiveness enough moisture can be conserved by summer cultivation to carry the trees through the season.

California Fruits in Europe.—Honorary President Hilgard had been invited to address the society on the introduction of California fruit products in Europe. The professor spoke briefly and laid particular stress upon the important point of preparation of the fruit. "In the first place," said the professor, "our dried fruits should be sulphured very little or not at all. Europeans who might be induced to buy our fruit do not judge by appearances when they buy. They determine by taste and smell, and they complain of the strong flavor of our fruits. They do not mind a little color." The professor advised the sending of samples to various European societies and the exchange of documents and literature, so that each might become better acquainted with the other.

Mr. Maslin read the report of an agent of the State Board of Trade in England, who had distributed samples of California fruit among various grocers, brokers and others for their judgment as to the practicability of its introduction in England. The testimony of the brokers is that the fruit was "too old," "packing careless," "prices too high," "poor fruits seems to have been especially selected in making up these samples," etc. A number of letters from grocers and others were submitted. They generally complain of the flavor of the fruit. They do not like the "horrid smell." The trouble seems to be in the sulphuring. In prunes the fault probably lies in the English unfamiliarity with our way of treatment. "I have no doubt," concluded Mr. Maslin, "that we can secure a good market for our dried fruits in England, except peaches, if we adopt a standard method of curing."

Mr. Lelong suggested that all difficulties might be overcome if the prunes were cooked by the French process. The English were accustomed to dried prunes prepared in that manner.

James Shinn added that there ought to be no difficulty in preparing our prunes for the English market. The prune of the French and our petite prune are precisely the same in every respect until they leave the tree. The French method of curing them seems to suit the English taste. If we are to cater to that taste we must learn and adopt that method.

Capt. Brainerd stated that Mr. Leib, of San Jose, had a full outfit for cooking prunes by steam, and that formerly he put up a large product in that way, but recently he has

only processed what prunes he needed to fill certain orders. The bulk of his prunes are now sun-cured.

Mr. S. Polak read a paper disclosing a scheme for introducing California fruits in Europe.

Miscellaneous.—The following subjects were chosen for the August meeting:

"Is it Practicable for California Fruit-Growers to Introduce Their Own Fruit in Europe?" "Prune Curing in the Santa Clara Valley," by Capt. H. A. Brainerd of San Jose.

E. E. Smith was appointed a representative of the society on the joint committee of the State Boards of Trade and Horticulture on the Winter Fair.

An Australian on Our Fruit Methods.

[Observations in California of Mr. FRED C. SMITH, Horticultural Agent of South Australian Government.]

The apricot scab and shot-hole, which is as prevalent here as in our country, is kept in check by spraying. Mr. Ditzler, the manager of Hatch & Rock's Rio Bonito orchard at Biggs, uses a sort of seed-sower mounted on a cart and worked by a geared attachment from the cart-wheel axle. It casts the powder in clouds over the trees and prevents the shot-hole scale from growing.

We paid a visit to the Santa Clara valley to see the pear orchard of Mr. A. Block. The peculiarity of his orchard is that it is planted with dwarf trees 15x15 feet apart. Although Mr. Block is said to get very large crops of pears, he has to constantly irrigate, cultivate and manure to do it. It is a very moot question if, with all the extra work attaching to this system, the result is commensurate. After going through and seeing for myself, I should plant not less than 30x30 for pears as standards, with a row of dwarfs between, with the intention of removing them when the standards were old and large enough to bear well. The dwarfs certainly bear early. I was in hope of finding a pear that would lengthen the canning season for the Bartlett and that would be as good for the purpose, but two or three weeks earlier or later, but I am afraid I shall again be doomed to disappointment. I can hear of no pear of the sort or of anything approaching the Bartlett in all-round points.

It will interest Australians to know that the *orcus chalybeus*, one of the ladybirds brought over by Prof. Koebele on his last trip from Australia, is after all cleaning out the red scale of the orange in an orchard where it was freed in the southern part of the State. Mr. Craw, the State Entomologist, tells me that it is possible that the reason why the Australian ladybirds multiply so tremendously here is because they are brought over without any of their natural enemies coming with them. There is an internal parasite of the ladybird which in Australia is very destructive to it and it has fortunately not been introduced here.

The same thing applies to the eucalyptus trees of this State. No live trees have been brought over. They are all raised from seed, hence the numerous scale diseases, borers and fungi that attack them in our country have not yet made their appearance, and certainly the immense growth of the blue gums here in a few years is astonishing. I had the pleasure of attending a fruit-growers' conference in this city on July 13th, when many of the most prominent orchardists of the State were convened to discuss the question of a revision of the tariff in favor of the fruit-growers of this country. It seemed strange to me that instead of seeing 200 or 300 men present there should be only 30 or 40. From the statements of some of the speakers it would seem that some branches of the industry were in dire need of protection, but the fewness of the growers present did not say very much for the great mass of opinion on that point. However, I got some little idea of the energy and go of the people in the business-like way in which active committees were found to further the ends of the meeting.

The next day the olive-growers met and a far larger attendance, considering that it was for one branch only of the industry, was present. The best speech that I heard was that made by Secretary Lelong of the State Board of Horticulture in describing his method of pickling olives. In Australia the old plan of pickling the olives green has been too long followed. One who has not eaten ripe pickled olives does not know what a really tasteful pickled olive is like. I shall put Mr. Lelong's method into practice on my return to South Australia, and no more green olives shall be put up by us. I will send you the full printed description of his method by next mail.

Just a few words before I close on the State Board of Trade of this city. This body occupies very much the same position as our Chambers of Manufacture in Australia, but it seems specially to have identified itself with the fruit industry, as it has by far the finest collection of varieties of fruits preserved in glass jars in this State, or even in the whole country. Mr. Maslin, the secretary of the institution, has given me his method of making the sulphured water. It is as follows: Get a barrel and place, say 20 gallons of water, filtered if possible, so as to be perfectly clear. Place a pan on the water with a handful of sulphur in it. Light the sulphur and cover over the top of barrel with a sack, well pressed down, and as often as the oxygen is exhausted and the sulphur stops burning re-light and proceed as before until all is burnt up. Then have the fresh fruit all ready in the jars and pour the water over it and immediately cover; seal tightly. The fruit preserved in this fashion will keep for years, but all colored fruit will lose its color and bleach yellow, and of course be unfit to eat. Mr. Maslin has tried very many experiments in the preservation of fruit for exhibition, but finds this plan the most feasible. This plan must be put into operation in the colonies in all centers where visitors from other countries are taken, and exhibits of the sort should be made also in London and India in the chief cities.

The Board of Trade last year sent two tons of dried fruit to England to be distributed in small packets free to the public, and printed instructions were provided also for cooking, etc. Fault was found with the color of the fruit

and in the strong smell of the sulphur evidently in the cooking; also in the fact that the fruit was sold only (except in case of figs) in bulk. Small parcels of one and two pounds were asked for. I have not yet seen anything to equal the splendid samples of dried apricots, peaches and raisins shown me at Mildura by the Chaffey Bros., nor have I seen anything to equal the neatness and handiness of their packages except in the raisin packages of this State.

When to Kill the Apple Aphis.

James Tullock, who is a prominent fruit grower on Fidalgo island, a fine horticultural spot in Puget Sound, has been conducting a series of experiments with the apple aphis, and he has reached some conclusions which are not generally known. The proper time to fight the aphides and psyllid families, as of other fruit pests, Mr. Tullock says, is when the eggs have burst and the nymphs or virgin females appear. There are no males at this time and the nymphs are very tender and easily killed by solutions of any of the ordinary insecticides used as "summer washes." This is against the horticulturists' idea of winter spraying, but it is the practical truth nevertheless.

It is really useless to expect to kill the eggs of the green aphis, or even any of the psyllid families, without using a solution of an insecticide sufficiently strong in itself to kill the bark and buds of the tree. The shell of the egg of the aphides will scarcely dissolve in strong caustic ammonia or sulphuric acid, and it is practically impossible to destroy the eggs upon the twig without using a solution of an insecticide, which will not only kill the egg or cause it to shrivel and dry up, but will also kill the bark and every bud it comes in contact with. As proof of this fact, I cite the following carefully conducted experiments. Branches and twigs affected with green aphis eggs were dipped several times in the following named solution, and without cutting them off of the tree:

1. Pure kerosene; the eggs hatched out in five days.
2. Pure turpentine; the eggs hatched out in ten days.
3. Pure benzine; the eggs hatched out in three days.
4. Crude carbolic acid; the eggs, buds and bark were killed.
5. Whale oil and quassia emulsion, pure; the eggs hatched out in ten days.
6. Concentrated lye emulsion, pure; the eggs, buds and bark were killed.
7. Sulphide of potash emulsion, pure; the eggs, buds and bark were killed.
8. Pine tar emulsion heated to 125° Fahrenheit; the eggs hatched out in three days.
9. Kerosene emulsion pure, 130° Fahrenheit; the eggs hatched out in seven days.
10. Turpentine and potash emulsion, pure; eggs hatched out in ten days.
11. Lime, sulphur and salt emulsion, pure; eggs hatched out in six days.
12. Tobacco and whale-oil emulsion, pure; eggs hatched out in seven days.
13. Vitacide diluted 200 times; most of the eggs hatched out in ten days, but some of the eggs were shriveled and died.
14. Vitacide Everette, diluted 50 times; the eggs, bark and buds were killed.

All of the above substances hurt the buds of the tree and also the bark more or less, and would have undoubtedly killed the leaves if there had been any on the twigs.

The best time to spray to destroy the green aphis is therefore when the young nymphs make their appearance early in the spring, as soon as possible after the leaf buds have expanded into small leaves; and if these young nymphs are killed, these fruit pests will have been so thoroughly eradicated from the tree that the trees will need but very little further attention during the entire season.

The Cause of Root Knot.

TO THE EDITOR:—In the RURAL PRESS of July 15th, in an article with reference to root knot, is expressed an opinion that "too much water in the nursery is the cause." I have a nurseryman near me who raises all his trees without water. Surface water is 75 feet from the surface. Last spring he called me in to see an awful example of root knot on one-year-old peach trees grown from grafted knot-rooted peach-tree pits. It was altogether the worse case that had so far come under my notice, many of the knots being two inches in diameter and as soft as a potato. He put the plow under them and burnt them up. Then he showed me a lot that he raised from seedling pits and they had no knots, neither had the trees from which they were taken. I can show knots of the same kind growing upon trees in this neighborhood, two and three feet from the ground. I think the only solution is to get pits from vigorous trees that have no knots. As to whether they should be seedlings or budded fruit, I do not know; but I am convinced that nurserymen will have to select their seed and not take it, as some do, promiscuously from the fruit-canner's or drier's pit pile. I think root knot is a sap disease, and the only cure is to select stock free from it.

Last spring I dug up a lot of yearling peach and apricot trees that had grown around a pit pile. They grew without water or care, and some of them were knotty.

As to putting peaches on apricots, I would say go slow. I planted an orchard in 1883—prunes, nectarines and apricots, all on apricot roots. Four hundred apricots are still there, with two or three exceptions, and they are fine trees and are doing as well as if on peach roots. Of 200 prunes, 148 are all that are left. The apricot root dwarfs under the prune. Of the 400 nectarine trees I have lost nearly half, they, too, dwarfing the same as under the prune, or were blown out by northers. The roots have behaved worse under the red nectarines than under the Hardwick. The prune trees grow at the sides. The center top branches send our small leaves which wither and die,

and the trees are not more than half the size that they would be if on peach root. I would also say that Myrobalan is no good with us, the soil being too dry for it.

Of course, every locality differs in this State, and I would say, put in a few trees on apricot and try them, but as to an orchard, it is better to be safe and not experiment. Lamanda Park, Cal., July 28, 1893. E. A. BONINE.

That New Australian Ladybird.

TO THE EDITOR:—You have doubtless seen the somewhat sensational report that has recently been published in relation to the increase of the steel-blue ladybird, *orcus chalybeus*, in an orchard near this city. Nearly a year and a half ago I placed about 360 of these ladybirds on a lemon tree in the orchard mentioned, the tree being thickly infested with the red and the black scales, and surrounded with other trees similarly infested. The insects did not thrive very well the first season, still they succeeded in maintaining themselves, and passed the winter safely without any other protection than that afforded by the trees. At the present writing there are three or four times as many of these ladybirds upon the original tree as I placed upon it, and while they have not as yet succeeded in freeing this one tree of the scales, still their work upon the latter is very noticeable. They appear to be very local in their habits, since during the past year and a half they have spread to a distance of only about 50 yards from the tree upon which they were originally placed. Even upon the trees immediately adjoining the latter, scarcely a dozen of the ladybirds are to be found, while upon the trees farther removed from the original one, only two or three specimens are to be found at the present time.

The present situation is practically the same as it was last autumn when a concourse of our fruit-growers, after investigating the workings of these ladybirds, concluded that it would not be advisable as yet to abandon all artificial means and trust to these insects for freeing the trees of the red and the black scales. D. W. COQUILLET.

Los Angeles, July 25, 1893.

[The report to which Prof. Coquillett alludes was printed in last week's RURAL, page 90.—EDITOR.]

Eight Rules in Drying Prunes.

The *Pacific Tree and Vine* gives the following condensed directions for drying prunes:

1. Gather when fully ripe, so they will fall with a light shake.
2. Grade into two or three sizes for drying.
3. Dip in boiling lye, one pound of concentrated lye to 10 or 15 gallons of water, and keep in till small cracks show in the skins, giving the dipper a motion while immersed. Rinse in clear water and spread on trays.
4. Dry them well, not too hard, but until entirely cured. They may cure on the trays stacked up, if you have plenty of trays.
5. Pile in the storehouse to sweat and cure, watching closely and stirring.
6. Grade accurately in sizes from 40 up.
7. If you dip them, dip in hot water with a pound of glycerine to every 20 gallons.
8. If boxed, face the boxes neatly, give full weight, and pack honestly in every way.

Curing Figs.

Mr. Meller, in the *Madera Tribune*, says he cures figs as follows: Pick them as they wit on the trees; dip them for 20 seconds in a solution of one ounce of carbonate of soda in 10 gallons of water; spread them on trays, keeping the blossom end up; sulphur them 12 hours; place in an evaporator for 12 hours; leave them in an airy room with screened windows and doors for ten days; then pack them.

THE DAIRY.

World's Fair Dairy Tests.

In our last notes on the dairy tests at the World's Fair we gave the quantity of milk given by the different breeds and the average weight of milk per cow per day from June 10th to 17th. *Hoard's Dairyman* of July 7th gives the milk and butter product of each heard from June 1st to July 1st inclusive, with per cent of total solids and butter fat, as well as the total number of pounds of butter fat contained in each day's milking, in tabulated form, with the following summary of averages, viz.:

The Guernseys gave 23,130 pounds of milk, which averaged of total solids 13.49 per cent, butter fat 4.56; total butter fat 1015.49 pounds for 30 days only, and total butter for 28 days 1144.49 pounds.

The produce of the Jersey herd is given for 28 days only and is: Milk 23,791 pounds, total solids 14.15 per cent, butter fat 4.99 per cent, total butter fat 1138.78 pounds, giving 1380.28 pounds of 80 per cent butter.

The Shorthorns, of which there were only 23 cows for the first two weeks and 24 for the remainder of the month, gave, in the 31 days, 24,765.6 pounds of milk, containing an average of 12.54 per cent of total solids and 3.62 per cent butter fat. The total butter fat for 30 days was 856 pounds and of 80 per cent butter 958.18 pounds.

The variation in the per cent of butter fat in the last named herd milk is from 3.5, the lowest in any one day, to 3.8, the highest. In the Jersey herd the variation in the herd milk is greatest, ranging from 4.4 to 5.4 per cent butter fat, on different days, while the Guernsey herd milk runs from 4.4 to 4.8 per cent.

The above refers to the mixed milk from the whole of each separate herd for the time named and does not in any way apply to the product of single animals.

The *Breeders' Gazette* gives the daily quantity of milk given by each cow, with per cent of butter fat, butter

credited to each cow daily, and the per cent of solids other than fat contained in the milk. We have not seen anything like so full an account of the dairy tests in any other paper. The tables given are valuable to all who are interested in dairying in any of its branches and afford a valuable object lesson in variations of quantity and quality of milk given by the same cow on different days, proof that a test of a few days only is not to be relied on as showing the true value of a cow in the dairy. That is a thing that requires time to prove, a whole season's milking, and, as many cows vary in the quantity of milk given from year to year, no cow that offers to do fairly well should be quickly condemned.

It is a well-known fact among breeders that cows, the produce of large milkers, are not always good for giving large quantities of milk, yet it is frequently the case that these cows, the inferiors of their dams in regard to quantity of milk given, will produce cows that are better milkers than any ever produced by their dams. Cases of this kind have frequently come under our observation, therefore we hold that there should be no hurried condemnation of young cows that have, through their dams, some claim to high-class dairy qualities, coupled with good breeding in every line of descent, not forgetting, however, the necessity of a perfect-shaped udder and a thrifty form of bodily appearance, the outcome of a sound and vigorous constitution, a *sine qua non* in all breeding cattle as well as those intended for the production of sound and health-giving milk.

The Guernsey and the Shorthorn breeds have had the misfortune to lose one cow each from their respective herds, though the worse luck falls to the lot of the Shorthorns, in that the cow which died did not live long enough after calving to make a test from which to take an average, according to the rules in force. Had she lived to make a ten-days' record of her milk she would have counted as one cow in the herd. The Guernsey cow died in the beginning of July, and had a record from the beginning of the test.

In regard to feed required by the respective breeds, we have the account of cost in the fifteen days of the cheese test, for the feed consumed, as follows: Shorthorns, \$99.36; Jerseys, \$98.14, and Guernseys, \$76.25. It will be seen that the last named have a great advantage in respect of cost of feed, but not enough to balance up for the larger quantity of butter made by the Jerseys.

The Guernsey cows have also the advantage of making the best colored butter, but as all the competitors use coloring matter, they thus lose the advantage they otherwise would have had, had the use of coloring matter been prohibited. As it is now, each breed is on an equality as regards points on color in judging the quality of the butter. In flavor the Shorthorns and Guernseys have the advantage over the Jerseys, the latter, however, gain more points in the "grain" and "solidity," so that the Jersey butter scores more points than that from either of the other herds.

Who Knows What's the Matter?

TO THE EDITOR:—I have a Jersey cow, which had her second calf about six months ago. She spent last year on my ranch inland, and gave a good quantity of milk of which the finest quality of butter was made. This season I have had her at the seaside, where she has seemed to do as well as usual, being in apparently excellent health, with good appetite. She has access to the purest water at all times. For two months she had natural pasturage with much wild oats in it, and during that time we often made butter in three to five minutes in one of Harrison & Dickson's rotary churns. Since then she has been fed on alfalfa and wild-oat hay, and the time taken to make butter increased in length from five minutes to an hour and a half; now it will not "come" at all. The milk to all appearance is such as she has always given, cream very thick, and whips with a Dover egg-beater, in two or three minutes, to a fine mass, apparently just ready to break into butter; but steady churning of three hours brings no other result. It will become thin after awhile, then thicken again; and change in this manner frequently. We have taken advice of experienced neighbors, tried all sorts of temperature, put salt in it, mixed it with other cows' milk, tried a dasher churn, churned it three hours one day and three more the next, churned it sweet and churned it sour; but the butter will not come.

A neighbor to whom we had given a quantity of the churned cream, when about to use it in cooking three days after, remarked its buttery appearance, and, putting it into her old-fashioned churn, brought a nice roll of butter in five minutes. Since then we have tried her churn, and she has tried our churn, but got no butter. Can any one tell us where the trouble lies? Our farmer friends are all non-plussed.

Long Beach, Cal., July 12, 1893.

The Performance of One Dairy Cow.

The dairy interests comprise one of the most important industries of Humboldt county. The business of improving stock and developing greater capabilities in higher production is attracting greater attention than ever before, says the *Rohnerville Home Journal*. The test system adopted by a number of our leading creameries is admitted to be the fairest and most exact method of determining the value of milk furnished, and as the creamery patron's returns are equally dependent upon the quality as well as the quantity of the milk he brings, it follows that the most profitable cow for him to have is the one that will produce the greatest amount of the richest milk.

Under the new order of things the tendency is to increase profits by "breeding out" the poorer members of a herd. The businesses of dairying and of raising beef cattle are becoming more widely separated. It is not our intention to enter into an extended discussion of the respective merits of the various breeds, but to cite as an illustration of the progress that has been made the wonderful performance of a Jersey cow—a breed that was not regarded with any espe-

cial favor by the majority of our dairymen six or seven years ago.

Mr. John Pollard of Coffee creek, who is the pioneer Jersey breeder of Humboldt county, has long made a specialty of the breed that is now coming into such great popularity, and he has a remarkably fine herd—one of the very best lots of Jerseys that can be found in California. The pride of his band is a five-year-old cow, a pure type of the perfect Jersey, whose wonderful record is given below:

On Monday evening she was milked and the milk weighed in the presence of a number of reliable witnesses, and the certified weight was 33 pounds. On Tuesday morning she was again milked before the same witnesses, and they attested to a weight of 28 pounds, making a total production of 61 pounds that day. This is the usual method of making similar tests in Eastern cattle exhibits. This milk was taken to the Eel river creamery with a lot of other samples, and subjected to the most careful tests. The amount of butter fat contained in the milk of this valuable cow was shown to be 5.2 per cent. The milk from Mr. Pollard's entire dairy averaged 4.3 per cent.

Placing the milk production of Mr. Pollard's prize cow at 58 pounds per day, at the present low price of butter (20 cents per pound), with the per cent of butter fat indicated above, she is bringing to her fortunate owner 75 cents per day, and increases her value in proportion.

It should be distinctly understood that the above record was not secured by any special feeding or pampering by way of preparation. The cow ran in the clover pasture with the rest of the herd, and did not receive any more care or attention than the remaining ones.

The Cow End of the Dairy Problem.

The following pertinent remark was recently made by Prof. I. P. Roberts, of Cornell University, before a Canadian audience:

Having spent many years in studying the problems of the dairy, I am led to the conclusion that our progress in dairying has been slow, because we began at the wrong end of the subject. For near a score of years we have been trying to improve the quality of our "goods" and have made some progress—perhaps raised the price of all cheese one-half cent per pound; but in that 20 years, 90 per cent of all cows have virtually remained at the old standard of production. Yet it would not have been half as difficult to have raised the total product of the butter fat of these cows 100 per cent as to have taught the people the right moment for "drawing the whey."

POULTRY YARD.

'Swelled Head' in Poultry.

The following communication is in response to a request for a remedy for "swelled head" from one of our subscribers. It was forwarded to Mr. Geoffroy for response:

TO THE EDITOR:—My apology for not having sooner replied to your communication is, first, that I have been in the hurry of a busy fruit season, for, believing that fruit and poultry raising go properly together, and each makes the other more profitable, I combine them; second, I have delayed in order to know somewhat more (of my own knowledge) of a remedy for "swelled head," as it is called by so many, strongly recommended me by friends who have found it so very effectual to cure that they fully believe in it and think that they are safe from the ravages of "swelled head" so long as they have a supply on hand. They do not, however, claim that it is "sure to cure" in all cases, for they say that no known remedy will do that, but that in eight cases out of ten it is "dead shot." A brother poultryman uses it and believes in it, considers it excellent beyond anything he has ever known, and says that it will cure radically even when the fowls' eyes have become closed up from the effect of the disease. I have sufficient testimony from others to induce me to recommend it without hesitation as a good and reliable cure for the expression of roup known as "swelled head," and do so.

The remedy, which is "Farmers' Healing Liniment," should be applied to the head and neck freely, holding the fowl by the legs, head downward, and being sure that it penetrates to the skin, so that the skin of the head and neck is thoroughly bathed with it, allowing it to run down. Bathe the eyes freely also. Sometimes one application, thoroughly made, is sufficient to effect a cure. If not, it should be repeated until no more is needed. The remedy which you quote from the *Poultry Keeper* I have tried, but without material success. Still, that should not condemn it, for no remedy can be a specific, as conditions are not always the same, and with remedies of recognized excellence one may cure where another has failed.

As I have said in a former article, fowls are subject to all or nearly all the ills that afflict humanity, and, like the human subject, require something more than mere airing when seriously ill. By many physicians, proper and careful nursing is considered as one-half the cure, and it is no less so with sick fowls or animals. It is just as requisite if you would see your remedies successful. Because a fowl is a small thing, and represents a relatively small value, it does not follow that it can be cured without proper care and treatment any more than can a valuable horse or cow. In all cases of any importance (for many times a single application of some simple remedy is all that is needed) the fowls should be placed in comfortable quarters by themselves where they will not be disturbed and worried by the others, and proper care had for their diet. I have, or rather had, a neighbor, the possessor of about one hundred head of nice, pure-blood fowls, and who, being an educated and able M. D., believed himself fully competent to meet and overcome any ills which might overtake his flock. He claimed that "swelled head" was an expression or symptom of diphtheria, finding that a microscopic examination of the throat and nasal passages exhibited all the conditions present in that disease. He testifies to the good effect

of Farmers' Healing Liniment in its treatment. This so-called liniment is not in fact a bona fide liniment, but more properly a germicide.

I might recommend a half-dozen others which have all been found good, but perhaps one is sufficient. I have, at times, immersed a fowl's head in coal oil, when affected in this way, and found it to cure. At other times a strong solution of salt in water has been sufficient, but I have fallen more or less into the way of killing the affected fowl and burying it. Two or three years ago I confined several well fowls with some dozen or so of fowls with swelled heads in all stages of the disease, and at the end of nearly two months, although several of the sick ones had died, the others remained apparently as healthy as when first put in with them. This experiment I repeated afterwards with nearly the same result, thus finding that the disease was not contagious, or at least that would seem to sufficiently warrant the conclusion.

Having at one time quite a number of "swelled heads" shut up in a house with a board floor, I sprinkled the floor plentifully with "Phenyle," a deodorizer, or disinfectant, composed of gas lime, carbolic acid and one other ingredient, the name of which does not now occur to me, and was somewhat disturbed on finding that the fowls were eating it. I was giving them no other treatment, and as they were rather a bad lot and as they showed no ill effect from eating it, I did not interfere with them and they continued to eat. All, with one or two exceptions, got well and were turned out with the other fowls; the moral of all which, I suppose, is that sometimes one remedy is sufficient to a cure, and at others something else is found to be required.

Prevention, where possible, is always better than cure, but where fowls are kept in numbers it is a very difficult matter to prevent the occurrence of disease, however careful and thorough one may be. Requisites are: Scrupulous cleanliness in all and everything, so that at no time may offensive odors be detected in or around their roosting places; clean, fresh water in clean vessels (not merely rinsed out and filled, but thoroughly cleaned from all slimy matter that clings to the sides and bottoms of the drinking vessels); no sour or semi-putrified food, but good, clean, healthy food, whether grain, meat, or vegetables. Let them have free access to broken charcoal, and see that they are supplied with shells, and green stuff of some kind chopped and mixed with their feed, or in separate boxes. I do not find that my fowls care for sand (coarse) or fine gravel, if plentifully supplied with shells, as they appear to neglect them for the shells. Finally, avoid dosing your fowls to keep them healthy, or to make them lay. Keep them in good condition by feeding regularly and with judgment, and keeping everything clean connected with them.

T. B. GEFFROY.

Lodi, July 27, 1893.

Poultry Notes.

Hens should always be free from lice before being permitted to set.—Western Rural.

None appreciate and show the result of good care so much as poultry, both old and young.

A wide range on fresh green grass is what poultry love above all things, but if that is impossible, cut some fresh grass or clover every day for their benefit.

The comb of the fowl is its health barometer. When the comb is a bright red, and filled with blood, the fowl is well. When it becomes pale and looks whitish, the fowl is out of condition. If it turns dark at the end, the trouble will generally be found connected with the respiratory organs; if the fowl is choking with food or the trachea is filling with canker, the comb will be black.

Selection is the grand watchword of the breeder of all species of domestic animals. The unmethodical and half-unconscious selection practiced by the masses of farmers and even semi-civilized hunters and herdsman during ages has modified all kinds of live-stock wonderfully. But selection as applied intelligently and methodically by the skillful breeder brings quicker and more certain returns. Poultry World.

Whole sound wheat is of course preferable when one can afford it; if not, chickens gladly accept screenings, and there is nothing they are fonder of than wheat bran. They like it dry, moistened with water or skim-milk, or as a principal ingredient of all soft foods. They should have it, too. There is nothing cheaper or more wholesome for them; but whatever else we give our charges, by all means let them have plenty of green food.—Practical Farmer.

One good way to teach hens to eat eggs is to throw into the fowl yards the empty and uncrushed shells of eggs from the kitchen. The fowls devour these voraciously, and thus get a taste for this kind of thing. A better way is to throw such shells into the ash-heap, or else to crush them up so fine that they will not be recognizable among the chickens. Hens will not get this habit if allowed free range. It is only when they are stived up in close quarters, with nothing for idle beaks to do, that they learn to eat eggs.—Poultry World.

Give the Fowls Fresh Water.

Arrange your work so, now that the hot days are upon us, that you can give the fowls fresh water twice a day. You will be surprised to see how eagerly they drink of it. They do not fancy water that has been standing in the drinking vessel in the sun or that has become stale any more than a person would.

Do not neglect them during the hot summer months, and do not forget that they need shade. I have in my mind's eye a young man who started out to make a living with poultry. He had excellent success in hatching, but when it came to care, the stock died right and left. I saw that young man swinging in a hammock during hot weather, while his chicks and fowls were out in the hot sun with not the least means of shelter, and with not a drop of fresh water. After the water vessels were filled he would not re-

plenish them until they were empty, and the poor fowls were compelled to slake their thirst with stagnant water. Did he succeed? Not a bit of it. And yet to-day he is not slow in trying to prove that there is nothing but risk in keeping poultry.—Germantown Telegraph.

Killing the Lice.

Although we have frequently given remedies for the destruction of lice, several of our readers have written us, and we believe that during the warm season a few hints will not be out of place. We give the following rules:

1. To destroy the red mites on little chicks, dust the chicks well with insect powder. Dust the hen also, as lice go from the hen to the chicks. For the large gray lice, rub a few drops of melted lard on the heads and throats; but do not use kerosene. Very little oil or lard should be used, as grease is injurious to chicks.

2. To destroy lice on fowls, provide a dust-bath. Also dip each hen in soapsuds, rubbing the feathers well; dip them so as to immerse their heads and bodies well, and do not rinse them. Add a gill of crude carbolic acid to a bucketful of suds, and have the suds strong. Do this on a clear day, so that the hens will dry quickly.

3. Saturate the poultry-house with kerosene—roosts, floor, walls, under the roof, and do not miss a crack or crevice. Spray it in, or use a watering-pot. The kerosene emulsion is also excellent. Keep the poultry-house clean, and remove the droppings daily during the summer. Repeat the work once a week, or as often as may be necessary.—Poultry Keeper.

Tobacco for Gapes.

Colonel F. J. Curtis writes to the *Rural New Yorker* that he has cured all his chickens of the gapes by making them inhale tobacco smoke. He says: "The treatment has done them no harm, and the trouble of smoking is but little, if it is done when they are in the coop. It takes but a moment to put them in a basket, and five minutes is as long as they should be subjected to the inhalation of smoke, and not so long if it is strong enough to produce stupor. As soon as a chick is stupefied, it should be taken from the basket and laid on the ground, when it will revive. Our chickens were nearly dead with the gapes when first treated, but got better with each treatment, and were cured after the seventh."

If it is necessary to repeat the above treatment seven times, we should think it quite troublesome. Our own plan is much easier, and so far, has proved very efficacious. Catch each little sufferer, and when he opens his little bill by way of protest, drop a lump of camphor as large as can be swallowed with ease. When the disease had been allowed to run we were obliged to repeat the dose.—Poultry Keeper.

Changes in the General Game Law.

Attorney Deering of the Fish and Game Commissioners, in answer to a question relative to the changes which have been made in the general game law of California by the supervisors of the interior counties, gave the following list of alterations in the open seasons, which will prove decidedly interesting to sportsmen in general:

Under the general law of the State the killing of game and the catching of fish are allowed only during the following seasons, viz.: Deer from September 1 to October 15; quail from September 1 to March 1; doves from August 1 to March 1; ducks from September 1 to March 1; trout, from April 1 to Nov. 1.

The above open seasons have, however, been changed in some of the counties by local ordinances, and in such counties the local law prevails. The counties which have up to the present made changes in the general law are as follows:

Deer—August 15 to October 1, Colusa; July 1 to December 15, Humboldt; July 15 to September 1, Los Angeles; July 15 to August 15, Marin; September 15 to December 1, Nevada; July 15 to September 1, San Mateo; July 15 to November 1, Shasta; September 1 to November 15, Siskiyou; July 22 to September 4, Sonoma; July 15 to October 15, Tehama; July 15 to September 15, Ventura; August 15 to October 1, Glenn.

Although the supervisors of the above counties made the foregoing changes in the general deer law, yet, owing to the lateness in advertising, the seasons will not open in Marin county until July 24, in San Mateo county until July 25, in Shasta county until August 1, and in Los Angeles county until July 29.

Quail—September 10 to March 1, Humboldt; October 1 to February 1, Marin; August 1 to March 1, Napa; October 1 to March 1, Nevada; September 15 to March 1, Placer; September 15 to March 1, San Mateo; September 1 to February 1, Siskiyou; October 1 to March 1, Yuba; October 1 to March 15, El Dorado.

Doves—July 1 to March 1, Colusa; June 15 to March 1, Contra Costa; June 1 to January 1, Humboldt; August 1 to January 1, Marin; July 1 to March 1, Monterey; July 1 to March 1, Nevada; July 1 to January 1, Placer; July 25 to December 1, San Mateo; June 25 to January 1, Shasta; July 15 to January 1, Sutter; July 1 to January 1, Tehama; July 1 to March 1, Yuba.

Duck—Attorney Deering said that very few changes have been made in the State laws by the county boards and they are as follows: Monterey, from August 1 to March 1; San Diego, September 1 to May 15; Yuba, September 15 to March 15.

In Ventura county the shooting of quail, doves and wild ducks for market is prohibited at all seasons.

In Yuba the hunting and trapping of pheasants is prohibited, and in Glenn county the killing of Mongolian pheasants and fishing for black bass is prohibited.

It was stated that the Supervisors of Mendocino county had ordained at a recent meeting that it will be unlawful to shoot deer in Mendocino county until July, 1895. This report has not yet been verified, however.

WORLD'S FAIR.

California at the Fair.

NUMBER III.

Large as the exhibit in the State building is, it is by no means all that California has to show at the fair. We pass into the Horticultural building and find that four large spaces within have the banners of the Golden State above them. One of these is in the northeast corner of the building. Here the Southern California Association has a pavilion of all kinds of fruit and nuts in large glass globes, besides home-made jellies and preserves. There is a handsome pyramid of almonds in fancy boxes from Butte and Solano counties, a bank of dried fruits from Los Angeles county, an assortment of dried and processed fruit, nuts and vegetables from Santa Clara county. The enormous onions, cucumbers, potatoes and tomatoes in the latter exhibit are marvels to Eastern people. J. C. Joplin, who lives in a canyon near Santa Ana, shows the "boss" cauliflower of the exposition, so far as I have seen. Bishop & Co., of Los Angeles, have an attractive pagoda of crystallized fruit. San Diego county has built a raisin-house in her corner, and shows a pyramid of jellies and boxes of dried fruit.

Passing from this room into the long greenhouse that leads to the next division of the building, we come across a collection of cacti, shown by the women of San Diego county.

In the room that we enter, California has the first place, going south, and challenges admiring attention with her orange tower, 35 feet tall, reaching almost to the roof. A box of navel oranges was offered to the person who should guess the nearest to the exact number of oranges used in making this tower, and was won by a Yankee and a woman, who guessed within one of the number, which was 13,873. Terraced tables are covered with oranges and lemons in fair condition, and with jars of processed fruit.

Walking through the spaces devoted to Iowa, Michigan, Illinois and New York, where plates of apples and fresh berries form the principle exhibit, we come to another California display. A table 22x52 feet in dimensions is covered with oranges and lemons, arranged in landscape-gardening style on a dark-green felt background, as we see them at the State Fairs. The fruit is from San Bernardino, Los Angeles and San Diego counties.

In the center is the old Liberty bell, in oranges, and every one stops to look at it with twofold interest. Riverside county has a table along the wall on one side, covered with citrus fruit, and on the other side is Frank Kimball's display of olive oil and pickled olives; also, a small lot of Elwood Cooper's olive oil, and oranges and lemons from Orange county.

The citrus fruit would not be considered fit to show at one of our home fairs, but only Californians criticize it unfavorably. The general effect is good, and people seem to realize that fruit cannot be sent so far and kept so long without showing blemishes. Doors lead from this room to an inner court which is occupied by orange and lemon orchards composed of young trees shipped from California, some of them showing both blossoms and fruit upon them. They are surrounded by cypress hedges, and rose bushes and semi-tropical lawn plants fill the available spaces in the court.

The wine exhibit is in the southwest corner of the building—an extensive display. The most conspicuous feature of this is a facsimile of one of the giant sequoias in Mendocino county. Strips of the bark were brought here and put together, so as to look like the base of the real tree, which is 30 feet in diameter and 295 feet tall. The bark extends to a height of 40 or more feet and is lined with boards, making a good-sized room, in which are the exhibits of Arpad Haraszthy & Co., C. Carpy & Co. and J. Gundlach & Co., of Napa Valley. A winding staircase within the tree leads to the gallery, and many persons think it is fun to take the trip up. The Stanford vineyard has a handsome booth. One of the immense tanks of the Sonoma county vineyards is shown. Alameda county has elegant showcases filled with bottles of wine.

Stern & Sons, L. J. Rose & Co. and the German Fruit Co. are well represented. Paul O. Burns, of San Jose, makes a large display, and there are many other exhibitors. The State Viticultural Society shows vines growing in the soil, with different ways of grafting and training; also a library of viticultural books and photographs of vineyards and fine grape clusters.

So far, so good; but where are the fresh fruits and vegetables that California ought to be shipping to this building almost daily? Shall the public be left to infer that there is little or nothing of the kind being produced in the State at this season? There will never again in the present century be such a chance as this to convince people from all points of the compass that almost every fruit and vegetable product is successfully raised in our great State, and that the productive season is not for just a few months in the year. I wish that from now until the close of the Exposition shipments in this line might be made sufficiently often for the tables to never become bare or discreditable in appearance. Mr. Wells, superintendent of the horticultural exhibit, is greatly disappointed by the failure of promised shipments to arrive, and says that, no matter what the cost, such an exhibit must be maintained in order to keep up the reputation of the State.

Before leaving the Horticultural building, it may interest you to know what Florida has in it. There is an arch of "Florida Golden Russets, the most delicious orange ever grown," and surely they are more russet than golden. A cocoanut palm tree, bearing nuts, is an object of much interest. The State made no appropriation, so there is little else to see but some guava jelly and cans of peeled oranges put up by the ladies of Florida, "in sugar and water, after the Mudge canning process." CLARA S. BROWN, Chicago, July 25, 1893.

THE HOME CIRCLE.

In a Garden.

I know of a garden far away
Where thrushes in the laurels sing;
Where hyacinths stand stiff and gay
And daffodils in clusters swing.
But in this dim town-plot of mine,
With sooty houses hemmed about,
There are no flowers fair and fine
To shake their shining petals out.
Yet here and there athwart the sun
Some bright leaf glitters like a gem;
And there is one bud, only one—
A tight bud on a slender stem.
A tiny treasured mystery
Which by and by will be a rose;
And every day I watch to see
Its tiny silken thread unclose.
On rainy days and windy days,
It seems so frail and soft and small,
I almost wonder as I gaze
If it will ever blow at all.
But there will come at last, I think,
A dawn when I shall wake to see
An open blossom, sweet and pink,
Where my one bud was wont to be.
—Frances Wynne.

That Little Prayer.

The fire upon the hearth is low,
And there is stillness everywhere;
Like troubled spirits here and there
The firelight shadows fluttering go,
And as the shadows round me creep,
A childish treble breaks the gloom,
And softly from a further room
Comes, "Now I lay me down to sleep."
And, somehow, with that little prayer
And that sweet treble in my ears,
My thoughts go back to distant years,
And linger with a dear one there;
And, as I hear the child's amen,
My mother's faith comes back to me;
Crouched at her side I seem to be,
And mother holds my hand again.
Oh, for an hour in that dear place!
Oh, for the peace of that dear time!
Oh, for that childish trust sublime!
Oh, for a glimpse of mother's face!
Yet, as the shadows round me creep,
I do not seem so be alone;
Sweet magic of that trembling tone,
And "Now I lay me down to sleep!"
—Eugene Field.

The Terrible Warrior Ants.

It was in Honduras, near the Caribbean coast, while on a Government survey, that I first saw the warrior ants, says a writer in *Yankee Blade*. One intensely hot day, as I sat idly swinging in a hammock under the roof of my bamboo hut, a native came running in, and with excited gesture beckoned me follow him. I did so wonderingly, and, on going out into the open air, looked in the direction he indicated. There, on the rolling savanna, stretched a wide, black belt, extending far back into the deep shadows of the adjacent forest. It rose and fell with every formation of the ground, and, like a huge snake, slowly crept toward the village. "The warrior ants," explained the native, in a strange patois of English and Spanish, which I shall not attempt to imitate. "They will soon be here," he continued; "you had better untie your dogs or the ants will kill them." Acting upon his advice, I loosened my dogs, and, retiring to a safe distance, watched the approach of the warriors. In countless multitudes they swarmed over the plain, marching in compact order like a well-drilled army. Before them scurried a heterogeneous mass of lizards, grasshoppers, frogs, beetles and all other manner of insects and reptiles, in a wild scamper to escape to a place of safety. Presently the advance guard reached my hut and disappeared within, then the main column appeared, and soon the roof, floor, walls and rafters were black with them. Like the soft rustle of dried grass stirred by a gentle breeze came the sound of their presence in the leaves of my thatched roof. The sound increased in loudness as the rats, mice, lizards, cockroaches, centipedes and others of their like, who had long made the roof their home, tried vainly to escape. Some succeeded in getting away from the house, but only to fall victims to the surrounding hordes without. The most exciting battle was with a snake about three feet long that tried to slip away unseen. The ants quickly surrounded him, however, and fought with terrific ferocity. With every switch of his tail the snake killed a score of his tormentors, but their places were soon filled from the black swarm which swept unceasingly on. Finally the writhings of the snake became fainter and fainter,

and at last ceased entirely, and then, and not until then, did the ants relinquish their attack.

All day long they marched through the house, until at sundown the end of the column had passed and was lost to view in the thickness of the forest.

I entered my house and prepared to survey ruefully my larder, but my anticipations of sorrow were premature, for there were all my provisions as I had left them—untouched.

I afterward learned that the warrior ants refuse to touch any food that they themselves have not caught and slain, which accounted for my provisions remaining unmolested.

I was overjoyed at the change in my house—not a cockroach, lizard or any other insect or reptile was left; they had been completely exterminated.

My second experience with warrior ants was not attended with such pleasant results, as you shall see.

I had been hunting all day in the vast forest with fairly good luck, but as dusk approached I found that in my enthusiasm I had wandered from the trail and that I was practically lost.

Dreading the possibility of having to remain all night in the forest without my pablo (mosquito net), I looked around for a point of vantage from which to survey the surrounding country and get my bearings. Selecting a large cabbage palm tree whose top towered high above the others, I removed my heavy hunting boots and started on my upward journey. The smooth surface of the tree rendered it difficult climbing. When about half way up I slipped and fell to the ground, a distance of about thirty feet.

Fortunately the earth beneath me was soft and spongy, and I escaped without being injured internally.

I tried to rise, but the sharp thrill of exquisite agony which shot through my left leg made it impossible. I had broken my leg, and the unpleasant fact that I was helpless and must lie there all night stared me in the face.

My ultimate rescue troubled me but little, for I knew it was a question of a comparatively short time before my absence from the village would be discovered and a search party sent out.

The long hours dragged along and the mosquitoes bit me unmercifully.

Finally the sun rose, and with the day came a strong sea breeze, which swept my persecutors, the mosquitoes, far inland.

Listlessly I glanced about me, and as I did so my eyes fell upon what seemed to be a large green blanket that I had noticed before, about forty feet away.

I lazily speculated as to what it was, when presently a tremor ran through it and it appeared to move.

On it came toward me across the open, slowly dragging over the uneven ground as though impelled by some invisible force.

Suddenly the truth flashed upon my mind—it was the advance guard of an army of warrior ants, and the tiny green leaves composing the moving mass were each carried by one of them.

My heart sank within me as I remembered the fate of the snake and thought of my helpless condition. Fascinated, I watched their preparations for the onslaught. The green mass stopped. The ants had discovered the presence of an enemy in their path.

Messengers had been sent to the rear, and soon the main body appeared; they marched as I had seen them before—in a compact column about six feet wide and extending as far back as the eye could reach. On they came, closer and closer.

Suddenly I felt a shooting pain in my feet like the puncture of a red-hot needle, then another, and in an instant my body was covered with the ferocious insects. They penetrated deep into my quivering flesh. They doubled themselves up and clung to me with bulldog tenacity—hundreds I killed, but thousands remained to take their places.

Maddened with pain I shrieked aloud and screamed like a hurt child. Thank heaven! Answering cries were heard and a party of natives burst through the bush.

They took in the situation at a glance, and, rushing in among the ants, picked me up and bore me away from my terrible assailants.

A Lucky Accident.

One of the greatest discoveries ever made was the result of the purest accident. It was the year 1796. The citizens of Munich had just witnessed the first triumphant performance of Mozart's opera, "Don Juan," and the theater was deserted by all save one man, Alois Sennefelder, who, after making a round of inspection in the building to see that no sparks had ignited anything combus-

tible, retired to his room to stamp the tickets of admission for the day following.

When he entered his apartments he had three things in his hand—a polished whetstone, which he had purchased for sharpening razors, a ticket stamp, still moistened with printing ink, and a check on the treasurer of the theater for his weekly salary.

As he placed the latter upon the table, a gust of wind swept it high up in his room, and then deposited it in a basin filled with water. Sennefelder dried the wet paper as well as he could, and then weighted it down with the whetstone, upon which he had before carelessly placed the printing-stamp.

When he returned to his room the following morning, he was astonished at seeing the letters printed with remarkable accuracy upon the dampened paper. A thought came to him. He wondered whether, by some such means, he could not simplify his work of continually copying the songs of the chorus. He went out and purchased a large stone, commenced making experiments, and, as we all know, finally discovered the art of printing from stone—lithography.

Spanish and Mexican Nomenclature.

Adonde (ah-don-day), where to.
Alameda (ah-lah-may-dah), shaded walk.
Aliso (al-ee-so), alder bush.
Arroyo (ar-ro-yo), a wash made by water.
Azusa (ah-soo-sah), provocation, annoyance.
Ballona (bai-yo-nah), low ground, estuary.
Bella Vista (bail-yah-vees-tah), pretty view.
Buenaventura (b'wain-ah-vain-tu-ra-h), good fortune.
Buena Vista (b'wain-ah-vees-tah), good view.
Cajon (cah-hone), a big box.
Canyon or Cañon (can-yone), deep ravine.
Casa Grande (cah-sah-gran-day), big house.
Cerrillos (sair-ee-l-yose), small round hills.
Chino (che-no), a Chinese.
Cienega (se-ain-e-pa), a swamp.
Colorado (co-lo-rah-do), red.
Coronado (co-ro-nah-do), the crowned.
Del Mar (dail-mar), of the sea.
El Dorado (ail-do-rah-do), the golden.
El Monte (ail-mon-tay), the wood.
El Paso (ail-pah-so), the pass.
Encinitas (ain-say-ne-tas), little oaks.
Fresno (frais-no), ash tree.
Gaviota (gah-ve-o-tah), sea gull.
Goleta (go-lay-tah), a schooner.
Hermosillo (air-mo-seel-yo), little beauty.
Indio (een-de-o), Indian.
La Jolla (la-hoe-yah), the cave.
Las Animas (lahs-ah-ne-mas), the souls.
La Cañada (lah-can-yah-dah), the glen.
Las Casilas (lahs-cah-s-tas), little houses.
Laguna (lah-goo-nah), a lake.
Las Flores (lahs-flo-rais), the flowers.
Los Angeles—Nuestra Señora Reina de Los Angeles—The angels.

To Avoid Colds.

"There are two very simple ways of avoiding pain and colds," said Henry McIntosh, who is at the Southern. "One of these is to shut your eyes and the other is to shut your mouth. The man who comes out of an over-heated room, especially late at night, and breathes through his mouth, will either catch a bad cold or irritate his lungs sufficiently to cause considerable annoyance and unpleasantness. If he will just keep his mouth shut and breathe through his nose, this difficulty and danger are entirely avoided. Nine chills out of every ten are the result of people talking freely while out of doors just after leaving a room full of hot air, and theater-goers who discuss and laugh over the play on their way home are inviting sickness.

"It is just the same with regard to shutting the eyes. Every man who travels a long distance gets dust or something worse in his eye occasionally, and proceeds to take every one's advice to get it out, sometimes rubbing it, and sometimes pulling one lid over the other. The next time you get a speck of dust or metal in your eye just shut it and keep it shut for over a minute. Nature will then come to your relief, and there will

be enough tear-like moisture to get rid of the obstruction, which will be found in one of the corners when the eye is finally opened. The worse of these two prescriptions is that they are entirely too simple. Mankind loves martyrdom in connection with medicine or surgery."—St. Louis Republic.

An Amusing Pastime.

At a party the other evening a rather odd and interesting amusement was indulged in. The hostess provided pencils and very long strips of paper. At the top of the strip some one drew a little sketch; this was passed on to the next person, who wrote at a little distance underneath it as clear a description as possible, then folded the paper over so as to conceal the drawing and passed it on again. The one who received it read the description and passed the paper on as before.

The paper went the rounds of the dozen or fifteen guests, and the comparison between the first and last pictures and the descriptions thereof, were amusing in the extreme.

Such exercises may be made to teach very useful lessons. They show, for one thing, that no two people agree in their estimates of facts. A few evenings of this sort in a community might have important results if any of those who indulge in the practice were ever called upon the witness-stand. It would teach them what many people could never learn any other way, that there is nothing so uncertain in this world as being perfectly sure of a thing. — New York Ledger.

"A Little Angel."

A writer on Paraguay's customs describes the funeral of a little child in that country as anything but a gloomy affair. Of such a funeral procession the following account is given:

They were all women and girls, not a man among them, so it could not be a wedding—some with babies in their arms, others with children trotting at their sides, the little boys wearing ponchos, the women and girls dressed after the Paraguayan fashion of skirt and camisole, everyone barefooted and with a black shawl or square of white cotton draped over the head. They advanced with laughter and gaiety, almost on a gentle run, and the young woman who led the cortege carried on her head a little coffin enveloped with linen embroidery edged with nanduti lace, and strewn with fresh red roses. It was an angelito, a "little angel," and therefore no cause for sadness, for throughout all Spanish America the death of a child is considered rather a matter for rejoicing. So, while the bells clattered more merrily than ever, the joyous group passed the turnstile, traversed the cloister of the church and halted beside a shallow hole.

The Speaking Voice.

Too little attention is paid to the matter of cultivating the voice in children. A writer in the *Chatauquan* says: Perhaps because speaking is so easy, explains why we fail in it. So little effort is required that we seem to do very little, and yet how much lies in that word fitly spoken! The tones of some voices say with us always. They seem to weave a spell about us, from whose thralldom we could not escape. Summon aid from your retinue of vocal workmen when you speak; use only the necessary parts of the vocal apparatus, and not every muscle of the throat, and so save yourself from becoming a victim of that dread complaint "clergyman's sore throat," which is the natural result of overstrained throat muscles. All these ills can be avoided by opening the way from the diaphragm to the lips, keeping it free from obstacles and hindrances. A little wholesome thought, and the matter of plain and pleasant talking is a solved problem.

A Cattle Dealer's Speech.

"Ladies and gentlemen," said a Carnoustie butcher who had been called on to speak at a kirk soiree, "I dinna ken what gar'd the chairman ca' on me to speak. The fac' is I've naething to speak aboot. Ye needna

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder
ABSOLUTELY PURE

laugh; it's as fac's ocht. Ye ken brawly that I'm juist a flesher an' cattle dealer, and there's naething i' my head but beasts frae mornin' to nicht." That was his concluding sentence; the laughter of the audience drove him into his seat.—N. B. Agriculturist.

Gems.

Words are but pictures of our thoughts.—Dryden.

If wrong our hearts, our heads are right in vain.—Young.

In all things it is better to hope than to despair.—Goethe.

A fig for your bill of fare; show me your bill of company.—Swift.

To give pain is the tyranny; to make happy, the true empire of beauty.—Steele.

He is the freeman whom the truth makes free, and all are slaves beside.—Cowper.

Choose rather to punish your appetites than to be punished by them.—Tyrionus Maxims.

Woman is a charming creature who changes her heart as easily as her gloves.—Balzac.

If you wish for anything which belongs to another you lose that which is your own.—Epictetus.

The most infamous are fond of fame; and those who fear not guilty, yet start at shame.—Churchill.

We attract hearts by the qualities we display; we retain them by the qualities we possess.—Suard.

Millions of spiritual creatures walk the earth unseen, both when we sleep and when we wake.—Milton.

A man's own good breeding is the best security against other people's ill-manners.—Lord Chesterfield.

The heart of a loving woman is a golden sanctuary, where often there reigns an idol of clay.—Limayrac.

No profit grows where there is no pleasure taken; in brief, sir, study what you most affect.—Shakespeare.

A woman would be in despair if nature had formed her as fashion makes her appear.—Mlle. de Lespinasse.

Though we travel the world over to find the beautiful, we must carry it with us or we find it not.—Proverb.

Women complain of the lack of virtue in men, and do not esteem those who are too strictly virtuous.—Blondel.

The art of conversation consists less in showing one's own wit than in giving opportunity for the display of the wit of others.—La Bruyere.

Riches are for spending, and spending for honor and good actions; therefore extraordinary expenses must be limited by the worth of the occasion.—Bacon.

It is astonishing how soon the whole conscience begins to unravel if a single stitch drops; one little sin indulged makes a hole you could put your head through.—Charles Buxton.

How Do the Newsboys Manage?

The names of the Russian newspapers are noted for their brevity and the ease with which English-speaking people may pronounce them. Here are a few specimens: *Wjedomosty Gradonastalskaja Olonstakaja Gubernskaja, Pskeffsky Gorodskoi Listok, Jakuterinoslawsky Listok, Wastotshuioje Objaafienij Estlandskaja Gubernsk Wjedomosty*. The tongue of the newsboy, which is seemingly capable of pronouncing almost everything unintelligible, would certainly require a great deal of twisting to shout the names and latest editions of these papers. Among the various periodicals all over the world there are papers devoted to no less than 82 separate and distinct trades, while of class papers and those devoted to religious dogmas, creeds and scientific theories there are 253 distinct groups. It is an interesting fact, quite worthy of mention, that newspapers of the United States are printed in more languages than those of any other country, no less than 21 being used at the present time. In Austria-Hungary 16 languages are used. In India 16, Russia 10, Germany 4. The five principal languages used in the world's newspapers in the order of their importance are English, German, French, Spanish and Italian.—Providence Journal.

A Little Dutch Girl and Her Wonderful Scissors.

More than two hundred years ago a little girl was born at Amsterdam, in Holland, who was named Joanne Koerten. After she had become very accomplished in music, spinning and embroidery she abandoned all these for a still more extraordinary art—that of cutting. One is seized with astonishment in looking at her work, for all that the engraver accomplishes with the graver she effected with her scissors.

She executed landscapes, marine views, flowers, animals and portraits of people of

such striking resemblance that she was for a time quite the wonder of Europe. She used white papers for her cuttings, placing them over a black surface so that the minute openings made by her scissors formed the light and shade.

The Czar, Peter the Great, and others of high rank paid her honor. A great many people went to see her, and she kept a book in which princes and princesses wrote their names. Her cuttings were so correct in effect and so tasteful as to give both dignity and value to her work, and constitute her an artist whose exquisite skill with scissors has never before nor since been equaled.—Wide Awake.

Mr. Edison Hates a Telephone.

"What makes you work?" I asked with real curiosity. "What impels you to this constant, tireless struggle? You have shown that you care comparatively nothing for the money it makes and you have no particular enthusiasm in the attending fame."

"I like it," he answered, after a moment of puzzled expression, and then he repeated his reply several times as if mine was a proposition that had not occurred to him before. "I like it. I don't know any other reason. You know some people like to collect stamps. Anything I have begun is always on my mind, and I am not easy while away from it until it is finished. And then I hate it."

"Hate it?" I asked, struck by his emphatic tones.

"Yes," he affirmed, "when it is all done and is a success, I can't bear the sight of it. I haven't used a telephone in ten years, and would go out of my way any day to miss an incandescent light."—From C. D. Lanier's sketch of Thomas A. Edison.

Here's To That Girl's Health.

A girl in a Maine village, who made her home with her aunt, was often disturbed by evidences of the old lady's indifference to everything but the welfare of her own material possessions. On day, in going down cellar for some butter, she tripped and fell heavily quite a distance. The maiden aunt rushed to the door, and peering down into the darkness called out sharply:

"D'y'e break the dish?"

"No!" thundered back the niece, for once thoroughly aroused, "No! but I will!" and she shivered it with hearty good will against the cellar-wall.

It is believed that the old lady was so shocked by this dramatic exhibition of malice that she took to her bed and kept it for a week.—Lewiston Journal.

DOMESTIC ECONOMY.

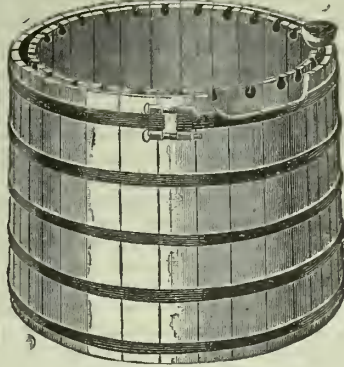
BROILED FINNAN HADDIE.—Split them down the back and dip in boiling water two or three times; then dry thoroughly on a cloth. Broil over a clear fire, flesh side down at first, turning occasionally to keep from burning, but the skin side only wants to brown. It needs to cook on the flesh side. When done, pour over one tablespoonful of melted butter mixed with a teaspoonful of lemon juice; season and serve.

LEMON PIE.—Mix one quarter of a cup of soft cracker crumbs with one tablespoonful of melted butter; add one cup of finely-chopped apples, the juice of two lemons and the rind of one. Then mix with two cups of granulated sugar, stirring until it is nearly dissolved. Beat the yolks of two eggs until light. Beat the whites to a stiff, dry froth, then mix the whites and yolks together. Stir the eggs into the other ingredients, mix well, turn into a pie plate, using only an under crust, and bake for 25 minutes in a moderate oven.

PUREE OF PEAS.—Boil one pint of fresh, tender green peas in one pint of water for 20 minutes. Add one quart of white stock, a young onion, sliced, one slice of carrot, a bay leaf and a sprig of parsley. Let the soup simmer for 20 minutes, or until the peas are very soft. Take from the fire, press through a sieve, season with salt and pepper, and return to the saucepan; stir until thoroughly heated, let it just come to a boil, add one cup of cream and serve at once.

CREAMED POTATOES.—This dish is best prepared from new potatoes, but others can be used. If new, rub off the skins but do not scrape; if old, peel them before cooking. Cook quickly in boiling water. Have ready a pint of sweet cream and milk, mixed. Put in a spider or Scotch bowl, and when it comes to a boil add one spoonful of flour, mixed well with two spoonfuls of butter, and with cold milk stir one minute; drain the water from the potatoes and salt them; remove to a hot tureen and pour cream sauce over them.

Patent Non-Shrinking Water Tanks.



WILL NOT LEAK OR DRY OUT.

THE BEST TANK NOW MANUFACTURED.

EVERY ONE GUARANTEED and cost no more than Common Tanks.

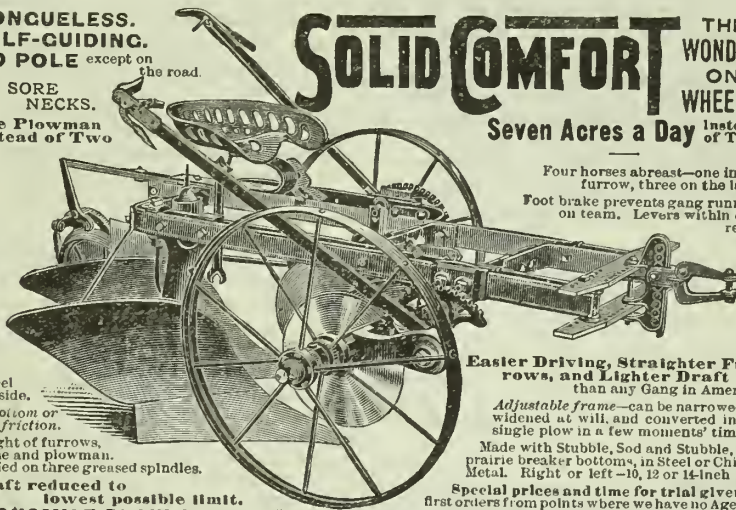
IF YOUR DEALER DOES NOT KEEP THEM, buy no other kind.

WRITE FOR ILLUSTRATED CATALOGUE AND PRICES.

W. E. HAMPTON,

SOLE OWNER OF PATENT AND MANUFACTURER.....27 BEALE ST, SAN FRANCISCO, CAL.

TONGUELESS. SELF-GUIDING. NO POLE except on the road.
NO SORE NECKS.
One Plowman instead of Two



SOLID COMFORT THE WONDER ON WHEELS.
Seven Acres a Day Instead of Two.

Four horses abreast—one in the furrow, three on the land. Foot brake prevents gang running on team. Levers within easy reach.

Easier Driving, Straighter Furrows, and Lighter Draft than any Gang in America.

Adjustable frame—can be narrowed or widened at will, and converted into a single plow in a few moments' time.

Made with Stubble, Sod and Stubble, and prairie breaker bottoms, in Steel or Chilled Metal. Right or left—10, 12 or 14-inch cut.

Special prices and time for trial given on first orders from points where we have no Agents.

ECONOMIST PLOW CO., So. Bend, Ind., or Stanton, Thompson & Co., Sacramento.
Our book—"Fun on the Farm"—sent free to all.

A SUBSTITUTE

Advantages of this Paper for a Drying Surface.

ABSOLUTELY ODORLESS.

WATER, ACID AND ALKALI PROOF.

WILL IMPART NO TASTE NOR ODOR TO FRUIT.

CHEAP AND DURABLE.

ITS BRILLIANT BLACK SURFACE, which absorbs the heat, drying both sides of fruit at the same time, and rendering the labor of turning unnecessary.



FOR TRAYS!

Unequaled for

DRYING GRAPES.

Write for

SAMPLES AND CIRCULAR.

Paraffine Paint Co.

116 Battery St.
SAN FRANCISCO.

PROTECT YOUR TREES

— WITH —

GILMAN'S TULE TREE PROTECTOR.

Cheapest, Best and Only One to Protect Trees and Vines from Frost, Sunburn, Rabbits, Squirrels, Borers and Other Tree Pests.

For Testimonials from Parties who are using them send for Descriptive Circulars.

B. F. GILMAN,

Sole Manufacturer of Patent Tule Covers,

420 NINTH ST., SAN FRANCISCO, CAL.



GRANGERS' BUSINESS ASSOCIATION, SHIPPING AND COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.

Full Cargoes of Wheat furnished Shippers at short Notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

A. M. BELT, Assistant Manager.

PATRONS OF HUSBANDRY.

From Mr Ohleyer.

TO THE EDITOR:—"I take up my pen to let you know that we are all well and in the hope that these few lines may find you and yours enjoying the same blessing."

Such as the above, dear and patient editor, is the height of our ambition these piping times of peace, of short crops, of short coin, of short prices and of short credits. I know just enough of editorial work to know how to sympathize with the man upon whom depends the next appearance of his journal, so far as the literature is concerned, the mechanical part being always in order.

Everybody can take a day off except the managing editor. We find them, the people, at the springs, the seashore, at the mountain retreats, at the annual conventions or at Chicago. Be it hot or cold, no change excuses the editor from his post of duty, and when his paper partakes somewhat of the growing surroundings, we just tell him, at least in our mind, that we'll stop the paper if he can't do better.

Of course present company is excepted, for the RURAL grows better and brighter every issue, notwithstanding the above-narrated shorts; and it does this in the absence of its many talented contributors at the various resorts or those yet deeply engaged in the harvest fields under a burning sun.

The cereal crops in Sutter and surrounding counties was never better in quality, thanks to the continued cool weather during the growing and ripening season. But the quantity is very short, the best-informed placing the grand total at not to exceed one-third of an average. This, in connection with the low price of one cent a pound, renders farming anything but cheerful.

Fruit is a better crop, but the money to handle it is timid and reserved, which leaves a heavy load on the minds of producers. But they have the hot sun left them, which offers to convert the entire crop into first-class dried fruit free of charge except to have it exposed to its rays. It will then keep or bear shipping to the "ends of the earth."

That was a timely "special" on "Fruit-Drying" in the RURAL, when this treatment seemed to be about the only escape.

Once or twice during the spring I referred to the undrained condition of the country and the consequent injury to crops. In a great majority of our seasons, drouths are more dreaded than too much rain, which is doubtless the reason of the absence of efforts at draining the uplands. The loss, however, from standing water during the past three years has been so great that people begin to agitate for a system of drainage.

Flat or valley lands, though porous and friable, need to be prepared to receive such a rainfall as we had last December, when something like 12 inches fell inside of a week. In nearly every section there is sufficient fall toward the running streams and lakes, but the course of the flow is interrupted by the undulating surface which requires adjusting to the general grade of the country to furnish the relief. Universal co-operation would bring relief without law, but this seems impractical; hence meetings have been held, the subjects discussed, existing laws examined and found inappropriate and a committee selected whose duty is to prepare a drainage act to be passed by the next legislature. Meantime, we shall have to plow and sow and suffer until we get legislation or more light on the subject. Some two or three months ago I noticed in a letter to the Grange Department from a correspondent in the upper San Joaquin valley where the subject of tile drainage was discussed in the grange. I have seen nothing further on the subject; but why not? It is a matter that affects grangers more than anybody, and might be agitated at their meetings, if anywhere. And it is just possible that tile drainage would not only answer the purpose, but be the very thing to relieve the country of surplus water.

The great black swamp that used to be in northwest Ohio has been largely reclaimed by tile drainage, and I am creditably informed that there is less face to the country than there is in our California valleys. I will only add that, from personal observations, I am convinced that there is scarcely a farmer in the Sacramento valley whose loss for want of proper drainage the past season is equal or more than equal to any possible expense of a drainage system that would give relief and last forever.

In the absence of any general movement by the sufferers, let us use the grange as a vehicle of thought and action.

GEORGE OHLEYER.

Yuba City, July 30, 1893.

From Pescadero Grange.

TO THE EDITOR:—At the present season it seems to be quiet all along the grange line. Pescadero must needs echo that sentiment also. We do not have our usual number present at the regular meetings, owing, no doubt, to the pressure of work. This is much to be regretted, as we have been listening to some very instructive addresses from our W. M., I. C. Steele, on the silver question. We have all agreed to let Congress settle the matter when it meets, which is certainly a wise and happy conclusion to reach. Another thing we have agreed to do is to watch the actions of the men whom we have appointed to rule over us, and try to discover the demagogues, if any there be in crowded official life. We have concluded that a true patriot will see the necessity of a steady currency, and will advocate such measures as will bring it about with as much dispatch as possible.

While we are quiet within the gates, perhaps a glimpse of our little town, where most every family has a representative granger, would not be amiss in these columns. Most every stranger coming to Pescadero is disappointed in two respects. They expect a larger town and expect that town to lie nearer the ocean. Now, the truth is the town is very small and the dairy ranches surrounding it are separately of great extent and consequently sparsely populated. The important Pebble Beach is two good miles from Pescadero. To get there one travels over a toilsome grade, but on returning is fully repaid, not only in beautiful stones, which many have mounted in jewelry, but in a picturesque view of Pescadero as it lies nestled among the hills. First of interest to us among the white buildings is the hall where the grangers meet. Next in order is the large, new creamery, the property of some of our grange brethren. Two good hotels are also visible, one decidedly unique in appearance, being a collection of cosy cottages surrounded by a sweet country garden. This hotel takes the name of its popular proprietress, Mrs. Swanton, and is called the Swanton house. Three stage lines, one from Santa Cruz, one from Redwood City and one from San Mateo, supply these hotels through the summer with people seeking health and pleasure. Three neat churches, a fine, large schoolhouse, two stores of general merchandise, two blacksmiths and several well-kept livery stables complete the list of our public or industrial buildings. The private houses are mostly white, and the grounds about them abound in flowers. It is a place where one can dream one's life away and where time scarce makes his mark. If one of our members dies or moves away, we see a new face come to fill the gap; for we are all necessary to one another, and when we lose one worker must look abroad for another. Such is our town now, such was it years ago, and such it is likely to be for many years to come. M. A. M.

July 25, 1893.

Grange Institute at Elk Grove.

TO THE EDITOR:—The Farmers' Institute meeting held at Elk Grove, Saturday, July 30th, under the auspices of Sacramento Pomona Grange, was very entertaining and instructive to those present.

The grangers of Sacramento and neighboring towns gathered en masse in the morning. Two degrees were given a class of two. A session of Pomona Grange was held, and at noon a delicious and abundant feast of chicken pie, ice cream, cakes, fruit, etc., was kindly served to 160 persons.

Although the day was warm and the hall "full to overflowing," the babies, little ones and all thoroughly enjoyed the occasion.

The program began with a vocal solo, by Miss Wilcox, of Sacramento Grange, which was rendered with taste and feeling.

An essay, upon the disasters attending the demonetization of silver, written by Dr. Caples, of Elk Grove Grange, was, in his absence, read by Miss McConnell and it excited much interest and provoked some argument and also resolutions upon the subject, to be forwarded to our Congressmen.

A vocal solo, by Mr. Wm. Shennar, was sung in fine voice and was well received.

Mr. E. W. Davis, Master of the State Grange, delivered an address, in his usual fluent and highly entertaining style, touching "hard times" and other current topics of the day.

A violin and piano duet, Schubert's beautiful "Serenade," was given with effect by the Misses Green, of Sacramento.

Col. Philo Hersey, of San Jose, spoke at length, and with much interest to fruit-growers, of the origin, development and success of the West Side Fruit Growers' Association, of Santa Clara valley, which is a co-operative union for disposing of dried fruits.

The address was full of instruction and was listened to with marked attention.

The famous "Peak Sisters," under the chaperonage of Mrs. Jones, of Sacramento, gave one of their unique and humorous entertainments, and caused much merriment.

The exercises closed with a vocal solo by Miss Lulu Rich, of Sacramento, which was well sung and much appreciated.

The audience greatly regretted that Prof. Hilgard, who was expected to address the meeting upon "Fertilization as Applied to Fruit Culture," was unavoidably absent.

ANNA MCCONNELL.

From Live Oak.

TO THE EDITOR:—North Butte Grange has been reposing for the last month owing to the busy season, and at our last meeting only about 20 members were present—a small number compared with our membership. Bro. Frisbie and wife were with us, and he gave words of encouragement to all.

Harvest is almost over in the surrounding vicinity, for it was only on an average compared with other years. The yield varied on different farms from 6 to 14 sacks to the acre, but some farmers had only a small number of acres in, so the general opinion is if prices are as short as crops a great many will indeed suffer before another harvest rolls around.

The work of packing fruit has been going on quite lively during the last two weeks, the pack being mostly of the early variety of peaches, which are sent to the Eastern markets. A great deal of this year's yield will be dried owing to the large quantity of fruit throughout the State and the low prices paid by Eastern dealers.

Through the columns of the PRESS I see that Petaluma Grange is working faithfully to make the next session of the State Grange a pleasant, instructive and interesting one. I hope a goodly number of our grange will be present. I heartily agree with the correspondent who objects to too much walking around, and I think a great many others would like to see the subject brought up in regard to shortening the initiatory ceremonies. E. M. B.

Live Oak, July 24, 1893

Protection for Home Boys.

At a regular meeting of Stockton Grange the following preamble and resolutions were unanimously adopted, and the secretary instructed to send a copy to the RURAL PRESS for publication:

WHEREAS, There is no class of citizens in our country that has a deeper interest in the welfare and prosperity of our commonwealth than the farmers; and

Whereas, To secure the best interest and future prosperity and happiness of our country, the American youth must have the fullest opportunity for learning and following without hindrance any useful, honest calling, trade or occupation whatsoever; and

Whereas, It seems to us a self-evident proposition that all American boys should have every opportunity and encouragement to become skilled artificers and workmen in all mechanical or other arts in which American skill and inventive genius have held a proud pre-eminence in the past; and

Whereas, It appears that the great combination of trade and labor unions in our country, composed of a great majority of persons of foreign birth, have arbitrarily and for selfish ends opposed, and to a great extent have prevented, American boys from learning useful trades and occupations; therefore

Resolved, by Stockton Grange, No. 70, P. of H., That any organization or body of men whatsoever that prevents or opposes the fullest opportunity and encouragement of our American boys from learning any useful, honest, lucrative trade, occupation or calling is dangerous to our country, and deserves the universal condemnation of all good citizens of the republic.

Resolved, That we invite our fellow-citizens of all occupations and professions to unite in opposing and preventing the further perpetrating of this great wrong upon our energetic and enterprising boys and young men, upon whom rest the hope, prosperity and greatness of our nation.

N. T. ROOT, Sec'y Stockton Grange.

From Vacaville.

TO THE EDITOR:—Vaca Valley Grange held a regular meeting July 22d. The weather being warm and grangers very busy, there had been no meeting for a month, so the attendance was not large. The meeting was a live one. After attending to various business, under the head of good of the order, a strong, live speech from a sister, on monopoly and farmer's co-operation, was frequently applauded. Discussion followed by different members. From another, the advantage of working together. Members gave their views of hard times, the cause and remedy. All was very interesting, and those members who were not present will not know what they missed. Action was taken in favor of the road convention. On account of all being so busy it was thought best to hold the next meeting the second Saturday in September.

A MEMBER ALWAYS PRESENT.

Vacaville, July 29th.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

Livermore Herald: Mr. Martin Mendenhall informs us that from a field of 34 acres he obtained 1004 sacks of common barley, averaging 118 pounds to the sack, in all 118,472 pounds, or a little over 59 tons. He had another piece of 30 acres sowed to common barley that averaged 29 sacks to the acre, or 870 sacks in all. From 25 acres he obtained 625 sacks of Chevalier barley, averaging 132 pounds each, or 82,500 pounds in all.

Butte.

Palermo Progress: The Palermo Fruit Company is shipping daily over 100 boxes of peaches. The fruit is from two-year-old trees. Next year, if favorable, there will be an immense number of boxes from this orchard.

Oroville Register: Surveyor McCoy has an observing eye—for lsdies as well as for lands, by the way—and while out surveying the Pentz ranch a short time ago he saw where slickens from the famous Cherokee or Spring Valley mine had filled a part of Saw Mill ravine to a depth of fully 100 feet. On top of the vast bed of detritus and far from any water was growing alfalfa as green, vigorous and thrifty as on the richest and best watered river bottom in the State. McCoy is convinced that the great mass of debris covering the present bed of Dry creek will in time become valuable land for growing alfalfa, though it, to the eye, now presents a bare, bleak, white waste of sand and slickens.

Oroville Register: Careful estimates in raising hogs show that for each 20 pounds of green alfalfa one pound of pork can be produced. On the river bottoms about the Central House and Gridley, in this county, and on almost any of our irrigated lands, ten tons of alfalfa hay can be produced per acre. This equals 20,000 pounds of green alfalfa, making no allowance whatever for the quantity lost in curing the hay. Twenty pounds of alfalfa to a pound of pork gives 1000 pounds of pork per acre, and at the low price of three cents per pound the farmer receives \$30 an acre for his alfalfa fed to hogs. When the price of pork is five or six cents a pound it will be seen that the profits are much larger.

Fresno.

Expositor: Last week experienced a boom in watermelon shipments to San Francisco and Sacramento. Fifteen thousand of these colicky viands found their way from the sunny plains of this valley into the market of the metropolis and a corresponding number of people were made happy, not to speak of the doctors.

Expositor: I. L. Grainger reports that the vineyards about six miles west of the city are being again attacked by the tobacco worm, and that the vineyardists are fighting the pest with a full force of men. He met a wagon load of Chinamen going out to be used in assisting in the war against the invaders. It was thought that the second crop of worms had been killed by the warm weather, but it would seem from the report of Mr. Grainger that such is not the case.

Humboldt.

Western Watchman, July 22: The harvest of early cherries is about over in Hydesville and vicinity, but for several weeks the later varieties will be ripening, beginning with the Black Tartarian, which is now ready for the market.

Kern.

Delano Courier: Spangler Brothers have rented 25,000 acres of land near Lerdo, and next season will crop the same to grain. The land is below the canals and is certain of yielding a good crop.

Californian: The number of fruit trees growing in this county, as per the Assessor's data, is as follows:

Variety.	Number Trees.
Apple.....	25,275
Apricot.....	106,645
Cherry.....	3,000
Fig.....	21,155
Peach.....	91,745
Pear.....	39,400
Prune (French).....	70,518
Prune (other kinds).....	16,980
Lemon.....	1,050
Orange.....	4,500
Almond.....	16,435
Walnut.....	4,760
Total.....	400,443

Mendocino.

Republican-Press: The recent public sale of 40 head of horses resulted in an average of about \$50 per head.

Dispatch-Democrat: A Dispatch-Democrat reporter interviewed several prominent hop-growers in the valley this week. All are confident that the yield will be nearly if not quite as large as usual this season. The late warm weather has caused a rapid growth, and some samples brought in are quite well developed.

Orange.

Santa Ana Blade: About 75,000 sacks of barley have thus far been thrashed on the San Joaquin ranch. Five thrashing machines, with a daily capacity each of 1200 sacks, are in full blast, and they will be reinforced shortly by three more.

Santa Ana Blade: Quail are reported as being plentiful this year. Hundreds of this toothsome bird were no doubt killed last year by eating some of the poisoned wheat that was used in exterminating the squirrels, but their thin ranks have multiplied to such an extent that some fine sport is expected this year when the season opens.

Santa Ana Blade: Some idea of the value of the honey crop of Orange county may be arrived at when it is known that F. P. Nickey,

of this city, has manufactured 4500 sixty-pound cans for the reception of the crop tributary to Santa Ana. This means 270,000 pounds, or 135 tons. Careful estimates put the honey crop of the entire county at 200 tons, although it may be greatly in excess of this. At the average price of six cents per pound the bees of this county have, during the past season, produced \$24,000 worth of sweetness.

San Bernardino.

Chino *Champion*, July 29: Another beet harvest has commenced. The work of gathering and delivering the third crop on the ranch is in full swing. For the past two weeks everything has been gotten in readiness to deliver the beets rapidly, so that the hauling commenced yesterday so smoothly that one would hardly have known that any extra work was going on. The first load of beets was delivered at six o'clock yesterday morning by W. C. Rightmeyer. The work commenced very gradually, and 112 tons were delivered during the day. A much larger tonnage will be put in to-day. The beets going in are mostly large, fine-looking and clean, and are turning out a good tonnage per acre.

Anaheim *Gazette*: Mr. Gillison had some tests of beets made at Chino last Friday, from which we have been permitted to take the following results: His own beets, which were yet green and consequently not up to their normal saccharine qualities, were found to possess 10.6 per cent saccharine and to be of 72 per cent purity; A. Brusky's beets went 13.7 per cent saccharine and 80 purity; S. S. Ball's, 11.6 saccharine and 75 purity; J. B. Cameron's, 14.5 saccharine and 82 purity; and Mr. Koerner's, 14.7 saccharine and 81 purity. The two latter were beets that came nearest maturity, but at the height of their perfection will yield even larger returns in sugar and coefficient of purity. Mr. Call's beets, like Mr. Gillison's, were green, and were simply analyzed to show what might be expected of them later on. Mr. Brusky's beets show up well in sugar, but are not yet thoroughly ripe, and are good for about 15 or 16 per cent when matured. This is the first beet assay this year, and is altogether most satisfactory.

Santa Barbara.

Lompoc *Record*: The bean and potato crop in and around Santa Maria and Gnadalupe is large, there being many hundred acres planted, and the late fogs are bringing the crops out in good shape.

Santa Barbara *Press*: The bean crop never looked better in Santa Barbara and Ventura counties than at the present time. They are the two counties which produce the bulk of the Lima beans raised in this State. The old crop is nearly all on the market, so that farmers will be reasonably sure of a fair price. In Ventura county, we learn from Captain D. W. Thompson, himself one of the heaviest growers, that there were only 7400 sacks of Lima beans in the warehouses along the railroad and at Hueneme a short time ago, and probably not so many now. Everything points to a prosperous year for the farmer, which means prosperity all along the line.

Santa Clara.

Campbell Cor. *Mercury*, July 28: Fruit is beginning to ripen more rapidly, and the drier presents a bnsy appearance. There were about 75 pitters to-day, and this force will be largely increased before the week is ended. The canery has not begun work yet, but Mr. Ainsby expects to start Thursday with a full force of hands.

Gilroy *Advocate*: People living in the irrigation districts of the State should see the wonderful productions of Old Gilroy, where no flowing water has been used to give life to vegetation. Beets, watermelons, corn, pumpkins and every kind of vegetable comes to perfection there without irrigation and with very little cultivation.

Solano.

Republican: There are 175 persons employed at present in A. T. Hatch's orchard, of whom 70 are Japanese.

Republican: L. B. Abernathie will place 20,000 Drake seedling buds upon his almond roots this fall. For many years Mr. Abernathie has been a strong advocate of the above industry, and still pins his faith to it, notwithstanding the failure of the crop this year. He has 95 acres of almonds.

Dixon *Tribune*: Harvest is now nearly over and a couple of weeks will see most of the machines laid up for the season. The summer-fallowed grain on the highlands turned out remarkably well, 18 sacks to the acre being nothing uncommon, although 14 would be nearer the average. The winter-sown averaged less than ordinary seasons. What brings the average of the county so low is the fact that at least 20 square miles in the center of the county, which usually produces a good crop, yielded almost nothing this year.

Sonoma.

Democrat: The grape crop still promises well, although there is some blight and mildew from the heat and north winds of a week ago.

Santa Rosa *Democrat*: The pumpkin crop in this part of the county is almost a complete failure. In some instances the farmers will hardly get their seed back.

Democrat: The sheep-raisers are not selling any of their spring clip of wool, and prices at present show no upward tendency. A good feature about the situation is that the lambs and early mutton were sold at good enough prices to enable the raisers to hold on to their wool for an advance in the market.

Republican: H. L. Lindolf, of Peachland, has brought a splendid sample of hops to this office. He says that he has as fine a prospect this year as ever he had, and certainly the sample left bears out the assertion. He has

already been offered 20 cents for his crop, but he refused to contract at that price. He said hops would be a splendid crop this year, all reports to the contrary notwithstanding.

Republican: Henry Ottenheimer, the hop-burner, says that the hops of Sonoma and Mendocino counties have been injured a good deal by the winds from the northwest. There will not be so large an average yield as there was last year, but he says the increased acreage will bring the aggregate product up to that of last year. Of the quality he could not speak, for he said it was too early yet. He seemed to be of the opinion that the hop-growers would come as near being "in it" as any of the producers of Sonoma county this year.

Democrat: The outlook for the hop crop in Sonoma is very favorable. There has been a lack of the usual fogs, but there seems to be no lack of moisture in the regular tradewind; the conditions which condense the moisture into fog are absent. There has not been more than four or five overcast mornings this season, which is very unusual. The condition of the fruit crop is good and the prospects for running canneries is much better than last week. Our bankers have been doing all in their power to supply the funds required for the work, and there is every reason to think they will be successful.

Bennett Valley Cor. *Democrat*: The agricultural outlook has not improved the past week. Several of the vineyardists have discovered symptoms of mildew and have been scattering sulphur very freely, in the hope that they will soon destroy the grape blight. There is no better remedy for mildew than an abundant dose of sulphur properly administered. The fruit tree men are anxiously wondering what is to become of their fruits. There has been a little inquiry for plums, especially for the Hungarian, which is almost the best for Eastern shipment. Prunes are doing nicely but have blighted some. During the past ten days quite a goodly percentage of the prunes have fallen from the trees; still there will be a pretty fair yield of prunes for this year. Harvesting is well nigh completed. James T. Burgess has the largest crop of grain in the valley.

Shasta.

Register: A. B. Stevens beat the Shasta county record with his thrasher at the ranch of Dick Owens. The machine thrashed 1211 sacks of oats, wheat and barley and moved five times. Mr. Owens says the job was a clean one, too.

Tehama.

Red Bluff *Cause*: Andy Johnson, a number of years ago, stuck a fig cutting into the ground at his home nine miles west of Red Bluff. No attention was ever paid to the cutting afterward; it was left to itself either to live or to die. It concluded to live, and to-day it is a wonder. It is now about 20 years old, is about 50 feet in height and covers a space, with its bushy limbs, of about a hundred feet. The limbs grow up from the ground and form such a thick network of twigs that no animal can get through them. This leads Mr. Johnson to believe that the fig tree might be made to serve as a hedge fence. The tree referred to is the black California fig. It is filled with fruit, probably having a ton on it.

Tulare.

Times: George F. Beales declares that he is going to raise three crops of potatoes this season on the Cain fruit ranch.

Times: It is estimated there are 200 tons of green prunes on the Briggs orchard this year. At one cent a pound, \$4000 will be paid the owners.

Porterville *Enterprise*: E. B. Prettyman brought us a potato last Friday which had a sprout attached to it measuring ten feet. Mr. Prettyman says he found it in the cellar of his store.

Times: Sixty or seventy tons of peaches will be gathered from the Fleming fruit farm on the Broder place east of town. The trees are not yet three years old. There are about 100 acres of peach trees.

Times: The first ripe grapes to be announced from Tulare county ripened on Tom Davis' place in Antelope valley. On the 16th he picked the first ripe Muscats of the season. The thermal belt along the foothills is several days ahead of the valley in the ripening of all varieties of fruit.

Porterville *Enterprise*: A corps of surveyors passed through here last week for the purpose of exploring the headwaters of North Tule, to ascertain if there are any feasible reservoir sites in that region and also to find out the cost of fluming water down to the valley for the purpose of irrigation.

Times: C. Hausch sowed, last winter, two sacks of Mt. Whitney wheat. After it came up pretty well, he let his hogs eat it down close to the ground in the spring and then turned them out. The grain sprouted from the roots again and a heavy crop was the result. He harvested 43 sacks and then lost about half of it besides, from the fact that his harvester wasted it badly.

Yolo.

Winters fruit-growers are drying the greater portion of their peach crop.

Rumsey Cor. *Democrat*: The grape growers are preparing to dry their grapes. There will be a very heavy yield on all the vines in this neighborhood. Mr. Morrin and one or two others will give the work to residents of this place.

Davilsville Cor. *Democrat*: A sample of Mediterranean wheat was placed in my hands to-day by James Campbell. The heads are almost jet black, and a field of such grain would certainly present a most singular appearance to those not accustomed to it. Mr. Campbell started with 11 kernels two years ago, and the

present season will gather something over a gallon.

Grafton Cor. *Democrat*: The farmers along the river are only planting buckwheat. This is a peculiar crop. To get a good crop it is necessary to plant late, and to do this the farmers sometimes have to plow twice before planting, to keep the ground in good condition.

Woodland *Democrat*: J. R. Jones is farming 80 acres of land near Brown's Corners. The crop this year was barley, and, before he started to harvest it, a number of people estimated the yield. The highest figures were those of Lane Dnnan, whose estimate was 60 hnsbels to the acre. Mr. Jones finished cutting the barley last week and the yield was 2805 sacks, or an average of 35 sacks to the acre. The sacks weigh three pounds over two bushels, so that the yield is 72 bushels to the acre. The barley was sown on an old clover field, and, while harvesting the crop, Mr. Jones also obtained nine sacks, or 500 pounds of clover seed.

Yuba.

Marysville *Appeal*: J. Ross Trayner informed our reporter recently that the Sntter Fruit Co. had shipped East, up to date, 39 carloads of fruit. Of that amount 16 carloads were shipped during the month of June and 23 during the month of July. The largest fruit shipment ever made from this section of the country will be done this year.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

JOHN LYNCH, Petaluma. Breeder of Thoroughbred Shorthorns. Young Stock for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collin, r.

PETER SAXE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

O. BLOM, St. Helena. Brown Leghorns a specialty.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

JOHN McFARLING, Calistoga, Cal. Importer and Breeder of Choice Poultry. Send for Circular. Thoroughbred Berkshire Pigs.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

O. H. DWINELLE, Fulton, Sonoma Co., Cal. Shropshire and Crossbred Shropshire-Merino Rams for sale.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

R. H. CRANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

SWINE.

H. J. PHILPOTT, Niles, Cal., Importer and breeder of Tecumseh and other choice strains of Registered Poland-China Hogs.

J. E. ALSFORD, Woodside, San Mateo Co. Breeder of Berkshire Hogs and Toulouse Geese.

P. H. MURPHY, Perkins, Sac. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, Low Prices.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.



A BARGAIN!
Two 3-year-old Imported Shire Mares in foal. Also Imported English Coach Stallion. Address W. W. RUSHMORE, Importer and Breeder of Draft and Coach Stallions. P. O. Box 86, Stable, Broadway and 32d St., Oakland, Cal.



—THE—
HALSTED INCUBATOR
COMPANY,
1312 Myrtle Street, Oakland, Cal.
Send Stamp for Circular.

MECHAM & FRITSON,

Importers & Breeders of Red Polled Cattle.

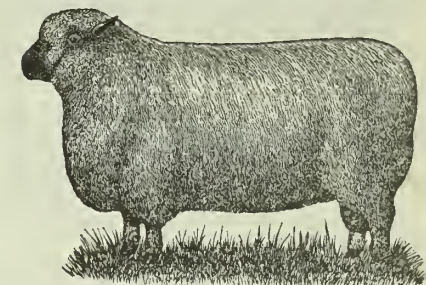
We have 200 head of Full Bloods and Crossbreds on Devons, Bulls and Heifers for sale. Address communications regarding Cattle to MECHAM & FRITSON, Petaluma, Cal.



MECHAM & HINKLE,

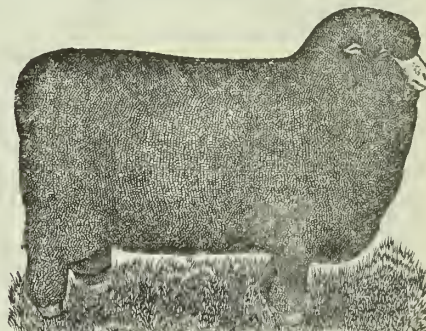
Importers & Breeders of Shropshire Sheep.

The flock was imported or bred direct from imported stock. The Shropshire excels all mutton breeds for a cross on the merino—giving more wool and mutton than that from any other breed. Pure and Crossbred Rams and Ewes for sale. Direct inquiries regarding Shropshires to MECHAM & HINKLE, Petaluma, Cal.



H. MECHAM,

Breeder of American Merino Sheep Without Horns. The only flock in the United States. When we bought our sheep East 24 years ago, among them was a ram without horns. He grew to be a fine large sheep, shearing at 2 years old, a 12-month's fleece, 35 lbs. of long white wool.



I have bred from him and his get ever since and have never made an out-cross and never used the same ram but one year on the same flock. My rams at two years old weigh from 180 to 190 lbs., have a strong constitution, without wrinkles, and will shear on an average about 25 lbs., a 12-month's fleece, of long white wool. Rams and Ewes for sale. P. O. Address Stony Point, Sonoma Co., Cal. R. R. Station, Petaluma.



OXFORD DOWN SHEEP FOR THE PACIFIC COAST.

W. A. SHAFER, Middletown, Ohio,
Largest American Importer of
O. D. Sheep.

Is prepared to quote prices on the best stock of Oxford Down Sheep to be had in England. Parties wanting first-class stock should write for particulars and induce their neighbors to join them. Import will arrive about August 1st. Write at once.

Short-Horn BULLS

Calves, Yearlings and 2-year-olds

FOR SALE.

ROBERT ASHBURNER,
Baden Station, San Mateo County, Cal.
Only three-fourths mile from the terminus of
the S. F. and San Mateo Electric Road.

PACIFIC RURAL PRESS!
Is the Largest Illustrated and Leading Agricultural and Horticultural Weekly of the West. Established 1870. Trial Subscriptions, 50c for 5 mos. or \$2.40 a year (till further notice). DEWEY PUBLISHING CO., 320 Market Street, San Francisco.

THE CALIFORNIA STATE FAIR

Of 1893 will be held at SACRAMENTO,
SEPTEMBER 4th to 16th :::::::::: TWO WEEKS.

\$20,000 IN CASH PREMIUMS \$20,000
FOR CALIFORNIA PRODUCTIONS.

FARMERS AND HORTICULTURISTS!
As well as MECHANICS AND ARTISANS!

Should make preparation to exhibit at THE ANNUAL FAIR as the opportunity is specially given to show CALIFORNIA'S CAPABILITIES.

INVITE INVESTMENT of capital by showing the products of your section.

INQUIRIES AS TO LOCALITIES are being constantly made. We reply by sending reports of exhibits, which speak for themselves.

OBJECT LESSONS are valuable, and when written upon and their description heralded, they become a standing advertisement.

SHOW WHAT YOUR COUNTY can produce, and capital will flow in the direction thereof.

LANDS HAVE BEEN IMPROVED by the hundreds of acres in tree and vine planting through capital attracted by exhibits made at the State Fair.

MECHANICAL PLANTS HAVE BEEN ENLARGED by means of extra capital attracted by exhibits made at the State Fair.

THE STATE FAIR is the stimulating agent of progression.

THE STATE FAIR is the medium that brings the two electrical currents—labor and capital—together each year.

THE STATE FAIR aids all classes. It is the recreation ground of the farmer, the school of information for the breeder, the point of observation for the mechanic, and the period of investigation for capital.

FAILURE TO EXHIBIT is an acknowledgment of weakness.

KEEP YOUR PRODUCTIONS before the people, and the people will always keep your locality in view.

THE USUAL EXTRA ATTRACTIONS for entertainment of visitors at the State Fair of 1893 will be furnished in keeping with the occasion, that exhibitors may benefit thereby.

Information furnished upon application to the Secretary, at Sacramento. Send at once for premium lists.

JOHN BOGGS, President.

EDWIN F. SMITH, Secretary.



No. 542.

"MAUDS"

Double Axle.

WE HAVE AN OVERSTOCK
OF THE

Regular and Pneumatic Tire Sulkies,
And for a Limited Time Will Sell for Less
Than Actual Cost.

NANCY HANKS
Record 2:04

TROTTED THE FASTEST mile on record when hitched to a Sulky with Ball Bearing, Pneumatic Tired Wheels. We can furnish you with a No. 2 1/4 Nancy Hanks Sulky with Pneumatic Tired Ball Bearing Wheels. This price includes the regular Sulky wheels as well and either style may be used. We solicit your order. Remember we give you the regular wheels in addition to the Pneumatic Tired Wheels. So you have two sets of wheels with each Sulky.

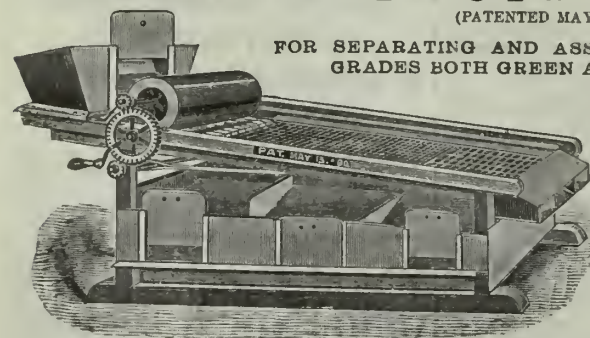
WRITE FOR PRICES.

Truman, Hooker & Co.
SAN FRANCISCO and FRESNO.

HAMILTON FRUIT GRADER.

(PATENTED MAY 13, 1890.)

FOR SEPARATING AND ASSORTING IN DIFFERENT GRADES BOTH GREEN AND DRIED FRUITS.



It is Simple, Durable and Efficient.

It has become the leading Fruit Grader of California. Col. Hervey has ordered three of these Fruit Graders this season. Send for catalogue and testimonials.

—A VARIETY OF—

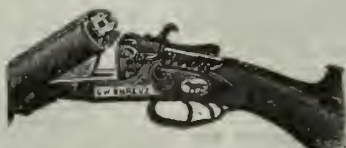
Fruit Cars, Transfer Cars, Turntables and Dipping Baskets
ALWAYS ON HAND.

MANUFACTURED AND FOR SALE BY

W. C. HAMILTON,

SAN JOSE.....CALIFORNIA.

Send for Price Lists
OF GUNS
And all Articles used
by Hunters and
Anglers.



GUNS SENT ON
TRIAL.

OLD GUNS TAKEN
IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.

HERCULES.

STEEL AND IRON.

The Best Windmill for Deep or Shallow Wells.

CENTRAL ACTING

DOUBLE BEARING

Warranted to run with less oil than any other Windmill.

HERCULES.
R. F. WILSON, STOCKTON, CAL.

AUTOMATIC OIL BEARINGS.

THIRTY DAYS' TRIAL, IF DESIRED.

Deep Well Pumps, All Brass Cylinder Pumps.

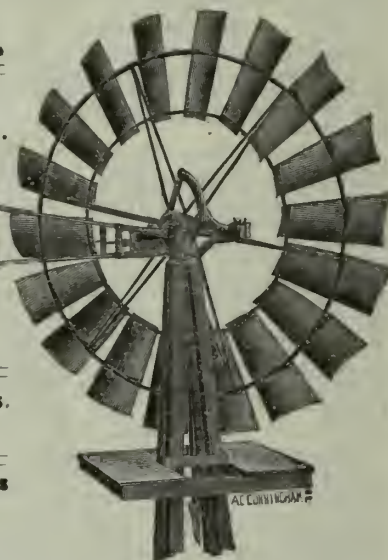
PRICES ARE LOW—Save money by DEALING DIRECT WITH THE MANUFACTURER.

Improved Davis, San Joaquin and Hercules Windmills, Pumps, Etc.

Patent Non-Shrinkable Redwood Tanks.

Write for Prices.

R. F. WILSON, WORKS, COR. MAIN & OTTER STS., STOCKTON, CAL.



ARE YOU A

Hay Baler? If so, do you use our Patent

Steel Wire **CROSS HEAD** Bale Ties?

IF NOT, WHY NOT?



—MADE ONLY BY—

THE WASHBURN & MOEN MFG. CO.

San Francisco Office and Warehouse

8 and 10 Pine Street.

ONLY 25 YEARS OLD
AND A GIANT!

THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.



Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.

S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, August 2, 1893.

During the week the wheat market has been forced into an unparalleled condition of uncertainty, weakness and depression, and prices at Chicago have reached a point never before known. In San Francisco, since a record of transactions has been kept, there is but one season when a lower figure was attained—\$1.05 per cental in 1869-70. The markets of the world have been going steadily from bad to worse for a number of weeks, and within the past six days the downward tendency culminated in complete demoralization. Cash wheat in San Francisco reached \$1.09 3/4 for new and \$1.10 per cental for shipping Monday, a decline of 8 cents in the past two weeks and 16 cents in two months. In Chicago the break was even more marked and extraordinary. Monday, No. 2 cash wheat was quoted at 54 1/2 to 54 3/4 cents per bushel, representing a decline during the summer of about 20 cents. There was a time when September wheat sold between 80 and 90 cents, with every apparent inducement for an advance.

This mournful condition of the grain trade has not been brought about by natural and legitimate conditions. It is largely due to the financial stringency—the "hard times" of the world. The laws of supply and demand have utterly failed to avail in the present crisis, and have, to all practical purposes, been totally suspended. The shortage in this year's crop of the world is now a matter of absolute knowledge. It is great and irreparable. It calls for an advance over present wheat figures of at least 20 cents per cental. Speculative markets are badly broken. It is absolutely impossible for grain-buyers to borrow money without paying fabulous rates of interest. The carrying charges have been advanced to an unprecedented figure. Rates of exchange are large. The financial world, in short, is in a state of paralysis, vitally affecting every branch of trade and all business men, mechanics, laborers and producers. Grain dealers who have attempted to pay the usurious charges of money-lenders have been compelled to recoup by buying the wheat at a figure which promises a profit, when sold, even under enormous tolls. That is to say, heavy usury has been demanded of buyers and dealers, and they in turn have forced wheat down low that they may be able to meet these requirements and still realize something when they sell. The producer suffers most, for in the long run he is obliged to bear the burden that illegitimate speculation has imposed upon the grain trade.

The direct effect of this abnormal condition of things has been a sheer decline in Chicago of 10 1/2 cents per bushel and in San Francisco of 6 cents per cental for new in one week. The loss to growers of the United States has been prodigious. The scenes in the Chicago Board of Trade on Saturday and Monday have been equaled only on a few previous occasions—in times of panic and extraordinary financial agitation. The San Francisco market has declined in sympathy with the downward movement in the East. There has really been little trade of any kind on the Produce Exchange. The scenes on the Chicago Board, Monday, are thus described in a press dispatch:

"The crowd knew a further serious break was due before the bell tapped for trade to begin, and curb was off to 60 3/4c. At opening, it seemed as though everybody had wheat to sell, and there was not a bid either in the light of a compliment to the market or as a 'feeler.' People with orders to sell found no outlet, and the market was off nearly 2c in an instant. Possibly a few lots were worked off at 60c for September, but brokers were simultaneously offering it at 59 1/2c, at 59c and at 58 1/2c in different parts of the pit, and within five minutes it was down to 57 1/2c, possibly touching 57 1/4c, which was the low point of the day. On the down turn, actual business was less than suggested by the noise, yet there was considerable selling, operators on that side, including Logan, Adams and Eggleston, with Parker a buyer, thought to be for Cudahy. Some of the early weakness, which at first could not be accounted for, was because of the selling of a line of 850,000 for account of Lyon-Hulbert. Extreme sensitiveness marked trade from first to last, and September finally rested 2 1/2c lower; for the day, 59 3/4c. December kept in line, dropping 3c, to 66c, at the opening, and closed at 67 1/4c, or 1 1/2c net loss. When September was at the bottom, cash was quoted 54 1/2 to 54 3/4c. News received after the opening exerted little influence, although at the decline a steadier tone was developed. This was due to the talk of further imports of gold, to a larger business in cash wheat here and at the seaboard, and a rally in Wall street."

It is thus seen how closely allied to speculation, and how sensitive to speculative movements, are the grain trade and the interests of grain producers.

The feeling in Chicago yesterday (Tuesday) was a little better, though there was no material advance in prices. But the wheat panic appeared to have subsided, and the market to be in improved shape to recover from the local influences which caused the break. Outside of Chicago, the market seems to be also in a little better tone. California cargoes afloat are steadier, and Liverpool futures are improved. The market has reached such a point that sellers do not let go unless driven by necessity; and, as soon as there is the smallest betterment in the financial situation, we may expect a corresponding change in wheat.

The World's Crops.

So far as the prices of grain have been affected by supply and demand, they seem to have been influenced altogether by the present conditions and the volume of present stock, and not at all by the probability of a shortage in supplies before the next year's crop is available. It is true that available stocks of old wheat are large, and that they have been made larger by the unusually heavy marketing of new wheat, induced by inability of farmers to secure advances on warehouse receipts and their imperative need of money. But the present abnormal state of things does not alter the fact—or rather that which appears to be a fact—that the deficit in the new yield is much greater than the carry-over stocks.

The consequence must be, sooner or later, before next season, a material advance in prices. It can be nothing else. It will come when financial matters are better adjusted and the grain trade is in better shape to take cognizance of the actual condition of things. The following statement from a New York paper bears out our former statements relative to the condition of the world's crops, and, in our judgment, is approximately correct:

George O. Jones, who has devoted many years to the study of the production of wheat and cotton in connection with the preparation of his charts on silver, has compiled for the Kiernan News Company the following official figures showing the average yearly wheat crops of the world for the past seven years; also estimates for the crops of 1893. His estimate of the yearly average for seven years is as follows:

France, 295,000,000; Russia, 235,000,000; Austria and Hungary, 177,000,000; Germany, 96,000,000; Italy, 115,000,000; Spain, 88,000,000; Great Britain, 73,000,000; Roumania, 44,000,000; Turkey in Europe, 42,000,000; Bulgaria, 34,000,000; Belgium, 19,000,000; all other countries in Europe, 44,000,000; total, 1,262,000,000 bushels.

The total yield of all these countries for 1893 he estimates at 1,070,000,000 bushels. His other figures are as follows: For the United States and Canada averages for seven years, 520,000,000 bushels; for 1893, 418,000,000 bushels. The average yield for Asia, Australasia and South America for seven years was 428,000,000. The estimated yield for 1893 is 440,000,000 bushels.

For the United States the estimated crop for 1893 is: Winter wheat, 263,000,000 bushels; spring wheat, 122,000,000 bushels; required for food and seed, 365,000,000 bushels; surplus, 20,000,000.

Mr. Jones says: Many well-informed men, like Mr. Pillsbury and others, place the spring-wheat crop at from 20,000,000 to 30,000,000 bushels below this estimate. Should their predictions prove correct, very little wheat can be shipped out of this country during the coming year without exhausting our entire present supply before another crop will be harvested.

In Canada the requirements for food are 45,000,000 bushels; the estimated crop is 33,000,000. The deficiency will be 12,000,000.

These conditions show that the wheat crops for 1893 will fall below their average by about 282,000,000 bushels. From this amount should be deducted the estimated quantity now afloat and in store in this country and in Europe and in farmers' hands, above the amount usually so held on July 1st, 75,000,000 bushels, showing a deficiency in world's supply of 207,000,000 bushels.

This vast deficiency arises mostly from the unprecedented normal weather conditions that have prevailed throughout the world during the past year. These conditions, over which man has no control, have not only ruined the hay and many other crops in large sections of Europe, but have injured nearly all their wheat crops from 15 to 30 per cent, on which basis these estimates are largely made.

Some leading foreign papers say that these conditions mean a food famine for man and beast within the next year.

Other Grains.

Barley has steadily declined during the week. The same influences depressing trade in other lines are at work, and they are aided by the reports of large yields in the State, particularly in the southern part. Feed demand improved a little yesterday, but at lower prices. There is some activity in brewing, but the volume of trade is not large. Exporters are securing only limited amounts of this class of stock.

Oats show no life, and trade is of nominal proportions. The market is strictly waiting. Stocks are more than abundant to meet all requirements. Nothing is doing in corn.

Fresh and Dried Fruits.

The market does not show much change from week to week. Supplies of all kinds of fruit are very liberal, peaches making a more general showing than any other. Apricots are still a prominent feature. In bulk to canners, there has recently been some demand at 1 1/4 to 1 1/2c per pound. Bartlett pears are becoming plentiful, and berries are largely represented. Peaches have been in good demand, and there is some improvement in the tone of the market. Figs are somewhat scarce. The quality of grapes is improving and some business is being done. Green-gage plums have been sold to canners at \$1.00 to \$1.15 per ton.

Local dealers have made quotations only on bleached apricots and on apples, viz.: Apricots, 7c to 8c per pound; apples, 3 1/4 to 4c for quarters, and 4c to 5c for sliced. The market has as yet taken no decided shape. Apricot drying is practically finished in many parts of the State, though the drying season is in full blast in Santa Clara valley. Peach curing has just fairly begun.

The Eastern dried fruit market is slow to open up. Old stocks are well cleaned up, and it would seem that the new crop comes in under favorable auspices. The financial stringency, however, has its effect there, and has prevented active dealing in futures, and is for the present a factor in keeping down prices.

Butter, Cheese, Eggs and Poultry.

A substantial advance has taken place during the week for fine qualities of butter; other grades remain about the same. Receipts are less free.

Cheese shows a better tone than for some time. An advance has taken place in all grades. The demand for choice California is good.

Eggs show no change from last week. There are plentiful offerings of common grades, while strictly choice is scarce.

Poultry remains about the same as last week. Geese have improved, and an advance has taken place in broilers. But little Eastern stock is coming in.

Vegetables.

The market for nearly all lines of vegetables is in liberal supply, and prices show little change. Onions have not been in such free receipt, and are firmer. Potatoes are coming in plentifully and Early Rose and Peerless have declined.

Hops.

So far dealings in the new crop of hops have been light. Growers hesitate to make contracts, and the

financial trouble acts as a preventive of great activity on the part of buyers. The outlook, however, is encouraging to growers, and there is well-founded expectation of good prices. The English and German crops are poor, the long-continued drouth having had a disastrous effect. Fleas and lice committed great havoc in the vines in England. The New York output will also show a material shortage. Vermin have given serious trouble, and the expectation is that there will be not much over a half crop. The Pacific coast yield, on the contrary, will be good. Reports from Oregon and Washington are favorable, lice having done little damage. In California there is every prospect of a full yield. Old stock has been pretty well cleaned up, and the season opens under excellent auspices. The Sacramento News reports that some contracts have been made in that vicinity for as high as 21 1/2 cents. The range was as low as 17.

Wool.

Trade has been nominal during the week. The weekly report of Thomas Denigan, Son & Co. says: "If, on the assembling of Congress, some immediate stand is taken respecting a change in tariff matters as regards wool, then some business may be done; but, so long as the present uncertainty exists, there will be no business of consequence. In any event, it will take quite a time to reorganize wool matters so that growers and manufacturers can do business with the same confidence that existed prior to March last."

Pork Products.

A serious break occurred in pork products at Chicago Tuesday, and has affected the market here, though as yet not severely. Several well-known firms, including John Cudahy, J. G. Steever & Co., E. W. Bailey & Co. and A. Helmholtz & Co., failed, and, when the announcement was made on the Board of Trade, there was a great uproar rivaling the scenes of Saturday in the wheat pit. Mess pork dropped from \$10 to \$10.50 per barrel in 40 minutes, but it afterward recovered to \$12. These firms had endeavored to take advantage of the known shortage in hogs, and effect a corner in pork products. The financial panic made it impossible for them to secure money, and they simply had to close out their contracts. It cannot be said yet what the effect will be on the market here. The influences which caused the panic in Chicago were largely local, and ought not to seriously affect this market.

Miscellaneous.

Receipts of comb and extracted boney are large, and prices are low. For the present the demand is rather slow, but it is expected to improve.

There is no change in fresh meats. Seeds—New-crop mustard is expected about the end of August. No inquiry for the article from the East has yet developed.

Offerings of hay are liberal, while the demand is fair only, so that the situation is rather favorable for buyers than otherwise.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per cwt. for the past week:

	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Thursday.....	58 1/2	59 1/2	59 1/2	59 1/2	59 1/2	60 1/2
Friday.....	58 1/2	59 1/2	59 1/2	59 1/2	59 1/2	60 1/2
Saturday.....	58 1/2	59 1/2	59 1/2	59 1/2	59 1/2	60 1/2
Monday.....	58 1/2	59 1/2	59 1/2	59 1/2	59 1/2	60 1/2
Tuesday.....	58 1/2	59 1/2	59 1/2	59 1/2	59 1/2	60 1/2

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. O.	P. S.	N. D.	Market for P. S.
Thursday.....	29 1/2	30 1/2	29 1/2	Weaker
Friday.....	29 1/2	30 1/2	29 1/2	Weak
Saturday.....	29 1/2	30 1/2	29 1/2	Easier
Monday.....	29 1/2	30 1/2	29 1/2	Quiet
Tuesday.....	29 1/2	30 1/2	29 1/2	Better

To-day's cablegram is as follows:
LIVERPOOL, Aug. 2.—Wheat—Quiet but steady. California spot lots, 5s 9 1/2d; off coast, 28s 6d; just shipped, 29s 9d; nearly due, 28s 6d; cargoes off coast and on passage, quiet but steady; Mark Lane wheat, rather easier; French country markets, very quiet; wheat and flour in Paris, firm.

Eastern Markets.

The following shows the closing prices per bushel of wheat for the past week at

New York.

	July.	Aug.	Sept.
Thursday.....	69 1/2	69 1/2	70 1/2
Friday.....	67 1/2	67 1/2	70 1/2
Saturday.....	65 1/2	65 1/2	70 1/2
Monday.....	71 1/2	65 1/2	70 1/2
Tuesday.....	65 1/2	65 1/2	70 1/2

The following is to-day's telegram—per bushel:
NEW YORK, Aug. 2.—Wheat—August, 60c; September, 71c; December, 77c.

Chicago.

	July.	Sept.	Dec.
Thursday.....	61 1/2	61 1/2	72 1/2
Friday.....	59 1/2	62 1/2	70 1/2
Saturday.....	57 1/2	61 1/2	69 1/2
Monday.....	56 1/2	59 1/2	67 1/2
Tuesday.....	55 1/2	58 1/2	66 1/2

The following is to-day's telegram—per bushel:
CHICAGO, Aug. 2.—Wheat—August, 60c; September, 62c; December, 70c.

Local Markets.

WHEAT.

	New.	Dec.
Thursday, highest.....	1 28	1 27
" lowest.....	1 27	1 26
Friday, highest.....	1 27	1 26
" lowest.....	1 26	1 25
Saturday, highest.....	1 25	1 24
" lowest.....	1 24	1 23
Monday, highest.....	1 23	1 22
" lowest.....	1 22	1 21
Tuesday, highest.....	1 22	1 21
" lowest.....	1 21	1 20

The following are to-day's recorded sales on Call:
Wheat—Morning—Informal Session—December, 2100 tons, \$1.23; 800, \$1.23; 400, \$1.23; 1400, \$1.23 per cwt. Regular Session—December, 500 tons, \$1.24; 100, \$1.24; 1400, \$1.24; 800, \$1.24; 200, \$1.24; 200, \$1.23; 300, \$1.23; 100, \$1.23; 100, \$1.23; 600, \$1.24. Seller 1893, new, after September 1st—100 tons, \$1.13 per cwt. Afternoon Session—December, 100 tons, \$1.24; 100, \$1.24; 2300, \$1.24; 100, \$1.24; 800, \$1.24. Seller 1893, new, after September 1st—200 tons, \$1.13 per cwt.

BARLEY.

	New.	Dec.
Thursday, highest.....	76 1/2	87 1/2
" lowest.....	76 1/2	87 1/2
Friday, highest.....	76 1/2	87 1/2
" lowest.....	75 1/2	86 1/2
Saturday, highest.....	74 1/2	85 1/2
" lowest.....	74 1/2	85 1/2
Monday, highest.....	72 1/2	83 1/2
" lowest.....	72 1/2	83 1/2
Tuesday, highest.....	72 1/2	83 1/2
" lowest.....	72 1/2	83 1/2

The following are to-day's recorded sales on Call:
Barley—Regular Session—December 100 tons, 83 1/2c; 300, 83 1/2c per cwt. Afternoon Session—December, 100 tons, 84c; 100, 81c. Seller 1893, new—100 tons, 74c; May, 10 tons, 92c per cwt.

Markets by Telegraph.

British Grain Trade.

LONDON, July 31.—The Mark Lane Express says: Where the wheat crop is bad, it is very bad; where it is good, it is barely good. The average yield is not expected to exceed 27 bushels to the acre, which will make a total of 7,087,500 quarters, against 8,000,000 quarters in 1892. There is a reduced demand in the market for all sorts of feeding stuffs. Sales of English wheat included new samples. First sales were made at 30s per quarter, but later there were transactions ranging from 28s to 32s. Foreign wheats are dull. Indian and American declined 9d. Stocks of foreign wheat and flour amount to 2,785,000 quarters. At to-day's market wheat was 6d lower; American flour declined 3d per sack; malting barley unchanged; feeding, 6d lower; oats, irregular and cheaper; corn, from 3d to 6d lower.

Sales of California Fruits.

CHICAGO, July 31.—The Earl Fruit Company to-day sold California fruit at auction as follows: Bartlett Pears, \$1.40 to \$1.85; German Prunes, \$1.90 to \$2.30; Bradshaw Plums, \$1.55 to \$1.75; Egg Plums, \$1.40 to \$1.65; Crawford Peaches, \$1.40 to \$1.60; Fontainebleau Grapes, half-crates, \$1.55 to \$1.85; Red Nectarines, \$1.7c to \$1.85.

NEW YORK, July 31.—The Earl Fruit Company to-day sold California fruit at auction as follows: Bartlett Pears, \$1.60 to \$2.45; Tragedy Prunes, \$2.40 to \$2.75; Magnum Bonum Plums, \$2.40; Egg Plums, \$2.10; Washington Plums, \$2.05; Peach Plums, \$1.55 to \$1.85; Purple Duane Plums, \$1.65 to \$1.80; German Prunes, \$1.55 to \$2; Hale's Early Peaches, \$1.50.

BOSTON, July 31.—The Earl Fruit Company to-day sold California fruit at auction as follows: Bartlett Pears, \$1.85; Early Crawford Peaches, \$1.65 to \$2.30; Hale's Early Peaches, \$1.65 to \$2.55; St John Peaches, \$1.85 to \$1.90; Washington Plums, \$1.15 to \$1.40; Purple Duane Plums, \$1.20; Golden Drop Plums, \$1.10 to \$1.15; Tragedy Prunes, \$1.50; Gros Prunes, \$1.10.

KANSAS CITY, July 31.—The Earl Fruit Company to-day sold California fruit at auction as follows: Bartlett Pears, \$1.00 to \$1.75; average, \$1.70.

NEW YORK, July 31.—Porter Brothers Company sold at auction to-day five carloads of California fruit at the following prices: Bartlett Pears, \$2.00 to \$2.10; Bradshaw Plums, \$1.55 to \$2.70; Tragedy Prunes, \$1.15 to \$2.15; German Prunes, \$1.55 to \$2.05; Egg Plums, \$1.95 to \$2; Washington Plums, \$1.60 to \$1.90; Peach Plums, \$1.75 to \$1.80; Royal Hative Plums, \$1.35; Purple Duane Plums, \$1.50 to \$1.80.

CHICAGO, July 31.—Porter Bros. Company sold to-day at auction ten cars California fruit at the following prices: Bartlett Pears, \$1.45 to \$2.05; Simoni Prunes, \$2.05 to \$2.95; Tragedy Prunes, \$1.60 to \$2.20; German Prunes, \$1.50 to \$2.20; Peach Plums, \$1.55 to \$1.75; Columbia Plums, \$1.70; Bradshaw Plums, \$1.70 to \$1.80; Purple Duane Plums, \$1.30 to \$1.60; Egg Plums, \$1.35 to \$1.60; Silver Prunes, \$1.60; Mikado Plums, \$1.70; Washington Plums, \$1.20 to \$1.50; Magnum Bonum Plums, \$1.45; Royal Hative Plums, \$1.61 to \$1.85; Crawford Peaches, \$1.15 to \$1.55; Foster Peaches, \$1.45; Tuscan Cling Peaches, \$1.45; St John's Peaches, \$1.05 to \$1.45; Hale's Early Peaches, \$1.05 to \$1.15; Strawberry Peaches, \$1; Fontainebleau Grapes, \$1.10 to \$1.80; Nectarines, 75c to \$1.15.

OMAHA, July 31.—Porter Brothers Company sold to-day three cars of California fruit as follows: Apples, \$1.00 to \$1.25; Bartlett Pears, \$1.50 to \$1.75.

Our Products in New York.

NEW YORK, July 30.—Everything in packed fruit is decidedly tame. Dealers can discount the dull times incident to midsummer, but they feel blue over the usual lack of interest in futures which does not belong to this part of the year. This position seems likely to hold until money affairs flow clearer.

Canned fruit has no attention whatever; prunes—undecided; there are buyers of four sizes at 4 1/2 f. o. b. with peaches at 7 f. o. b.; raisins exhibit no useful points, prices no better than last. The trade is using the hold-over slowly. Apricots quoted 7 1/2 f. o. b. Our market is here.

Wool—With so many idle mills in New England and no expansion of trade in goods, manufacturers' wants are moderate. The cheap condition of affairs has brought out more speculative inquiry, but as unusual long time and other entangling concessions are asked, holders seem to feel they are about as well off with the stock as paper. The cleaned basis of territorial wool is extremely low, and if the market is much longer neglected at home at the prices, many lines of unworked may find a place abroad. Many blocks of Montana have sold down from 9 to 14 cents, making a scoured basis of only 37 cents. Sales at New York, 237,000 pounds domestic and 79,000 foreign; sales at Boston, 1,675,500 pounds domestic, including 64,000 spring California at 13 1/2c; also 100,000 pounds Australian and 50,000 export. Philadelphia reports inactivity, low bids for large parcels. Lima beans continue weak; nominal; closing rates, \$1.85 to \$1.90.

Honey—No improvement. Hides—Prime foreign and Coast range at 10 1/2 to 11 1/2c; sales, 3000 California at 10 1/2c, full weight.

Hops—Last outlines of trade not materially changed; selections close somewhat stiffer; local trade light. Some old hops sold at range of 8 to 14c. One Pacific contract reported at 25c, landed here. Exports for the week, 1473 bales.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. AUG. 2, 1893.

Strawberries, chest	50 @ 75	Red.....	50 @ 75
Longworth.....	5 00 @ 7 00	White.....	@ 75
Sharpless.....	3 00 @ 5 00	Grapes (green)	25 @ 75
Goscherries, lb	2 @ 3	Crabapples	50 @ 65
Do drier.....	25 @ 35		
Raspberries.....	2 85 @ 4 00	Extra choice fruit for special	
Blackberries.....	2 00 @ 3 00	purposes sells at an advance	
Limes, Mex.....	4 00 @ 4 50	on outside quotations	
Do Cal.....	75 @ 1 00	Beets, sk.....	@ 1 25
Lemons, box.....	1 50 @ 3 00	Carrots, sk.....	45 @ 60
Do Santa Bar.....	4 00 @ 5 00	Okra, dry, lb.....	15 @ 20
Do Sicily choice 4	50 @ 5 50	Okra, green, box	35 @ 60
Green Apples, bx	25 @ 35	Paranip, cti.....	1 50 @ 2 00
Red Apples, h.x.	50 @ 75	Peppers, dry, lb	5 @ 10
Apricots, box.....	25 @ 40	Peppers, gr'n, bx	25 @ 75
Royal.....	30 @ 40	Peas, lb.....	2 @ 2 1/2
Plums.....	25 @ 50	Turnips, cti.....	@ 75
Pears, h.x.....	30 @ 50	Cabbage, 100 lbs	50 @ 55
Pears, Bart., bx	50 @ 60	Garlic, lb.....	60 @ 70
Peaches, box.....	20 @ 40	Onion, drier.....	50 @ 60
Peaches, bkt.....	25 @ 40	Celery.....	50 @ 60
Crawford.....	25 @ 40	Tomatoes, box	50 @ 75
Figs, Black, box	25 @ 50	String Beans.....	1 1/2 @ 3

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

AUG. 2, 1893.

BEANS AND PEAS.		BAGS.	
Bayo, cti.....	2 25 @ 2 35	Standard Calc Grain,	6 @
Butter.....	2 55 @ 2 65	Spot.....	18 @
Pea.....	3 00 @ 3 25	June & July delivery 64	@ 15
Red.....	3 00 @ 3 25	Potatoes, gummies.....	30 @
Pink.....	2 55 @ 2 65	Wool, 34 lb.....	32 @
Small White.....	2 55 @ 2 65	Wool, 4 lb.....	32 @
Large White.....	2 70 @ 2 90		
Lima.....	2 70 @ 2 90		
BUTTER.		HOPS.	
Cal. poor to	15 @	1892, fair.....	16 @
fair, lb.....	15 @	Good.....	20 @
Do g'd to choice	21 @	Choice.....	20 @
Do Giltedged.....	23 @	FLOUR.	
Do Giltedged.....	23 @	Extra, city mills 4	10 @
Do Creamery.....	20 @	Do country m's 4	10 @
Do do Giltedged.....	21 @	Superfine.....	2 90 @ 3 00
Cal. Keg.....	19 @	NUTS—JOBBER.	
CHEESE.		Walnuts, hard	8 @ 9
Cal. choice	9 @ 10	shell, Cal. lb.....	12 @ 13
cream.....	8 @ 9	Do soft shell.....	12 @ 13
Do fair to good.....	10 @	Do paper-shell.....	12 @ 13
Do Giltedged.....	10 @	Almonds, soft sh 1	15 @ 16
Do Skim.....	5 @ 6	Paper shell.....	15 @ 16
Young America	10 @ 11	Hard shell.....	7 @ 8
EGGS.		Brazil.....	10 @ 11
Store.....	17 @ 19	Pecans, small.....	8 @ 10
Rauch.....	18 @ 25	Do large.....	10 @ 12
Eastern.....	18 @ 13	Peanuts.....	34 @ 54
Outside prices for selected		Filberts.....	10 @ 12
large eggs and inside prices		Hickory.....	7 @ 8
for mixed sizes—small eggs		Chestnuts.....	8 @ 10
are hard to sell.		ONIONS.	
FEED.		Silver.....	60 @ 75
Bran, ton.....	17 50 @ 18 50	POTATOES.	
Feedmeal.....	23 50 @ 24 00	New, cti.....	
Gr'd Barley.....	18 00 @ 19 00	Early Rose.....	35 @ 60
Middlings.....	21 00 @ 24 00	Peerless.....	40 @ 60
Oil Oats Meal.....	35 00 @	Burbank.....	50 @ 60
HAY.		Garret Chile.....	50 @ 60
Compressed.....	7 00 @ 11 00	POULTRY.	
Wheat, per ton.....	9 00 @	Hens, doz.....	6 00 @ 7 00
Do choice.....	12 @	Roosters, old.....	6 00 @ 6 50
Wheat and oats.....	8 00 @ 11 00	Do young.....	7 00 @ 9 00
Wild Oats.....	8 50 @ 10 00	Broilers, small.....	3 00 @ 3 50
Cultivated do.....	7 00 @ 10 00	Do large.....	3 00 @ 4 50
Barley.....	7 00 @ 9 00	Fryers.....	5 00 @ 6 00
Alfalfa.....	8 00 @ 11 00	Young Ducks.....	4 00 @ 5 00
Oliver.....	8 00 @ 10 00	Old Ducks.....	3 50 @ 4 00
GRAIN, ETC.		Geese, pair.....	1 00 @ 1 50
Barley, feed, cti.....	72 @	Turkeys, goblr.....	15 @ 17
Do good.....	75 @	Turkeys, hens.....	15 @ 17
Do choice.....	77 @	All kinds of poultry, if poor	
Do brewing.....	90 @ 97	or small, sell at less than	
Corn, white.....	90 @ 97	quoted; if large and in good	
Yellow, large.....	90 @ 97	condition, they sell for more	
Do small.....	95 @ 97	than quoted.	
Oats, milling.....	40 @	Mapshatton Egg	
Feed, choice.....	35 @	Food (Red Ball	
Do good.....	30 @	Brand) in 100-	
Do fair.....	25 @	lb. Cabinets.....	@ 11 50
Do common.....	20 @	PROVISIONS.	
Surprise.....	1 40 @ 1 45	Oaf. bacon,	
Black feed.....	1 10 @ 1 20	heavy, per lb.....	@ 12
Gray.....	1 25 @ 1 30	Medium.....	@ 12
Rye.....	1 02 @ 1 07	Light.....	14 @ 18
Wheat, milling.....	1 15 @ 1 25	Cal and d'ba.....	10 @ 11
Giltedged.....	1 10 @ 1 11	Hams, Cal.....	@ 13
Shipping choice.....	1 05 @	Do Eastern.....	@ 13 1/2
Off Grades.....	1 05 @	SEEDS.	
Sonora.....	@ 1 00	Alfalfa.....	9 @ 10
WOOL.		Clover, Red.....	15 @
California, year's fleece 8@10c		White.....	30 @
Do, 6 to 8 months.....	8 @ 12c	Flaxseed.....	24 @ 3
Do, Foothill.....	10 @ 13c	Hemp.....	4 @
Do, Northern.....	12 @ 14c	Do brown.....	5 @ 5 1/2
Do, extra Humboldt		HONEY.	
and Mendocino.....	13 @ 15c	Corn, 2-lb frame	7 @ 10
Nevada, choice, light.....	12 @ 14c	Do 1-lb frame	1 @ 12
Do, heavy.....	9 @ 10c	White extracted	5 @ 6
Oregon, East'n, choice.....	12 @ 15c	Amber do.....	5 @
Do, Eastern, poor.....	8 @ 10c	Dark do.....	5 @
Do, Valley.....	12 @ 15c	Beeswax, lb.....	23 @ 25

Three and One-Half Days to the World's Fair.

We take pleasure in advising the readers of the PACIFIC RURAL PRESS that the UNION PACIFIC is the most direct and quickest line from San Francisco and all points in California to the WORLD'S FAIR.

It is the ONLY LINE running Pullman's latest improved vestibule Drawing-Room Sleepers and Dining Cars from San Francisco to Chicago without change, and only one change of cars to New York or Boston.

Select Tourist Excursions via the UNION PACIFIC leave San Francisco every Thursday for Chicago, New York and Boston in charge of experienced managers, who give their personal attention to the comfort of ladies and children travelling alone.

Steamship Tickets to and from all points in Europe. For tickets to the World's Fair and all points east and for Sleeping-Car accommodations call on or address D. W. Hitchcock, General Agent Union Pacific System, No. 1 Montgomery street, San Francisco.

Nerve Tonic **Blood Builder**

DR. WILLIAMS' PINK PILLS FOR PALE PEOPLE

50c. per box.
6 for \$2.50.

Send for descriptive pamphlet.

Dr. WILLIAMS' MEDICINE CO., Schenectady, N.Y. and Brockville, Ont.

BARGAINS IN REAL ESTATE!

\$6500 FINE NEW RESIDENCE, N. W. COR. 19th avenue and 17th street, East Oakland. House nine rooms, bath and laundry. Elevated, healthful, fine view, convenient of access; three blocks from Haywards electric cars; near good schools and churches. Easy terms.

JOHN F. BYXBEE, on premises, or No. 42 Market St.....San Francisco.

UNION IRON WORKS, SACRAMENTO.....CALIFORNIA.

ROOT, NEILSON & CO. —MANUFACTURERS OF—

STEAM ENGINES, BOILERS And all kinds of MACHINERY FOR MINING PURPOSES.

FLOURING MILLS, SAW MILLS AND QUARTZ MILLS. Machinery constructed, fitted up and repaired.

Front St., bet. N and O, Sacramento, Cal.

The Judson Fruit Company,
308 and 310
WASHINGTON STREET
San Francisco, Cal.

Every Inventor Wants a Good Patent

Or none at all. To secure the best patents Inventors have only to address DEWEY & Co., Pioneer Patent Agents, No. 220 Market St., San Francisco.

There are many good reasons why Pacific Coast Inventors should patronize this Home Agency.

It is the ablest, largest, best, most convenient, economical and speedy for all Pacific Coast patrons. It is the oldest on this side of the American continent, most experienced, and every way reliable.

It has the largest library of Patent Law books, American and Foreign Patent Office Reports, scientific and mechanical newspaper files, latest works on science, art, inventions, and mechanical and other new discoveries.

Conducted from 1863 by its present owners (A. T. Dewey, W. B. Fwer and Geo. H. Strong) this agency has the best knowledge of patents already issued, and of the state of the arts in all lines of inventions most common on this coast.

Patents secured in the United States, Canada, Mexico, all British colonies and provinces, England and other civilized countries throughout the globe.

Caveats filed, assignments duly prepared, examinations made, and a general Patent Agency business conducted.

Established and successfully and popularly conducted for nearly thirty years, our patrons number many thousands, to whom we refer with confidence, as men of influence and reliability. Old and new inventors are cordially offered the complimentary use of our library and free advice, etc. No other agency can afford Pacific States inventors half the advantages possessed by this old, well-tried and experienced firm.

SPECIAL ANNOUNCEMENT.

We have made arrangements with Dr. B. J. Kendall Co., publishers of "A Treatise on the Horse and his Diseases," which will enable all our subscribers to obtain a copy of that valuable work free by sending their address (enclosing a two-cent stamp for mailing same) to Dr. B. J. KENDALL CO., ENOSBURGH FALLS, VT. This book is now recognized as standard authority upon all diseases of the horse, as its phenomenal sale attests, over four million copies having been sold in the past ten years, a sale never before reached by any publication in the same period of time. We feel confident that our patrons will appreciate the work, and be glad to avail themselves of this opportunity of obtaining a valuable book.

It is necessary that you mention this paper in sending for the "Treatise." This offer will remain open for only a short time.

Educational.

Bowens Academy,
University Ave., Berkeley.

BOARDING AND DAY SCHOOL
For Boys and Young Men.

Special university preparation, depending not on time but on progress in studies.

T. S. BOWENS, M. A.....Head Master.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering, Surveying, Architecture, Drawing and Assaying, 728 MARKET ST., SAN FRANCISCO, CAL. Open All Year.

A. VAN DER NAILLEN, President.
Assaying of Ores, \$25; Brillion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. ESTABLISHED 1844. Send for circular.

ACTUAL BUSINESS PRACTICE.

PACIFIC Business College,
320 POST ST. SAN FRANCISCO.

LIFE SCHOLARSHIPS, \$75.
Bookkeeping, Penmanship, Shorthand, Typewriting, English Branches, etc. Graduates aided in getting positions. Send for circulars. T. A. ROBINSON, Pres.

HEALD'S
BUSINESS COLLEGE,
24 POST STREET.....SAN FRANCISCO.
FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR. E. P. HEALD, Pres. C. S. HALEY, Sec.

— We are now better than ever prepared to receive consignments of all kinds of perishable products, such as Fruits, Vegetables, Eggs, etc. Our facilities for cool, dry storage and packing for long-distance shipping cannot be excelled. It is our constant aim to make our consignors and our customers stay with us.



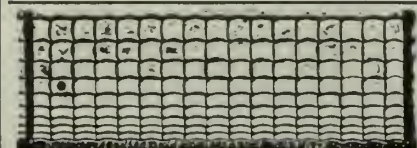
KENDALL'S SPAVIN CURE.
The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

- KENDALL'S SPAVIN CURE. -
STOCKTON, CAL., Dec. 19th, '92.

DR. B. J. KENDALL CO.
Gentlemen:—Having read one of your Treatise on the Horse and seeing the Spavin Cure advertised, I thought I would try it. I had one horse with a prominent Spavin of 12 months standing. I removed it with 2¢ bottle. I tied up one fore foot on same side the spavin was and compelling the horse to rest on lame leg while I took a surecure and drew it across the hock or spavin until the hock or spavin got very warm with the friction, then putting on Spavin Cure. I had a mare that had a running from her nose for 12 or 14 months. I rubbed the Spavin Cure from her eyes down to nostrils, then from back of jaw bone down under the throat for a week. I have not seen any discharge for two months.

Yours truly, HUGH MCDADE.
DR. B. J. KENDALL CO.,
Enosburgh Falls, Vermont.
SOLD BY ALL DRUGGISTS.

REGULATE THE STOMACH, LIVER AND BOWELS, AND PURIFY THE BLOOD.
A RELIABLE REMEDY FOR
Indigestion, Biliousness, Headache, Constipation, Dyspepsia, Chronic Liver Troubles, Bileziness, Bad Complexion, Biliary, Offensive Breath, and all disorders of the Stomach, Liver and Bowels.
Ripans Tablets contain nothing injurious to the most delicate constitution. Pleasant to take, safe, effectual. Give immediate relief.
Sold by druggists. A trial bottle sent by mail on receipt of 10 cents. Address
THE RIPANS CHEMICAL CO.,
10 SPRUCE STREET, NEW YORK CITY.



The Gov. of N. Carolina
To Gov. of S. Carolina.

"It's a long way between posts." That's what he would say if he should see a string of our regular five-foot farm fence now serving on one side of a pasture for deer. End posts 33 rods apart and only one post between. Send for particulars.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich

MAKE YOUR OWN GAS!
BADLAM BROS.,
519 Market St., San Francisco.

SOLE MANUFACTURERS OF THE CELEBRATED SPERLESS GAS WORKS. New process, safe and inexpensive, from \$100 upward. Light cheaper than coal oil. Send for catalogue and prices.

TREE WASH.

"Greenbank" Powdered Caustic Soda and Insecticide.

T. W. JACKSON & CO.,
Sole Agents,
No. 5 Market Street, San Francisco, Cal.

J.I.C. DRIVING STILL LEADS THEM ALL.
BIT
IT WILL CONTROL THE MOST VIOLENT HORSE.
75,000 sold in 1891.
100,000 sold in 1892.
THEY ARE KING.
Sample mailed X C for \$1.00
Nickel, \$1.50.
Stallion Bits 50 cts. extra.
RACINE MALLEABLE IRON CO. J. P. DAVIES, Mgr.

Seeds, Plants, Etc.

AN INVITATION

IS EXTENDED TO ALL INTERESTED TO VISIT THE SAUSAL FRUIT FARM DURING THE FRUITING SEASON, WHERE ALL VARIETIES ARE TESTED THAT ARE GROWN AT

NAPA VALLEY NURSERIES.

AN INSPECTION OF THE NURSERIES ALSO SOLICITED. CLEAN STOCK, UNIRRIGATED, PROPAGATED FROM BEARING TREES.

LEONARD COATES, NAPA, CAL.

OLIVE TREES.

ALL KINDS OF
Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,
Pomona, Cal.

Spark's Mammoth Apricot.

A superior quality, healthy and vigorous grower. Particularly fine for canning, and an excellent long-distance shipper. They run three and four to the pound. The largest and finest fruit of the apricot variety. A large stock of trees for sale. For further information address N. B. SMITH, Ventura, Ventura Co., California.



HEADQUARTERS
For Rare new Tropical fruit and ornamental plants and trees. Palms, Ferns, Orange Trees, Pineapples, Bamboos, Aquatics, Etc.
Plants safely shipped everywhere. Send stamp for new and full catalogue which tells all about this subject.
REASONER BROS.,
Oneco, Fla.

Dormant Buds

FROM HEADQUARTERS.

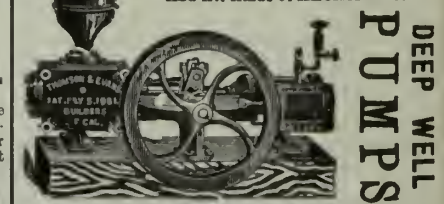
I offer a very fine stock and assortment of Dormant Buds of Peach, Apricot, Nectarine, Prune and Plum. Prices low. NOW is the time to place your order. I also offer a general supply of choice nursery stock.

F. S. PHOENIX,
Bloomington, - - Illinois.

C. H. EVANS & CO.,

(Successors to THOMSON & EVANS.)

110 and 112 Beale Street, S. F.
MACHINE WORKS,
Steam Pumps, Steam Engines
And All Kinds of MACHINERY.



HAY PRESSES.

The Monarch, Junior Monarch, and other kinds of Presses, made by the Celebrated Hay Press Manufacturer, Jacob Price, for sale by

L. O. MOREHOUSE,
San Leandro, Cal.

THE American Bee Journal,

(Established 1861.)
IS Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample.
\$1.00 BEE-BOOK FREE
GEO W YORK & CO., 56 Fifth Ave., Chicago, Ill)

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tools, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.

California Crops.

Summary of Report of Observer James A. Barwick, for Week Ending July 29, 1893.]

Butte County.—Fruit crop in the vicinity of Wyandotte is an excellent one.

Colusa County (Maxwell)—Fields have yielded much better than was expected.

Sacramento County (Galt)—The present warm weather is ripening the fruit very rapidly. Grapes are coming on in good quantity. The Sweetwaters are the first to mature. Peaches are in good supply, and apples are plentiful. Watermelons are on hand. (Folsom)—Grapes are showing rapid and good growth, and give good promise both as to quality and quantity.

San Benito County (San Felipe)—Wheat in this vicinity is turning out from 18 to 26 sacks to the acre.

Yuba County (Marysville)—Next week peach picking will be quite general. White, Cooley & Cuts' orchard will yield nearly or quite 500 tons of good merchantable peaches.

Solano County (Collinsville)—Wheat is averaging 14 sacks to the acre and the quality is pronounced good.

Sonoma County (Healdsburg)—Hop prospects are far from promising, though our growers are not at all discouraged. The yield, however, will fall considerably short of what it was last year, but the deficiency will doubtless be made up by the number of young hop yards that will come into bearing. (Geyserville)—The warm weather and heavy north winds have had their effect upon the fruit, causing the quality to be more in accordance with the quantity, but the grapes remain uninjured for the present, at least, as the fruit is still in its first stages of growth. (Bellvue)—There is some complaint of prunes dropping off, but most of the trees are carrying all they will mature. Corn is making a poor showing so far, though late fogs may improve the crop. Peaches are a fair crop, plums about the same, apples promise better, the Bellflower being very good.

Fresno County (Fresno)—A number of farmers were interviewed as to the prospects of the grain crop. To sum up the various statements it would be in effect that only about one-half what is expected would be harvested and placed upon the market. However, this year's harvest would about equal that of former years. They all felt blue and discouraged over the prospective prices. In the subirrigated regions of Fresno, and along the sloughs of Huron, big crops are promised, but in the latter district many fields had been completely drowned out and killed. The alfalfa crop is above the average, but prices have touched a very low mark. Loose hay is now selling for \$4.50 and \$5 per ton, on the streets or delivered, and brings only about \$3 on the ranches.

Hercules Windmills.

People who buy windmills want something that will raise the wind or utilize when it is raised. The Hercules Windmill is warranted to do all that can be expected from a windmill, and do it well. Write for prices to R. F. Wilson, 347 Commerce St., Stockton, Cal.

MUSHROOM CULTURE.

An expert in mushroom culture desires engagement. English open-air method; harvest all the year round; profits heavy. Address, G. C. M., this office.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California street, San Francisco.

Hay Pressing.

If you are interested in pressing hay write Truman, Hooper & Co., San Francisco. They will save you money.

SITUATION WANTED.

MARRIED MAN WITH THOROUGH PRACTICAL Experience in agriculture in all its branches wants situation. Best references. Address

JOSEPH A. FRANK,
Santa Cruz P. O.

FRANK A. BRUSH,
SANTA ROSA, CAL. (Care Santa Rosa National Bank.)
Wants you all to write to him for prices on Young Stock.

MINORCAS: White and Black.
LEGHORNS: White, Brown, Black, Buff.

B. P. ROCKS.
Mention the age desired and when shipped. Circular Free.

Dr. A. E. BUZARD,
VETERINARY SURGEON.

MEMBER OF THE ROYAL COLLEGE OF VETERINARY Surgeons, London, England. Late Veterinary Surgeon in the United States Army. Veterinary Contributor to the "Pacific Rural Press." The Diseases of all Domestic Animals treated on Scientific Principles. Special attention given to Chronic Lameness and Surgical Operations. 405 BRODERICK ST., SAN FRANCISCO. Calls to the country promptly attended to. Telephone No. 4687.

STEVEN'S FRUIT CASE!

A notable invention of the Columbian year, for transporting California's fresh fruit to market. Look into it! It is worthy of trial! Its advantages truly stated are: Fruit can be picked later and riper; requires no wrappers; no decay from pressure, bruising or rubbing; the ventilation is absolute and positive; it grades and counts the fruit in the carrier; fruit all open to inspection; no rehandling or repacking at destination; no skilled labor for packing. Gives the grower all the advantage arising by arrival of his fruits in markets ripe, sound, luscious and attractive, instead of half ripe, bruised or decaying. It isolates each piece of fruit by double, elastic walls, with air spaces between, over and around it. It is not an untried quantity. Messrs. Brown & Wells, of California Market, San Francisco, say: "We have made shipments of green fruit in it to Honolulu, Panama, Boston, New York, Philadelphia, Australia and Arizona, and have received report to the effect that the fruit arrived in perfect condition. We believe it is surely destined to become in the near future the universal package for short or long distance shipments." Nothing to equal it for fine apricots, peaches, plums and pears. Will carry fresh figs successfully. Carriers now ready for delivery for apricots. Send in early orders to insure supply.

PRICE (for ordinary standard package) \$15.00 per hundred, including outside and inside cases. Call on us or send for circulars.

STEVENS FRUIT CASE CO., 307 Front Street, San Francisco,
Agents for the Pacific Coast.

DEWEY & CO.
AMERICAN AND FOREIGN PATENT SOLICITORS
ESTABLISHED 1860.
OFFICE OF THE "Mining and Scientific Press" Pacific Rural Press
No. 220 Market St.
TAKE ELEVATOR No. 12 FRONT ST.
SAN FRANCISCO, CAL.

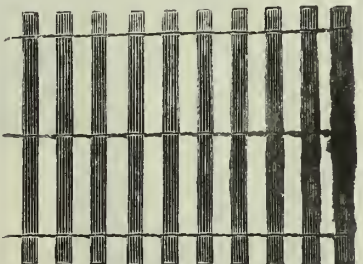
RABBIT-PROOF STOCK FENCE.

Cheap, Durable and Effective.

Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2½ ft., 4 ft., 4½ ft., and 6 ft. high. Send for circulars and price list to

JUDSON M'F'G CO.,

12 & 14 Fremont St. San Francisco.



The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.

WE GUARANTEE

That one tablespoonful of

GOMBAULT'S CAUSTIC BALSAM

will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made. It is therefore the cheapest (as well as safest and best) external applicant known for man or beast.

THE LAWRENCE WILLIAMS CO., CLEVELAND, OHIO.

STOCK SCALES

4 TON \$45.

U.S. STANDARD. FULLY WARRANTED.

Delivered at your R. R. Station and ample time for building and testing allowed before acceptance.

OSGOOD & THOMPSON, Binghamton, N. Y.

PORTABLE PLATFORM SCALES
TRUCKS, ETC.

Twenty-five per cent cheaper than any other on the market. Send for Catalogue.

C. H. LINDEMANN, Agent,

126 KEARNY STREET, SAN FRANCISCO

WELLMACH'S

All Kinds, Water, Gas, Oil, Mining, Ditching, Pumping, Wind and Steam Heating Boilers, &c. Will pay you to send 25c. for Encyclopedia, of 1600 Engravings. The American Well Works, Aurora, Ill. Also, Chicago, Ill. Dallas, Tex. St. Louis, Mo. N. Y.

Deep Well Pumps.



The Valves and working parts of the Fulton Pump can be removed, repaired and replaced without taking the pump out of the well.

Pumps fitted up for all depths of wells, ready to put in.

Send for Circular and Price List to

A. T. AMES,
GALT, CAL.

MANUFACTURER OF PUMPS AND
WINDMILLS.

CHOPPERS
ATTENTION!

ASK FOR THIS AXE.

USE NO OTHER.

Wood-choppers, try the

Kelly Perfect Axe

It will cut more wood

than any other axe.

The scoop in the blade

keeps it from sticking in

the wood, and makes it

cut deeper than any other

axe. Ask your dealer for

it. Send us his name if

he don't keep it. It is the

Anti-Trust Axe.

Kelly Axe Mfg. Co.

LOUISVILLE, KY.

ROOFING

GUM ELASTIC ROOFING FELT costs only \$2 per 100 square feet. Makes a good roof for years, and any one can put it on.

GUM ELASTIC PAINT costs only 60 cents per gal. in bbl lots or \$4.50 for 5 gal. tubs. Color red. Will stop leaks in tin or iron roofs that will last for years. TRY IT.

Gum Elastic Roofing Co.,

39 & 41 West Broadway, NEW YORK.
Local Agents Wanted.

BACK FILES of the PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes) \$4. Inverted in Dewey's patent binder 50 cents additional per volume.

Commission Merchants.

DALTON BROS.,

Commission - Merchants,

— AND DEALERS IN —

CALIFORNIA AND OREGON PRODUCE,
Green and Dried Fruits,

Grain, Wool, Hides, Beans and Potatoes.

Advances made on Consignments.

308 & 310 Davis Street, San Francisco.

[P. O. Box 1936.]

Consignments Solicited.

P. STEINHAGEN & CO.



404 & 406 DAVIS ST. S.F.

ALLISON, GRAY & CO.,

501, 503, 505, 507 & 509 Front St.,

And 306 Washington Street, SAN FRANCISCO.

— GENERAL —

Commission - Merchants,

GREEN and DRIED FRUITS,

Poultry, Eggs, Game, Grain, Produce and

Wool.

MOORE, FERGUSON & CO.

WOOL, GRAIN, FLOUR

— AND —

General Commission Merchants,

310 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

[ESTABLISHED 1854.]

GEORGE MORROW & CO.,

HAY and GRAIN

COMMISSION MERCHANTS,

39 Clay Street and 28 Commercial Street,

SAN FRANCISCO, CAL.

SHIPPING ORDERS A SPECIALTY.

LINDSAY & CRAIG,

Crocker Building.....San Francisco.

Mortgages Bought, Loans Negotiated.

Several buyers on hand for desirable Fruit and Grain Ranches.

GRANGERS' BANK
OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874.



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 800,000
Dividends paid to Stockholders.... 720,000

OFFICERS.

A. D. LOGAN.....President
I. O. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on wheat and country produce a specialty.

January 1, 1893. A. MONTPELLIER, Manager.



RIFE'S AUTOMATIC HYDRAULIC ENGINE

THE PELTON WATER WHEEL CO.
GENERAL WESTERN AGENTS,
121 MAIN STREET, SAN FRANCISCO, CAL.

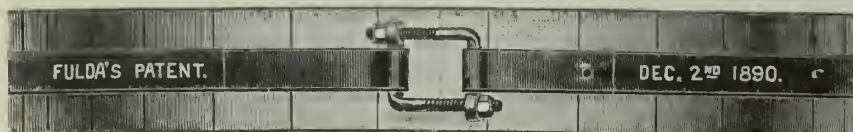
Works
While
You
Sleep.

THE RIFE HYDRAULIC ENGINE is the most simple and efficient machine yet devised for elevating water for irrigation, filling railroad tanks, supplying mills, factories, dairies, stock yards, country residences, small towns, and for various other purposes. This ram is self-operating, constant in action, and is not only much more efficient than anything of the kind ever put upon the market, but from absence of wearing parts, more durable and every way reliable. Many may be referred to that have run for years, elevating water in some cases from 100 to 800 feet without any attention or expense in the way of repairs.

These machines have already come largely into use in all parts of the country, and are rapidly superseding every other device for the purpose. They will work effectively under a head as low as two feet and for every foot of fall will elevate 20 feet. By means of an adjusting lever the capacity of any of the various sizes can be reduced 50 per cent or more, as may be desired, to provide for a variation in water supply, without disadvantage or loss in efficiency.

WATER RAISED AND WASTE.—The fall from the spring, stream or other source of supply to the engine determines the height of which the water can be elevated, as well as the relative proportion between the water raised and wasted, the quantity raised varying according to the height it is carried and the distance conveyed. For ordinary purposes it is sufficient to say that with a discharge pipe 1000 feet in length, one-sixth of the water can be raised and discharged at an elevation five times the height of fall or one-twelfth ten times the height of fall.

Parties wishing for information should give the quantity of water that can be supplied to the engine, either in gallons, cubic feet or miners' inches; the head or fall from source of supply to point where the engine is to be located, length of drive pipe, height to which the water is to be raised, distance from engine to place of discharge and the quantity of water it is desired to elevate. No reliable information can be afforded without an explicit answer to these inquiries.



FULDA'S PATENT BAND AND HOOP COUPLING.

The Best, Simplest and Cheapest Coupling for Tank Hoops.
sufficient lap of hoop renders it unnecessary to rivet the hoop. It will fit the circle of any tank, regardless of sizes.
Made in sizes to fit any width of iron.

Prices, \$1.00 to \$1.50 per Pair. For sale to the trade. Liberal discount in quantities.
FULDA BROTHERS,
30 TO 40 SPEAR ST., SAN FRANCISCO,
MANUFACTURERS OF MINING AND WATER TANKS
Send for Catalogue.



The Anderson Prune Dipper

W. C. ANDERSON, Patentee and Sole Manufacturer.

THIS WELL-KNOWN DIPPER is in use in almost every plum-growing section of the State and has given perfect satisfaction wherever tried.

WE HAVE MADE SEVERAL IMPROVEMENTS THIS SEASON in additional heating capacity, facility for spreading the fruit, etc., which makes the machine indispensable both for the factory and the farm.

We also keep a full line of FIELD CARS, TURNTABLES, TRANSFER CARS, Etc.
For further information address the Manufacturer,

P. O. BOX 970, SAN JOSE, CAL.

FRUIT PAPER!

RAISIN WRAPS, SWEAT PAPER
FROM THE MANUFACTURER DIRECT AT LOWEST PRICE.

Raisin-packers are advised that we will make and carry in stock the "Azure Blue" "Top Wrap," which has been used for years by the packers of Spain.

S. P. TAYLOR PAPER CO.,

414 & 416 CLAY STREET.....SAN FRANCISCO.



GEM STEEL WIND MILL WITH GRAPHITE BOXES.

Never Requires Oiling or Climbing of Towers.

Guaranteed more durable without oil than other mills that are oiled. Practically, these mills require no attention. TRULY A GEM, and worth its weight in Gold. It combines beauty, strength, durability and simplicity. Govers itself perfectly, is easily erected and is sold on its merits; in fact, it is the best mill on earth. They are geared back three to one—the wheel making three revolutions to one stroke of pump—making them run in the lightest wind or breeze. The mill is made entirely of Steel and Cast Iron. Each one of our Gem Wind Mills is warranted. If not satisfactory, freight will be paid both ways and money refunded. We also carry Pumps of all kinds, Tanks, Pipe Fittings, Hose, Etc. **WOODIN & LITTLE, 312 MARKET ST., San Francisco, Cal.**



MILK MEN "LOW-DOWN" WAGONS

are protected from the storm. They never have lame backs. They never slip or fall getting in and out. Their milk is not churned. **THEY LIVE LONG AND THEY PROSPER.** You can get full particulars by writing the **PARSONS "LOW-DOWN" WAGON CO., Earlville, N. Y.**

"An Ounce of Practical Common Sense is Worth a Pound of Theory."

Atkinson's Practical Incubator and Brooder Combined

IS THE BOSS MACHINE FOR HATCHING AND REARING CHICKENS. It is Simple, Safe, Reliable, Practical and economical. Was awarded every Prize offered on Incubators and Brooders at the State Fair held September 5th to 17th, 1892, as follows: For the best display of Incubators in operation, \$25; for the Incubator hatching most chickens during Fair, \$10; or the best display of Brooders in operation, \$10. Also, Cash Prize at Stockton and Silver Medal at San Jose.



Does Not Need Watching at Night.

Does Not Spoil Eggs from Extremes of Temperature.

Does Not Require an Experienced Electrician to Operate it.

No Accidents from Lamp, as the principle of the application of heat overcomes all danger of explosion. The principle by which the water is heated is

entirely new. The large Double Brooder Attachment reduces the cost of rearing chicks to the minimum. Patented January 19, 1892. Send stamp for circulars and price list. Address

M. L. WISE, Manager,

1029 J STREET.....SACRAMENTO, CAL.

F. W. KROGH & CO.,

51 BEALE STREET,
SAN FRANCISCO.

DEEP WELL
Pumps,
POWER PUMPS,
Steam and Irrigating
PUMPS,

— AND —
Pumping Machinery
OF ALL KINDS,

Also, several different kinds of
HORSE-POWERS.

F. W. KROGH & CO

Send for Catalogue and Price List.
Kindly mention this paper.



OUR BRAND. Stocktonia.

Try it. It makes light, sweet and delicious bread. You can have 1500 barrels every day.

Farmers' Union & Milling Co.
STOCKTON, CAL.

UNION FLOUR MILLS



Vol. XLVI. No. 7.

SAN FRANCISCO, SATURDAY, AUGUST 12, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market St.

Majestic Palms at San Fernando.

Come to think of it, it was little wonder that the throng at Jackson Park, Chicago, were even more attracted by the arrival of the great palm from San Diego than they were by the monster Krupp gun from Germany. The untraveled native born of the temperate zone has usually to form his idea of a palm from the tub-grown dwarf of the ordinary greenhouse or window garden. If he has visited the palm-houses of the parks or botanic gardens, his conception of palm growth is truer and yet inadequate. The palm of a semi-tropical country has size and grace and symbols of antiquity which house-grown specimens do not secure. No wonder, then, that a palm which had outlived a century at San Diego should command attention and admiration when its crest was reared amid the growths of a wintry clime.

The Californian of a century hence will find himself almost in a grove of lofty palms of many species. We of the present day have only isolated specimens which have survived the Mission era or others more remote in their original habitats to show us altitude and majesty. We have hundreds and thousands which are still in their first quarter of a century, and are but promises of future greatness, and we have many more now in their first decade, for palm-planting has of late become a general delight of the Californian and is likely to continue—in fact, in the dissemination of desirable species, we trust it has just begun. Add a century to the life of these, and the palm-crowned California of the future can be imagined.

As this will be so marked a feature of our future ornamental growths, great interest naturally pertains to the old palms of the present day. They are not all cared for as they should be. Towns in which such trees struggle with drouth and neglect should endeavor to secure their preservation and culture. Those which now stand in gardens are usually cherished and prized, and are notable features of the locality to which the attention of tourists and sight-seers is directed. Would that all our old palms could be similarly cherished and honored!

The engraving shows a pair of native fan palms (*Washingtonia filifera*) still standing near the old Mission of San Fernando in Los Angeles county. They were, in all probability, brought there a century or so ago from the habitat of the species on the west side of the Colorado desert near the south boundary of the State. The padres rightly appreciated the beauty of this palm, for they carried it to many of their Missions. It seemed to have a place of honor on their planting lists beside the date palm. As Jessie B. Waite has written:

And the sagebrush torn asunder
Soon gave place to golden grain;
Towering palm trees, fruitful olives,
Purple vineyards filled the plain.

The engraving shows the twin palms and in the distance the many-arched corridor of the old Mission building. These antiquities should increase in popular esteem as the beautiful San Fernando valley advances in settlement and development.

IT IS ANNOUNCED from Washington that the forthcoming report of the Commissioner of Internal Revenue will show

a large increase in the output of sugar made in the United States from beets and sorghum. The total acreage for the past year was 24,703, and 57,200,000 pounds of sugar, exclusive of that manufactured from cane in Louisiana and vicinity. California raised more sugar from beets than any other State, and her increase of output for the year was the greatest. There were 15,993 acres planted in California, and 43,500,000 pounds of sugar were made.



CALIFORNIA FAN PALMS AT SAN FERNANDO MISSION.

This is said to be an increase of about 35 per cent. Nebraska raised 7,000,000 pounds of beet-sugar on 4900 acres; Kansas raised about 1,800,000 pounds of sorghum on 3953 acres; Utah raised about 6,000,000 pounds of beet-sugar on 3500 acres; Virginia raised 700,000 pounds of beet-sugar on 400 acres.

SAN BERNARDINO COUNTY reports a total planting of orchard and vineyard in 1893 at 5400 acres, of which one-half is citrus fruits including about 1000 acres of lemons. This year's total is 600 acres more than 1892, and the largest deciduous planting ever known in the county.

Unusual Hay Shortage Abroad.

There is well nigh a hay famine in Europe. News has been received of the failure of fodder crops in most countries of Europe, and hay prices in England have been reported at nearly \$40 per ton. Germany has prohibited the exportation of all hay and other forage in order to prevent large shipments to France. The heavy shortage of oats in Austria has caused that Government to add one-third corn in place of oats for army horses. Hay has been imported into the countries named from various sections, and orders have even been sent to Australia. Shipments have already begun from Boston, New York and Montreal. The present ocean freight rate on hay from Boston to Rotterdam and Hamburg is 45 cents per 100 pounds, or about \$10 per ton of 2240 pounds. Clover hay commands a higher price than timothy in London, the quotations ranging from \$30 to \$38 per ton, while other grades sell from \$25 to \$33.

Quite in contrast with the above is the report that in the eastern half of the United States the hay crop is the largest known for years, and the clover hay crop has already been harvested in good condition. No doubt this crop will yield this country a vast amount of money. In spite of the large crop, eastern prices are firm because of the situation abroad. How far hay can be profitably shipped depends, of course, upon the foreign price; but there seems to be a chance that the Pacific coast may even profit by the demand. It is said that hay is being looked after in Nevada for shipment to Europe. One shipper says he wants 15,000 tons for this purpose. As the overland roads are very short of local freights between California and the Missouri river, they may make rates to favor the hay trade.

The possibility of shipping hay to Europe makes one sigh for the Nicaragua canal. That highway would bring us to the front in such trade. As England likes clover hay, we could give her first quality lucerne or alfalfa in unlimited amount.

WOOL-GROWERS in these troublous times will be interested in the fact that at a meeting of the prominent sheep and wool-growers, held recently in Livermore, resolutions were passed denouncing the commission men for raising their commission from 2½ per cent to one-half a cent per pound, or double, under the present prices, and a call was issued for a meeting of the wool-growers of that county, to be held in Livermore on August 19th, at 3 P. M., for the purpose of forming a protective association, with a view to erecting warehouses and marketing their own wool independently of the commission men.

THE ROCHESTER FRUIT COMPANY of Rochester, San Bernardino county, is putting up an extensive plant for canning, drying and handling fruit on the co-operative plan, in which nearly all fruit-growers of the vicinity are interested. It will be ready for operation in thirty days.

IT IS REPORTED from Wheatland that hop-pickers are flocking in by the hundreds, and already the hop fields are full, and hundreds of men and women are unable to secure employment. If the influx continues, the result is not pleasant to contemplate.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half inch (1 square).....	1.00	2.50	6.50	22.00
One inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager

San Francisco, August 12, 1893.

TABLE OF CONTENTS.

EDITORIALS.—Majestic Palms at San Fernando; Universal Hay Shortage Abroad; Miscellaneous, 117. The Week; The Importance of the Fruit Industry; The Jersey Victory; Miscellaneous, 118. From An Independent Standpoint, 119.
ILLUSTRATIONS.—California Fan Palms at San Fernando Mission, 117.
HORTICULTURE.—Lemon Growing; Orange Figures in the Ojai; Japanese Plums in Vaca Valley, 121.
THE IRRIGATIONIST.—California Methods of Irrigation, 121.
RURAL IMPROVEMENT.—Sewage Farms in California, 122.
THE DAIRY.—Making Gilt-Edge Butter; Jersey Cheese Victory at the World's Fair, 122.
THE APIARY.—Honey Notes, 123.
WORLD'S FAIR.—A Californian's Comments, 123.
POULTRY YARD.—Hens or Pullets; Let Your Hens Sit; To Start Hens Laying, 123.
THE HOME CIRCLE.—Miscellaneous, 124-125.
YOUNG FOLKS' COLUMN.—Miscellaneous, 125.
DOMESTIC ECONOMY.—The Cold Potato, 125.
PATRONS OF HUSBANDRY.—From Worthy Master Davis; From Yuba City Grange, From the State Lecturer; San Jose Grange; Temescal Grange; Santa Cruz Grange Closed Out; Watsonville Grange, 126.
AGRICULTURAL NOTES.—126-127.
MARKET REPORTS.—128-129.
MISCELLANEOUS.—The Orcus Chalybeus is Doing Well; Gleanings; Road Convention at Sacramento; Capt. Messenger's Experience With Tagosaste; Railroad Rates on Dried Fruit; Entomological Laboratory Manual, 120.

BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

	PAGE.
Flows—Deere Implement Co.....	132
Carriages and Wagons—Cal. Wagon & Carriage Co.....	132
Royal Baking Powder.....	125
Brood Mares at Auction—Killip & Co.....	127
Life Insurance—Pacific Mutual Life Ins. Co.....	127

See Advertising Columns.

The Week.

There has come a series of hot days, which has hurried things greatly in the fruit districts, and the result has been some worry and loss. Growers who were prepared for drying have had to work fast and long hours to keep pace with the rapidly ripening fruit, and those who have usually depended upon local markets and canners have suffered losses. This year should enforce the lesson of preparation for various means of handling fruit. There has been greater complaint and proportionally greater losses in old regions near the bay of San Francisco than in the newer and greater orchard regions. This has been the case because the older regions have had less enterprise in fruit-handling than the new, and when anything interferes with their traditional ways of selling, the fruit rots on the ground and the growers sit on the fence and argue the silver question. The same sun which ripens and rots can be made to preserve, but it does not cut fruit nor furnish trays. This is a great question. It is too hot now to act on it, but next winter stay away from the grocery, get some lumber, drive a nail every time a rain drop strikes the barn roof, and you will have a lot of trays on which the golden sun will make golden dollars of a parity of 1 to 1000 of the kind you made on the fence this summer.

The Jersey Victory.

Readers will find on another page of this issue an outline of a victory for Jersey stock, of which we hope to give fuller details next week. It seems that the Jerseys have won a signal victory in a line of dairy work for which, so far as we remember, the Jersey has never claimed first rank, viz., as a cheese cow. All have been free to concede the Jersey's cream percentage, her desirability as a family cow, also pre-eminence as a butter-producer, but always with the reservation that she lacked capacity, and that larger breeds could use up more food profitably and therefore outstrip the Jersey in what made a dairy-producer rich. But who ever heard of a Jersey as a cheese cow? How could such rich milk ever pay in a cheese vat?

The World's Fair contest, though not as full in representing the different breeds as could be desired, certainly gives the Jersey a standing in advance of her own claims, and we shall be much mistaken if it does not bring in another era of Jersey popularity which may surpass any-

thing we have yet seen. Surely if we had a well-bred Jersey herd we should look for better days ahead than the last few years have shown. Fortunately, California already has excellent breeds of this blood, and considerable crossing has been done with the Jersey to advantage. We are ready for another Jersey wave.

The Importance of the Fruit Interest.

Recent events demonstrate the truth of our claim that the fruit industry of California has become too large to be thrust into any single pocket, individual or corporate. Chicago advices are that the coterie of highly respectable fruit merchants who did not subject California fruit to the indignity of being purchased by sidewalk and handcart dealers, but insisted upon the supremacy of Chicago's commercial 400 in auction sales, have been worsted by the collarless contingent, and transactions at the free-for-all auctions are far greater than at the star chamber sales. This is only what might have been expected, and we hope now that the business will revert to the best methods which are in harmony with the idea of the greatest possible distribution, for upon this basis only can the trade permanently rest.

It is interesting to note the claim made by the open-auction parties that they are developing trade in new channels. The following is telegraphed from Chicago:

Since we have declared our intention to operate an open auction in the full sense of the word, and since the Fruit Buyers' Association declared its boycott against us, our business has been steadily on the increase. Not only has our list of small buyers grown, but the members of the association who are not in favor of closed auctions have been dropping into our ranks gradually, until we now have a considerable number of them in attendance every day, and many peddlers who were known as small buyers three months ago are to-day among the largest. These are the buyers who were once the street men, but who have later developed into jobbers, buying all the way up to 200 boxes of fruit at a time.

In proof of the increase of business which this "open" auction has enjoyed since the boycott was declared, the following figures are given: Sales during June and July of 1892, when all the houses were "open," \$178,753.91; sales during June and July, 1893, since the association resorted to the "closed" auction and since the institution of the boycott against the "open" shops, \$255,954.30, an increase of business of \$97,720.13.

This increased sale of California fresh fruits is one of the most delightful features of this rather doleful summer. It was hardly anticipated, because early prophecies on the part of some shippers did not give such hope. They were based upon the fact that times are hard at the East, and that perhaps old-fashioned boiled-cider apple-sauce would be the limit of the people's possibilities in fruit diet. California fresh fruits would be a luxury for flush times, not for such times as these. Again, Eastern people would scrimp and pinch to meet the cost of their Chicago pilgrimages, and this again would preclude free purchases of California fruits. Fortunately these deductions were unsound, though the premises were true, for they have the hardest kind of times at the East and millions of people are running the gantlet of Chicago bed and board brigands, and still California fruit goes at a gait never attained before. It seems clear that California fruit has speed in it, and all that it needs is a free road to Eastern favor. This fact appears in the figures of Eastern shipments: Up to August 5, 1892, the Southern Pacific shipped 1234 cars of green fruit to the East. Up to the same date this season the shipments amounted to 1813 cars. This increase is gratifying, because the prices realized in the East are good. During the early part of the season they showed a disposition to slump, but latterly they have stiffened up and the returns of shippers are fair.

This summer's experience in the sale of fruit is especially significant, not only of the free way in which the trade must be allowed to proceed, but its importance as a factor of our industrial progress. We do not forget that only a portion of our fruit-producing area at present reaps direct benefit from Eastern shipment. There are vast regions from which such shipments are not now made and they are perhaps suffering from the smallness of this year's pack of canned fruit, which limits purchases for this purpose. Though this may occasion some losses, they are plainly due to temporary conditions and should not be taken to indicate any weakness in the business of fruit production if wisely planned and conducted. Our fresh fruit sells freely at the East, because it is for immediate consumption; our canned fruits are low and dull because the general financial fashion at present is to be fearful and shortsighted, and during such a mood of the fickle goddess dealers will not order a year's canned goods in advance. Such schrewd dealers as Armsby have been credited with saying that one who buys good canned fruits at present prices will make a lot of money in a few months, and we believe it to be true. Still those who know and believe it have not the money to invest and those who have the money lack the confidence. So we shall go through the summer with a small pack and begin

next year's pack with full orders and a hare market. Dried fruit, even though the product be large, we expect will take much the same course and will have a clearer field for sale next winter than it has had for several years.

Evidently the people of California should have trust and confidence in a business which is carrying itself so well through a period of depression. The products of the industry are becoming the accepted food for the American millions. Unless depression is attended by actual poverty, people will not stint their stomachs. They may chill their backs or go on defective soles, but their stomachs are too near their hearts to be punished simply through a whim of distrust. So long then as the country is rich, and taste favors our fruit and fruit products, we have little to fear from such "financial stringency" as now paralyzes the purse-strings. Rather should the summer's experience give stronger confidence in this branch of our productive effort and warrant still further extension of it through well-planned orchard enterprise on suitable lands, under proper climatic conditions. Even though the times be dull, we expect to see considerable extension of our orchard area this winter. Fortunately, too, the growth of our fruit enterprises helps every other branch of food production, as well as every manufacture and artisanship in the State. The more people who gain a livelihood in or through the fruit interest, the better demand there will be for every other legitimate production or trade. For all these reasons, it is hard to overestimate the local importance of California's fruit industries.

WHILE all the talk is about money, it is worth saying that the agricultural interest is doing more than all the other interests combined to reballast the country with gold and should be accorded far greater importance than it now has in the eyes of the Eastern doctrinaires. *Farm and Home* notes that twice within a few years the outflow of gold during financial flurries has been checked by the large exports of food supplies. Thus it is that twice within a few years this country has been saved from much greater financial distress through our vast natural resources. But it is unwise to rely upon such good fortune at all times. Still the fact remains that the products of our soil were, in each instance, the salvation of the country, and that farmers have come to the relief of the people and relieved the stringency of the money markets where financiers and politicians have failed.

THE Governor of New Mexico has issued a proclamation calling an irrigation convention at Deming, N. M., November 7th next, for the purpose of devising ways and means to stop the unlawful use and diversion of the waters of the Rio Grande in southern Colorado, and of storing and preserving in reservoirs the spring and storm waters that now go to waste annually, and of discussing and considering all important questions relating to irrigation laws, irrigation securities, methods, and to devise and agree on some general and concerted plan of action looking to the development of the agricultural, vinicultural and horticultural resources of such region by saving and utilizing the waters. This will follow the Los Angeles convention of October 10th to 15th, which we suppose all interested in irrigation are preparing to attend.

OWING to the crowded condition of the grain sheds at sections 1 and 2 of the seawall, San Francisco, which are three-quarters of a mile in length, the board passed a resolution that grain discharged on this part of the seawall after the 15th inst. and up to January 1, 1894, should not remain for more than three days on the front and twelve days on the inside of the dock, instead of five and twenty-five days as formerly. The board reserves the right to order the grain moved at any time.

HORTICULTURAL FRIENDS of Mrs. L. U. McCann, of Santa Cruz, will grieve with her in her bereavement through the death of her husband, Judge F. J. McCann of the Superior Court. The Judge was regarded as one of the ablest men on the bench in this State. His rulings and decisions were models of clearness and lucidity, and his decisions have seldom been reversed. He was a native of Maryland and 63 years of age at his death.

IT IS TELEGRAPHED from Los Angeles that the Ranchito and Los Nietos Walnut-Growers' Association to-day appointed Porter Brothers & Co. of San Francisco, the W. R. Strong Company of Los Angeles, and Thacker Brothers of Chicago, agents for handling the product this year. This is the largest deal in nuts so far made this year.

A RECENT REPORT to the Viticultural Commissioners from Alameda county states there are nearly 700 acres of vineyard on resistant roots, and of these about two-thirds are *riparia*. Nearly the whole resistant acreage is now in bearing.

From an Independent Standpoint.

Congress met in special session on Monday according to programme, the percentage of attendance being greater than on the opening day of any session since the war. All the California men were on hand, and Senator Perkins was sworn in and took his seat on Tuesday. The House organized by re-electing Speaker Crisp, the Republicans voting for ex-Speaker Reed, and the Populists for Jerry Simpson of Kansas. Cannon of California voted with the Democrats for Crisp, and it is assumed that he will act with the Democrats throughout his term.

At Washington nobody talks about anything but financial questions, and it is a foregone conclusion that tariff considerations will be postponed till some judgment is reached as to silver. The point to be urged will be repeal of the Sherman law or that part of it which enforces the purchase of 4,500,000 ounces of silver bullion each month, and there is the prospect of a hot battle. Those who favor repeal are unquestionably in the majority in both houses, but in each there is a strong and able minority; and it is the plan of this minority to secure a compromise. They will demand in place of the Sherman or purchase law, some measure "favorable to silver," though the precise nature of this measure is not yet agreed upon. It will probably be a demand for the free coinage of the American product upon the ratio of twenty to one; it should not be less than a reaffirmation of our national policy of bimetalism. The silver minority have in the rules of Congress a chance to filibuster and prevent definite action as to the Sherman law and they assert that this and every other resource of obstruction will be employed; but the majority may, if they choose, adopt rules limiting debate, and this will probably be done, though it will involve a radical departure from Democratic practice.

The President's message, read on Tuesday, is a brief document and is devoted wholly to the currency question. The "extraordinary and alarming business situation," Mr. Cleveland says, constrained him to call the special session. Viewing the serious financial plight of the country, he finds it "not traceable to any of the afflictions which frequently check national growth and prosperity," but due to "financial distrust." "Values supposed to be fixed," he says, "are fast becoming conjectural, and loss and failure have invaded every branch of business. I believe that these things are principally chargeable to congressional legislation touching the purchase and coinage of silver by the General Government." Then follows the familiar facts concerning our recent financial legislation, with statements showing the stages in the decline of the treasury balance. Quoting the clause of the Sherman law which declares it to be "the established policy of the United States to maintain the two metals upon a parity with each other upon the present legal ratio, or such ratio as may be provided by law," the President says:

This declaration so controls the action of the Secretary of the Treasury as to prevent his exercising the discretion nominally vested in him, if by such action the parity between gold and silver may be disturbed. Manifestly the refusal by the Secretary to pay these Treasury notes in gold, if demanded, would necessarily result in their discredit and depreciation as obligations payable only in silver, and would destroy the parity between the two metals by establishing a discrimination in favor of gold.

Proceeding to argue the question, Mr. Cleveland says:

Unless government bonds are to be constantly issued and sold to replenish our exhausted gold, only to be again exhausted, it is apparent that the operation of the silver-purchase law now in force leads in the direction of the entire substitution of silver for gold in the Government Treasury, and that this must be followed by the payment of all Government obligations in depreciated silver. At this stage gold and silver must part company and the Government must fail in its established policy to maintain the two metals on a parity with each other.

Given over to the exclusive use of a currency greatly depreciated, according to the standard of the commercial world, we would no longer claim a place among the nations of the first class, nor could our Government claim a performance of its obligations, so far as such obligations have been imposed upon it, to provide for the use of its people the best and safest money, if, as many of our friends claim, silver ought to occupy a larger place in our currency and the currency of the world through general international co-operation and agreement.

It is obvious that the United States will not be in a position to gain a hearing in favor of such an arrangement so long as we are willing to continue our attempt to accomplish the result single-handed.

Continuing, he declares that the knowledge among our own people that the Government cannot make "this fiat money" the equivalent of gold "has resulted in such a lack of confidence at home in the stability of currency values that capital refuses its aid to new enterprises, while millions are actually withdrawn from the channels of trade and commerce to become idle and unproductive in the hands of timid owners." In other words, he puts the blame of the current hard times wholly upon the Sherman law. The evils of a fluctuating currency, he says, fall chiefly upon the man who earns his daily bread by daily toil, adding:

The people of the United States are entitled to sound stable currency and to money recognized as such on every exchange

and in every market of the world. Their Government has no right to injure them by financial experiments opposed to the policy and practice of other civilized States, nor is it justified in permitting an exaggerated and unreasonable reliance on our national strength and ability to jeopardize the soundness of the people's money.

After summing up all the considerations of the question, as he views it, the President's conclusion is "that the legislation condemned by an ordeal of three years' disastrous experience should be removed from the statute-book."

It must be said that while Mr. Cleveland's message is a well-put argument for one side of the case—namely, the side of the single gold standard—it throws no new light on the general financial situation. Everything that he says was well known before, while he leaves untouched at least two sides of the question. He has nothing to say about the persistent advance in the value of gold and its effects as manifested in the general decline in values; he passes over without mention the industrial and social effects of the fall of silver. He has no plan to secure the co-operation of other nations with the United States to the end of restoring to silver its old money character; and he shows plainly that he has no sympathy with or interest in the policy of bimetalism, which is the hope and promise of both the Democratic and Republican parties. This message is disappointing at home and it will be most damaging abroad. By those European nations whose co-operation we so sadly need, the President's declaration will be taken as notice of abandonment by the American people of the bimetallic policy. The whole motive of the Brussels conference—that is, the effort to get Europe to join in the use of silver—will appear to be thrown over. By this utterance the President has put the administration in an attitude hostile to the policy of the dominant party which he represents and hostile to the almost universal sentiment of the country.

As to the President's immediate recommendation—repeal of the Sherman or silver-purchase law—we heartily concur; that we hold to be the first essential step toward bimetalism; and bimetalism is, as we view it, the true American policy. The President gives us no hope of bimetalism, but inferentially supports the gold standard which plays into the hands of the creditor and the purchaser and out of the hands of the debtor, the seller and the producer. We shall not refrain from saying that in so moulding this state paper as to ignore half the considerations before the public and to leave unsaid the things which it was the duty of the President—as the official representative of American policy—to say, Mr. Cleveland has done the country a very serious mischief. This mischief must grow out of the fact that Europe will not comprehend as we do at home that Mr. Cleveland speaks only for himself.

The statement above, that Mr. Cleveland's message was limited to the financial question, is not quite true. He has a word to say about the tariff, as follows:

It was my purpose to summon Congress in special session early in the coming September, that we might enter promptly upon the work of tariff reform, which the true interests of the country clearly demand, which so large a majority of the people, as shown by their suffrages, desire and expect, and to the accomplishment of which every effort of the present Administration is pledged. But while tariff reform has lost nothing of its immediate and permanent importance, and must in the near future engage the attention of Congress, it has seemed to me that the financial condition of the country should at once, and before all other subjects, be considered by your honorable body.

Governor Markham is being urged to call a special session of the Legislature to make an appropriation of State funds in aid of the Midwinter Fair project. A round half million is wanted; and it is assumed that this sum would readily be provided if the law-makers could be given a grab at the public purse. That there is some ground for fearing that almost anything in the way of a job might be worked through the legislature we will not deny; but we cannot believe that any set of men could be so wanting in comprehension of duty as, in these hard times, to vote half a million dollars or any other sum out of the public treasury in aid of a holiday scheme. To do so would, in fact, be infamous. Putting aside the constitutional objections to the scheme, there are still opposing considerations enough to utterly condemn it. Our wasteful State Government spends twice as much as it should, and the taxes levied to support it are more than the people can pay without hardship. To add to the present tax rate a percentage sufficient to raise another half million, and that, too, for a project only incidentally related to the material interests of the people, would call forth a louder outcry than there has ever been heard from the long-suffering people of California. If such a tax should be levied, we believe property-holders would refuse to pay it, and that public opinion would support and enforce the protest.

If San Francisco wants a Midwinter Fair, let her make

it; it is a private and not a public project. To ask the State to pay for it is as unreasonable as it would be to ask the State to pay for the next Fourth-of-July celebration. The very fact that there is a demand upon the public purse in this matter shows that false notions of the duties of Government are becoming dangerously common. The RURAL is old-fashioned enough to believe that the appropriation of \$300,000 for a California exhibit at Chicago was an outrage. We hold it to be the duty of Government to attend to the public business and to protect the rights of citizens, and we hold it a violation of trust to devote funds raised by taxation to holiday projects great or small.

The distress occasioned by the shutting down of the silver mines in Colorado is very great. For a month past Denver has been full of idle and hungry men; and on more than one occasion riot has barely been prevented. Business in Denver, which has lived largely upon the disbursements of the mines, is dull beyond precedent, and thousands of discharged clerks and mechanics have swelled the army of the unemployed. To relieve this congestion of poverty and hunger the railroads have been carrying people out of the State without charge, and each day sees the departure of some hundreds. But for every man who goes another comes in from the outside districts, and the situation at Denver is no better now than it was a month ago. Several of the churches have opened soup kitchens to prevent actual starvation, but this, of course, is only a temporary expedient which relieves but does not cure the prevailing distress. For the present Denver has collapsed. Her foundries are idle; there is, of course, no building; her jobbing trade is ruined, and even her retail stores are empty or doing nothing. In the adjacent country affairs are in scarcely better shape, for the farmers have no market but the mines, and with these shut down there is no sale for anything. It is really a dreadful situation, and it looks as if the history of Nevada was to be repeated on a larger scale. It will be repeated unless the readjustment of finances shall restore its old-time value to silver.

The universal poverty of the discharged miners is a curious fact. Their wages have been high (from three to five dollars per day), they have, as a rule, no dependent families to use up their earnings; and yet, almost without exception, dismissal found them flat broke. They seem to have lived recklessly, earning largely and spending freely without forethought or prudence. It is a sad commentary upon the standards of life in Colorado. If that State is ever to come to anything in a large and wholesome way, she must have a better sort of population.

While the money policy of England, based upon the single gold standard, yields prodigious advantages to the government and to a large body of rich men whose wealth is in the form of credits, it works upon the agricultural, manufacturing and laboring classes the same sort of hardship that it does upon the corresponding classes in this country. In spite of the fact that the English farmer receives for his wheat a price equal to what is paid to the Californian plus the cost of transport from here to Liverpool, English agriculture is in a desperate state. Lands have declined in value, rents have fallen and are generally in arrears; and the condition of the agricultural laborer is little better than pauperism. In the English world of manufacture, things are no better. Scores upon scores of factories are idle and their workmen are living upon charity. Other causes have contributed largely to this state of things but the chief trouble is the increase in the value of gold reflected in the low prices of everything else. In brief, the industrial effects of the gold policy are the same in England as in this country. The reason why we hear less of them is because the English political life does not reflect so quickly as ours does, the conditions, necessities and demands of the people. The rich commercial class rules the British Empire and the selfish interests of commercial wealth are served by the gold policy. The interests of the land-owning aristocracy, of the manufacturers, of the factory operatives, of the farmers and of the farm laborers are subordinated by the ruling forces of English politics to the interests of the bankers, the merchants and the idle rich holders of vested funds.

The first strong note of protest comes from a representative of the aristocratic land-owning class—from no less a person than the Hon. Arthur Balfour, late Lord Lieutenant of Ireland and late leader of the Conservatives in the House of Commons. Mr. Balfour is next in rank to his uncle, the Earl of Salisbury, in the Conservative party, his personal like his political connections being of the highest. At a meeting of dignitaries held in London last Thursday to consider the financial and business situation Mr. Balfour made the principal address. He disclaimed political motives and alluded to the anxiety felt throughout the business world connected with the currency changes in India and the action that might be taken by

the United States Government. The gold standard, he declared, would never satisfy commercial wants, while the double standard alone would prevent dangerous oscillations in trade. He condemned isolated action on the part of individual States, and recommended an international agreement, fixing the ratio of values between gold and silver. In the course of his address, Mr. Balfour said that European bimetalists did not, like "some bimetalists of the Western States of America," aim at inflation of the currency; but they believed it would prove the safest commercial policy.

It is not likely that Mr. Balfour's disclaimer of political motive was in entire candor. He is, no doubt, feeling the public pulse, as we would call it in America, with reference to the future policy of the Conservative party, in which he stands close to the head. If his expression last week should meet with hearty response, it is not unlikely that bimetalism will be adopted as a leading feature in Conservative tactics. Such a course would naturally turn American sympathies to the Conservative side of English politics. It would be a strange union of the more or less wild and woolly West with the aristocratic classes of England against the bond-holding and commercial classes of both countries. There is a gambling phrase about playing "both ends against the middle" which would seem to apply in such an adjustment of international political forces.

The Orcus Chalybeus Is Doing Well.

TO THE EDITOR:—Mr. D. W. Coquillett's letter, regarding the increase of the steel-blue ladybird, *Orcus chalybeus*, printed in your issue of the 5th instant, gives the reader the impression that it will yet prove of no benefit, notwithstanding the reports to the contrary.

From the date of the arrival of the last shipment of predaceous insects from Australia, a bitter and determined warfare has been waged against them by parties whose interest and duty were to protect them. This antagonism was largely owing to professional jealousy of Prof. Koebele and of the State Board of Horticulture, to whose combined efforts is due their presence here. The press has been filled with denunciations of the State Board and of Mr. Koebele, condemnatory resolutions have been passed at presumed meetings, and adverse petitions have been gotten up, all having the same point of inspiration and all aiming at the same end—the nullifying of the good work of the board, and enabling envy-inspired enemies to exclaim, "I told you so!"

In the midst of this, the board has remained quiet, reliant upon the assurance of Mr. Koebele that time would prove the value of his labors for the fruit-growers of California.

Time has done so, and from the most authentic sources to-day we learn that, despite its studied neglect, its abandonment to its fate, its exposure to all the chances of adverse storms and insectivorous birds (inspired, perhaps, with the hope that it would never again be heard from), the *Orcus chalybeus* has redeemed the reputation of its importer and stands to-day among the foremost of the orchardist's friends. The evidences of this are not furnished by its enthusiastic friends, but it has forced itself upon public attention, and men whom experience has taught have given their evidence, based upon closest observation, of its rapid spread and its good work.

The contest over the *Orcus chalybeus*, now raging in Los Angeles and which it has been sought to transfer to San Francisco, is between those who have been compelled to realize and admit the value of this enemy of the red scale, and those whose interest it is to discredit its labors and its value. So important is its work that the supervisors of Los Angeles, at the instance of a committee of ten representing the fruit-growers who are benefited by it, have been compelled to take measures for its preservation.

In his report, written nearly a year ago, Mr. Coquillett says of the *Orcus chalybeus*: "While they do not increase with sufficient rapidity to give us the assurance that they will be able to practically free all of the trees in this State of the different kinds of scale insects that infest them, still they will undoubtedly prove valuable allies in keeping these scale insects down."

It is not to be expected that they will ever free all the trees in this State of all the scale insects; if they did they would do something heretofore unheard of. Even the *Vedalia* has not freed all the trees in this State of the cottony cushion scale, nor will it ever do so, but late reports have proven the truth of that assertion, that it would prove a valuable ally in keeping them in check, a fact that its enemies, it seems, still do not care to admit, but prove it by acknowledging, in part, the truth. While the *Orcus chalybeus* does not propagate so rapidly as does the *Vedalia*, it is evidently spreading with sufficient rapidity to insure good work within the next few years, and if given a fair chance it will do for the red scale what the *Vedalia* has done for the white.

Regarding the rapidity with which the *Orcus chalybeus* increases, Mr. Scott, Horticultural Commissioner of Los Angeles, writes me: "The ladybirds in Kercheval's orchard have lately increased rapidly and soon ought to be distributed among orchardists who will take proper care of them." This rapid increase has been a surprise even to their friends, and has overwhelmed their opponents with confusion. After our experience with the *Vedalia* we expected too much from the *Orcus*, and it was thought that from the few healthy specimens which arrived, enough would be assured to clear the orchards of the red scale in a few months, and when this was not done they were liberally denounced as worthless and the board as extravagant. But the *Orcus* has kept quietly at work and to-day stands

before us with the endorsement of some of the best-informed horticulturists and entomologists of the State as to her value and capability.

ALEXANDER CRAW,
State Quarantine Officer and Entomologist.
San Francisco, Cal., Aug. 7, 1893.

Road Convention in Sacramento.

In view of the general need of better roads, and the special fact that California is now making and maintaining roads under a new system, it is exceedingly desirable that the convention called to meet in Sacramento September 7th should be largely attended. The appeal is made to county boards of supervisors to appoint one or more of their number or attend the convention in a body. The board is also requested to appoint three representative citizens of the county as delegates to said convention. Public-spirited men who are familiar with road conditions and needs are the kind desired as these delegates. In addition to those named—the supervisors and three delegates from each county—there are to be 20 delegates-at-large appointed by the Governor, and two delegates each from boards of trade, municipal councils, granges and all societies immediately interested, together with all transportation companies of the State.

The committee in charge of the convention has also sent out circulars to county surveyors asking for certain facts, and as these questions give a clue to the purposes of the convention, we publish them as follows:

How many miles of public roads in your county? How many graveled miles, macadam miles, dirt miles and sand miles? Other kinds of roads in miles?

What is the road tax?
In ten years the county has expended on its roads about how much?

It has of good roads to-day how many gravel miles, macadam miles, other kinds in miles?

Approximate value of roads to-day, on basis of cost for ten years?

Is suitable stone material available in the county?

Is gravel of the right kind easily obtainable in the county?

What is the cost, approximately, per mile, of the best road in the county?

In your opinion would it be economy to construct and maintain highways in your county at general cost, even if the sum total had to be raised by county credit, taking into consideration the use of good roads meanwhile, time saved, power saved and values enhanced, pending the forty years' life of bonds under the new constitutional amendment permitting loans for that time?

In your opinion is the new road law, making supervisors district superintendents, an improvement over the former law?

Do you believe roads can be built better and cheaper under the contract system and according to a comprehensive county scheme, or do you prefer the independent district system?

Are the roads sprinkled in your county? To what extent, and at whose and what cost?

What is the average width of your main thoroughfares?

Do you think that good roads, properly constructed, less width, would serve?

Capt. Messenger's Experience With Tagosaste

TO THE EDITOR:—As inquiries are made for my experience with tagosaste, the plant described in the *RURAL PRESS* of July 29, I will state that I received a package of the seed about four years ago. I planted the seed in fall in different places to see where it would do best. That on the southern side of the hill was most satisfactory. I selected a place where there had been a pile of brush burned, leaving the ground bare of other seed, and picked the earth about six inches deep with a pick. Then I planted the seed and put a light covering of brush over them to keep the quail from scratching them up, also as a mark and for general protection.

The seed came up finely about March; but the rabbits destroyed a good many plants and as soon as they got above the brush the cattle took them off. But they held their own pretty well and grew about two feet high that year. One is about eight feet high now and bore a few seeds this year.

I am not posted as to what degree of cold it will stand, but am inclined to think it would require about the same temperature as an orange tree.

From my experience I am satisfied that it is a valuable forage plant, and if my land had tagosaste on it in place of chapparal I feel confident I could keep three times the stock I am now able to do on the same range.

Valley Springs, August 6, 1893. H. A. MESSENGER.

Railway Rates on Dried Fruit.

Some days ago the Southern Pacific announced a reduction from main-line points in California to New York on dried fruit in boxes, barrels or kegs from \$1.40 to \$1. This applies to a minimum of 30,000 pounds.

Dried-fruit men asserted that the reduction was not the benefit which first appeared. It applied only to points reached by sea competition, and was not available to such centers as Chicago and St. Louis. It has been the custom to largely ship dried fruit in sacks or bags. The additional weight of the boxes or barrels makes the apparent reduction a trifling one, it is asserted.

Yesterday the Santa Fe met the reduction of the Southern Pacific on dried fruit in boxes, barrels or kegs and quoted a rate of its own of \$1.20 on dried fruit in sacks or bags from points reached by its system in southern California. These rates apply to Missouri and Mississippi river points and to Chicago, not being restricted to maritime points in competition with the railway. W. A. Bissell, general passenger and freight agent of the Atlantic & Pacific, is credited with bringing about this reduction.

It was announced yesterday that the rate would be put into effect whether it was voted down by the Transcontinental Freight Committee at its meeting or not. Charles F. Smurr, general freight agent of the Southern Pacific, stated yesterday that no reduction had been made by that line with reference to dried fruit in bags or sacks, but that the subject of a reduction was under consideration.—Chronicle, Aug. 9.

Gleanings.

—Miss Elderly: "What would you do if I should tell you my age?" He: "Multiply it by two."—*Brooklyn Life*.

—The San Jose *Mercury* thinks the highway of the future will consist mainly of an electric-railway track and a road for bicycles.

—James Ely informs the Woodland *Democrat* that he can go into the foothills, three miles west of his Buckeye ranch, and kill a deer "most any time he wants one."

—"Do I make myself plain?" asked the angular lecturer on 'Woman's Rights,' stopping in the middle of her discourse. "You don't have to mum," replied a voice from the rear, "the Lord done it for you long ago."—*Vogue*.

—The Watsonville *Rustler* has definite ideas on the silver question. "The silver dollar," it remarks, "is the poor man's coin, and by a happy coincidence two silver dollars will pay a year's subscription to the *Rustler*, a live local newspaper of the Pajaro valley."

The irrepressible dude very early in life
Falls in love with each maiden he sees.
In fact he no sooner gets down on his tip
Than he's apt to get down on his knees.

—*Brooklyn Life*.

—Commenting upon the announcement that Chris Evans' wife and daughter are about to go into the theatrical line, the Woodland *Mail* remarks that it will be in the line of family tradition, since the husband and father at different times devoted himself to holding up the stage.

—From the report of the Tacoma meeting of the Washington State Horticultural Society it appears that the Italian prune is very strongly favored by the fruit-growers who were in attendance at the meeting. It is stated that it was agreed that the French prune should not be planted at all, and, except for immediate use in the fall, only the Italian should be planted.

—The editor of the Kern County *Gazette* notes the fact that he was asked to give, for publication in one of the city papers, his views on the silver question, adding, "We didn't answer it, from the simple fact that our ignorance on the subject is snhlime. We feel very lonesome in this matter, for we are perhaps the only person in the State who don't understand it thoroughly."

—Wm. Isaacks, says the Shasta *Courier*, has returned from a trip to Oregon. He reports that in Webfoot "times are so hard that farmers combine to harvest crops and pay their hands in sheep and coyote pelts. When an Oregonian wants a drink he goes into a saloon, throws down a sheep-hide, gets his drink and the barkeeper hands out nine rabbit-skins for change. It is a sort of skin game all the way through."

—The Oregon *Statesman* pays the following handsome tribute to the unlovely but lucrative hog: "The hog is one of our best sources of wealth, and we owe much of respect to him. We must take off our hats to the hog, also, because he is very much like most people. He takes all he can get and keeps all he can. The difference is that he is a modest fellow, has no pride and don't think he is pretty or smart. But these qualities are in his favor. Great is the hog."

—Several years since Jacob Cunningham, of Blacks, Yolo county, planted 20 acres of figs, of the White Adriatic variety; and his neighbors used to drop in every few days and talk on pleasant topics like insanity, idiocy, wastefulness, second childhood, and such. Now they beg to withdraw their former remarks, for Mr. Cunningham has demonstrated that figs are well adapted to Yolo county soil, and he will realize handsome profits. The fruit is large and of delicate flavor and will make a most excellent confection.

—Mr. Leonard Coates has the following to say in the Napa *Register*: "Speculators are everywhere taking the opportunity offered by the much talked-of 'financial stringency' to increase the feeling of insecurity. This state of things is largely imaginary and probably merely a periodical depression, absolutely unavoidable when nearly every one operates on 'margin'—lives beyond his means. A halt must be called sooner or later, and hence the 'hard times,' born of these spasms of economy, when necessity is made a virtue."

—The Governor has appointed the following citizens as delegates from the State at large to the Sacramento Road Convention, Sept. 7th: Allen B. Lemmon, Santa Rosa; N. P. Brown, Nevada City; John W. Surface, Ione; Geo. B. Clifford, Napa; J. A. Fletcher, Auburn; Add Chinkson, Sacramento; Will S. Green, Colusa; Marsden Manson, San Francisco; D. N. Hoag, Redlands; W. H. H. Hussey, Oakland; R. J. Broughton, Santa Barbara; W. B. Meek, Yuba; Jay Scott, Fresno; A. T. Lightner, Bakersfield; R. A. Thompson, Santa Rosa; Ernest McNollough, San Francisco; W. R. Radcliff, Watsonville; W. S. S. Boynton, Oroville; J. Boggs, Princeton; J. A. Woodson, Sacramento.

Entomological Laboratory Manual.

Prof. C. W. Woodworth, instructor in entomology at the State University, Berkeley, has just published a useful aid to instruction in that line, entitled "Laboratory Manual for the Course in Elementary and Economic Entomology at the University of California." It contains an outline of 16 weeks' work, three hours each week, the leading observations to be made, the appliances required, etc., and abundant blank pages for the student to record his observations in text and sketch. The book has an oilcloth cover to escape injury from fluids, etc. The work will be of great value to the students in Prof. Woodworth's classes and in other similar institutions, as well as suggestive to teachers of entomology in the public schools and academies. It can be had for 50c per copy by addressing the author at Berkeley. This price is merely to cover the cost of publication.

Our Dried Fruit Edition.

TO THE EDITOR:—Your Dried Fruit Edition, Vol. XLVI, No. 3, July 15th, ought to be in the hands of every fruit-grower in the State. You have done the industry a great service. I want an extra copy to put in my packing-house, where all employees may see it. N. P. CHIPMAN, Red Bluff.

HORTICULTURE.

Lemon Growing.

The following essay on the lemon was read before the last meeting of the Southern California Pomological Society by D. H. Burnham, of Riverside:

To a person about to engage in lemon culture, the first question suggested would naturally be as to a suitable location. Too much importance cannot be attached to this, because favorable or unfavorable climatic conditions may make all the difference between success and failure in the enterprise. The ideal locations are not easy to find, even in the favored climate of southern California; but diligent search will disclose them, scattered here and there at protected points and in limited areas. They may be known by the following conditions, viz., a good fruit soil, freedom from damaging frosts, sufficient water for irrigation, and sufficient elevation and distance from the coast to secure exemption from fogs and smut-producing insects. As to the first, the soil may vary considerably and yet produce good lemons, and it is presumed that if all other conditions are favorable there will usually be no difficulty with the soil. The temperature is more important. To insure the most perfect success, the maximum cold should not be greater than 32 degrees.

Having selected the location, the choice of trees next requires attention. It is perhaps unnecessary to say that good, healthy, well-grown orange stock is the only suitable stock for either the lemon or the orange. No one, at this late date, will be likely to repeat the early unfortunate experiments with lemon, lime, China lemon and other stocks.

With regard to varieties, while admitting some of the claims put forward in favor of other varieties, I do not hesitate to express the opinion that the Lisbon possesses more good qualities than any other variety with which I am acquainted. I will say, however, in regard to the Villa Franca, for which much excellence is claimed, that my acquaintance with it is too limited to justify any expression of opinion in regard to its quality or adaptability to this locality.

From the time of planting to the time of fruiting, no pains should be spared to produce and continue the healthy and vigorous condition of the trees; the pruning requires special and intelligent attention, being careful not to prune too much nor yet too sparingly. The natural habit of the lemon, in its early growths, is to throw up strong, upright shoots; these must be judiciously thinned and checked, with the view of forming a symmetrical top and to avoid the necessity of cutting away any heavy wood later, keeping in mind the desirability of a compact, self-supporting top, and remembering also that when the tree comes into bearing the choicest fruit will be found where well protected by the foliage.

During all this the fertility of the soil should be carefully considered, adding from time to time in moderate amounts such fertilizers as seem to be necessary to secure a fair growth of well-matured wood.

Many methods of curing lemons have been tried during the last few years, some with considerable success, others resulting in decided failures, but altogether contributing to the stock of useful and instructive experience, which may result in the adoption of more perfect methods.

Without stopping to review the methods pursued by others, and with no desire to make this article unreasonably long and wearisome, I cannot perhaps do better than to describe, as briefly as possible, my personal experience in handling the fruit. At first, I will say that the variety with which I have mostly experimented is the Lisbon, which originated, so far as this locality is concerned, as follows: With a consignment of oranges received by an importer in San Francisco (in 1875, I think) were a few Lisbon lemon trees, which a friend who happened to be in the city at the time secured and brought to me in Riverside. From this stock my own orchard is derived, as well as several well-known orchards in Riverside. I do not think that it is different from other Lisbon lemons, but it has been very satisfactory to all who have grown or in any way become acquainted with it. It was lemons of this variety, cured as I am about to describe, which were sent, by request, to the Department of Agriculture, reaching Washington about the first of September last, having been packed since the preceding November (nine or ten months).

The report upon these lemons has been quite generally quoted in the papers, but for the purpose of showing the possibilities of the California product, I may be pardoned for again quoting from their letter, where, among other things, they say: "We have just made a rough test with specimens from this lot which you sent, and other specimens secured from one of the leading groceries in this city, which cost in the New York market \$8 per box of 300, actual count. The selected specimens are exactly the same weight, and find that the California specimens yield fully 33½ per cent more juice, is much more free from rag, and has a thinner skin than the imported garden-grown, velvet-skinned Sicilian lemon."

My first crop of any considerable amount was in 1885. I then commenced a series of experiments in curing. First, I packed 100 boxes in perfectly dry sand, wrapping each lemon in heavy fruit paper. A little later I put up 100 boxes more in precisely the same manner, also filled some boxes with the wrapped fruit, spreading a sheet of heavy paper over the top and placing on this dry sand to the depth of about one inch. Still others were wrapped in paper, filling the boxes as full as convenient and placing them, some as closely piled as possible, and others left a little open for ventilation, and still others were simply put up in boxes without wraps. I kept nearly all of them until June (about six months) with more or less sorting over, except those lots where sand was used, then packed and shipped probably the first car that ever went out of Riverside. The first lot packed in sand came out in perfect condition; no loss worth mentioning. All the decayed fruit found in the 100 boxes did not fill half a box. The fruit stood shipping well and sold in Denver as high as \$8

per box, while the best imported sold for about \$9, which made the price about the same, allowing for the difference in size of the boxes.

The second lot of 100 boxes came out of the sand in a damaged condition, nearly one-half of the whole lot being lost from decay; the outer portions of each box being fairly good, while the centers were in some cases entirely spoiled. I can only account for this difference by supposing that the sand had gathered moisture before the lemons were put in, or that the lemons after the early fall rains contained more moisture. The lemons put up with a slight covering of sand were in fine condition, nearly as good as the first lot put in sand. Those wrapped in paper kept fairly well, but with heavy losses from shrinkage, those where air was more nearly excluded being best, while those without wraps were lacking in quality and general appearance, with a large percentage of decay and considerable injury to the sound fruit on account of dust from the decayed portions.

After making a careful study of these experiments, I arrived at the conclusion that the important conditions for perfect curing of the lemon could be secured much easier and at less cost by the use of paper only; that a dry, moderately cool, dark room, with abundance of fresh air, protected from drafts, with fruit well wrapped and packed in well-lined boxes, would meet all requirements demanded. Accordingly, I have adopted the following method, which seems to be attended with all the success that can reasonably be expected: Commence picking as soon as any portion of the fruit is of the desired size. Continue from day to day, picking only the size determined upon. Use every possible care in handling, so as not to bruise the fruit in the least. Wrap as soon as possible when the surface of the fruit is perfectly dry. Use good, strong fruit paper, twisting the corners so as to cover the fruit perfectly. Pack in boxes well lined with Manila paper, placing a sheet of same paper between each layer. Fill boxes as nearly full as possible without crowding or subjecting them to any pressure from boxes above. Fold the lining paper well over the top, adding also another sheet of the paper. Finally, store in any convenient room possessing as nearly as possible the conditions previously mentioned. After storing do not disturb the fruit until wanted for shipment. Slight examination will disclose the condition of the fruit at any time, which, if not satisfactory, should be shipped at once. I do not think the keeping qualities of the fruit will be improved by any repacking, rewinding or exposure of any kind.

Lemons stored in this way last year kept in perfect condition from six to eight months. Some at ten months were still in fair condition; others were kept twelve months, but with some loss toward the end of the season.

With regard to lemon-curing houses, the grower who has properly constructed houses, with double walls, double roofs, complete system of ventilation, and superior facilities for handling the fruit, is indeed fortunate; but it has been fully demonstrated that an excellent degree of success can be attained with very simple and inexpensive buildings and appliances.

Orange Figures in the Ojai.

E. S. Thacher, who has a hundred acres in citrus fruits on the higher lands of the Ojai valley in Ventura county, is credited by the *Venturian* with an account of his experience. The land is rough and rocky, and its preparation was difficult and expensive. Water is not abundant, and the trees have not done as well as they might have done under more favorable circumstances. The fruit, however, for bright appearance, sweetness and flavor, has few equals. Mr. Thatcher makes a careful and conservative estimate of the expenses and profits of the business, and it can be depended upon as being absolutely correct:

87 trees, 1-year bud on 2-year stock, at 65 cents.....	\$56 55
Planting.....	3 00
Cultivation, 5 years at \$3.....	15 00
Irrigation, 5 years at \$3.....	15 00

Total cost per acre.....\$89 55

The cost of land, clearing and preparation for planting and of water supply will have to be added.

The few scattering oranges obtained in the third and fourth years are not estimated. In the fifth year the owner can depend upon ten boxes to the acre, which will bring about \$30. After the fifth year the income will increase rapidly. Mr. Thatcher has six acres of Seedlings and Mediterranean Sweets, which are nearly 20 years old and are in full bearing. The crop this year is somewhat below the average, and prices have been low. He has shipped 1000 boxes and has 200 boxes in addition. These have sold at an average of \$1.50 per box, making the gross income for the six acres \$1800, or \$300 per acre.

200 boxes at 15 cents each.....	\$30 00
Picking at 4 cents per box.....	3 00
Sorting and packing at 9 cents.....	16 50
Paper for wrapping.....	8 00
Cultivation one year.....	3 00
Irrigation one year.....	3 00

Total cost of handling per acre.....	\$68 50
Net income per acre.....	232 00
Net income of six acres.....	1392 00

Japanese Plums in Vaca Valley.

Last week, H. A. Bassford, one of Vaca Valley's most successful horticulturists, brought to the *Reporter* office samples of three varieties of Japanese plums grown on his ranch near town. The large, highly colored *Prunus Simonii* or Simon plum measured in circumference seven and one-half inches. This variety finds ready sale in the East at high prices, but the tree is said to be a rather shy bearer. The Mikado, a large golden-yellow plum, when ripe, measured seven and one-quarter inches. It is considered now as the most profitable variety that is propagated in the valley, ripening early, the trees good bearers and the fruit bringing very high prices. Last season they brought as high as \$11 per box in the Eastern markets, or over 50

cents a pound, and this season are bringing from \$5 to \$7 per box. The Shiro Smono, or Abundance plum, is somewhat smaller than the two first named, but has a richer color. The sample measures six and one-half inches. This plum is a very heavy bearer and brings a fancy price in the markets of the East.

Mr. Bassford says he is testing several other varieties of Japanese plums and a few varieties of Japanese apricots, peaches and pears.

THE IRRIGATIONIST.

California Methods of Irrigation.

A very interesting review of irrigation methods is given in a publication just issued for the use of delegates to the Irrigation Congress to assemble in Los Angeles, October 10th, entitled "Irrigation in Southern California," by Harry E. Brook. The methods originated in that part of the State, but they are now common in the State generally wherever the artificial application of water is resorted to. The condensed description will meet many inquiries which we receive regarding California practices.

The extent and location of the lands to be irrigated must first be determined with approximate accuracy, in order that the money return from the sale of water may be estimated and placed against the cost of obtaining it.

The various hydrographic problems must then be studied in the field, with some degree of detail, including questions of rainfall, storms, evaporation and sediment carried by the water. Detailed topographic surveys are then necessary. If storage reservoirs are to be constructed, an even greater degree of engineering skill may be required. The character and nature of the construction of the dam will differ in every case.

Irrigation is an art that must be learned. It has been brought to the highest perfection in southern California by men of means, who have tried all known systems.

Water for irrigation is obtained from running streams; by storing water in reservoirs constructed in the mountains or foothills; by tunneling into the mountains; by building underground dams to force the subterranean flow to the surface, and by boring artesian wells. Water is also occasionally pumped from wells, on a small scale, by windmills or by steam engines.

The first supplies of water used for irrigating were derived from running streams that were easily diverted. No expensive dams or other works were built, and economy in handling the water was not deemed necessary. Such streams were not numerous in this section, and over 25 years ago successful experiments were made in the search for artesian water. Water storage in natural lakes or depressions, or in reservoirs built on drainage lines, was next undertaken. This system, when the works are judiciously constructed, is the most reliable of all. Several streams of considerable size have been developed by tunneling into the mountains. Where streams have little or no flow in summer, trenches have been sunk to the bedrock, across the stream, and a dam there constructed which has forced the underground flow to the surface.

The next step in irrigation is the application of water to crops. The methods used may all be reduced to three—flooding, small furrows and basins—the choice depending upon the soil and the amount of water available. In southern California the furrow system is now used almost exclusively. It is considered by far the best, as its effect resembles that of a slow, soaking rain. The check or basin system is sometimes used where the surface is rolling or steep. For steep hillsides a method of irrigation by curved furrows has lately been introduced in southern California. Cemented canals and wooden flumes are largely used. Sub-irrigation has been a total failure practically, the roots clogging the pipes.

The processes of irrigation in southern California may be classed under three heads: (1) Frequent irrigation with rare cultivation; (2) medium irrigation with medium cultivation; (3) rare irrigation with frequent cultivation. The first may be termed the method of the pioneer, the second the method of experience, the third the method resulting from education. The primitive Mexican farmer wasted as much water in growing a half acre of beans, corn and melons as is now found ample to thoroughly irrigate 20 to 40 acres of oranges or Muscat grapes. The change has been brought about by experience, education and a free use of the cultivator.

The quantity of water used per acre varies greatly. It depends on the crop, the soil, the rate of transpiration and the judgment of the irrigator. Alfalfa grown on mesa soils probably requires the maximum and olives the minimum. Citrus trees usually require more water than any other trees, and are generally irrigated every four weeks during the summer. The supply of water per acre varies in the different colonies. At Ontario, Pomona and Cucamonga one inch to ten acres is stipulated; Rialto, Redlands and the proposed Victor project have one inch to eight acres; Riverside, Santa Ana, Highlands and several other settlements use any amount which the irrigator chooses to order and pay for. Some districts are contracting to furnish one inch to five acres.

The term here used in water measurement, one inch, means a steady flow of water through an aperture one inch square, under a four-inch pressure, and is identical with the term "miner's inch," as commonly used in California. This flow yields in round numbers nine gallons per minute.

The preparation of virgin soil for an orchard or vineyard to be irrigated after planting varies little from that of land which depends on rainfall. If the soil is light and porous, it is desirable to have quite a fall to the land, so that water in the furrows may be run swiftly over the soil, while on a heavy soil it is necessary to have the ground nearly level so that the water may be run very slowly, thus thoroughly soaking the ground. Trees are usually planted 20, 22 and 24 feet apart. Furrows are commonly opened between these trees by taking off the teeth from a six-foot

cultivator and placing a small shovel at each end and one in the center, thus making three furrows, each two feet apart, at one trip. The growing limbs usually extend so far out from the trees that two sets of furrows are all that can be made. Into these six shallow furrows the water is turned from the flumes or head ditch and is allowed to run 24 to 48 hours, according to the nature of the soil, until the ground is perfectly soaked. The cultivator is started as soon as the horses can get on the ground after the irrigation, and the soil is kept perfectly pulverized until another irrigation is deemed necessary.

In southern California, orange trees are usually irrigated about six times annually; apricots, peaches, prunes and Muscat (raisin) grapes three times; and olives and corn once; while alfalfa is generally flooded after every cutting, which is from six to eight times every season.

Irrigation for grain is never resorted to in southern California, the "glorious climate" making it possible for the grain farmer to plow in December, sow in January and harvest in May, the usual winter rains from December to April being ordinarily amply sufficient to make a first-class crop of wheat or barley. Sugar beets are not irrigated.

RURAL IMPROVEMENT.

Sewage Farms in California.

The disposition of sewage is a question of the greatest importance in cities and towns beyond tide-water connections. The difficulty of proper undertakings is the reason why many towns and villages are uncleanly, and their inhabitants a prey of zymotic diseases. The following notes on what some California towns are doing, as recently described in the *Engineering News*, should interest many of our readers:

A very interesting example of the use of sewage for irrigation is found at Fresno, Cal., where the city pays \$5000 per year for the disposal of the sewage, and the fortunate man who receives the money distributes the sewage over land which he rents to Chinamen for market gardens.

Prior to the construction of the sewers the city trustees thought the disposal of the sewage the great obstacle to be overcome; therefore they called for proposals to take care of the sewage for five years, the successful bidder to give a bond of \$10,000 to protect the city from all damages which might arise therefrom after its delivery at the end of the pipe. Alexander McBean, of Oakland, was the lowest bidder, and his bid of \$5000 per annum was accordingly accepted. The contractor purchased 80 acres of land at the end of the outlet sewer, and for one year the sewage ran upon that land without any attention or care, except when occasionally some neighbor saw fit to take it for irrigation. The second year the contractor constructed ditches and leased the land to Chinamen for vegetable gardens, and for two seasons it has been used for irrigating gardens and vineyards.

Mr. H. Burley, of Fresno, superintends the renting of the land, which is all under cultivation with all the various kinds of vegetables commonly in the market, such as potatoes, yams, parsnips, lettuce, celery, beans, peas and corn. It is customary to irrigate vegetables in furrows only. Trees and vines would be irrigated in furrows also. Grasses would be flooded, but we have no knowledge of sewage being used on grasses.

Mr. Burley, the superintendent of the farm, states that he can see no difference between irrigating with sewage and clear water. It is possible that the land may produce good crops longer by the use of sewage, but that is to be proved. The general impression is that sewage is superior to water for irrigation. The sewage farm is an exceptionally poor piece of land, but it produces pretty well with sewage irrigation.

When put upon the land, without more dilution than is given by the flushing water, unless the land is cultivated within a day or two, there is quite a stench, but when cultivated this disappears.

When not needed on the farm, the sewage is allowed to float in the irrigating ditches for miles beyond, it which way it becomes very much diluted, and in the irrigating season is used throughout the country below the sewage farm proper.

The sewage farm of Pasadena is owned by the city, and comprises 300 acres of land situated about four miles from the city in a southeasterly direction, in a well-settled part of the valley. The soil is a sandy loam, mixed with some alkali. It has the capacity of absorbing a considerable quantity of water. It is estimated that for the present only 40 acres will be required for the disposal of the sewage, but the latter may be spread over a much larger area for the purpose of irrigating crops on the remainder of the farm.

It is the intention to devote the land irrigated with sewage to the raising of vegetables, berries and citrus fruits, and perhaps walnuts and alfalfa hay. The latter yields about seven crops per annum, or about ten tons per acre, and is sold for \$10 to \$15 per ton. It stands any amount of irrigation at all seasons, and the sewage may be crowded on it at any time. Vegetables are calculated to yield \$25 net per acre, while berries, as a rule, yield from \$100 to \$200 per acre per annum. Citrus fruits often net from \$150 to \$400 per acre per annum. With sewage irrigation, these figures may possibly be exceeded.

The sewage is taken from the sewer in much the same manner as water from irrigating pipes by the simple closing of a cast-iron slide gate, built into a manhole, through which the pipe leads. The sewage is thus backed up into the sewer until it rises nearly to the top of the manhole, whence it finds its way through a joint of sewer pipe into the main carrier, an earthen dish 20 ins. wide at the top, 10 ins. at the bottom and 10 ins. deep. This carrier has a grade from 4 to 6 ins. in 100 feet. The land which the main carriers cover is divided into fields 100 ft. in width, and from 200 to 400 feet in length. The slope of the fields

at right angles to the main carriers is $1\frac{1}{2}$ to $2\frac{1}{2}$ ft. per 100 ft. To irrigate the fields a dam of earth or of redwood board is inserted in the carrier at the lower end of the field, and the sewage is thus diverted into numerous small furrows from 3 to 6 ins. deep and 1 ft. apart, previously made with a common cultivator. Each field is expected to take the sewage for at least 12 hours. After the first soaking the dam is removed and the next field in order will receive its charge, and so on. As soon as the ground permits it, say, in about two days, field No. 1 will be thoroughly cultivated, to keep the ground from baking hard and to allow the air to act upon the soil. This is the common course adopted here for irrigation with pure water.

Fruit trees are planted in regular lines about 20 ft. apart each way, which permits the manner of irrigation here described. The side and bottom walls of the main carriers will be raked over with a garden rake whenever it becomes necessary to prevent the ditch from becoming foul.

Berries are to be planted in rows about 8 ft. apart, and the sewage will be led in between the rows so that the ground can be well cultivated. Vegetables may be planted in single or double rows, as the case may require, and the sewage will be conducted in between the rows or fields in flat trenches, which are to remain filled until the ground from trench to trench is thoroughly saturated with the sewage water, when the trenches will be drained, and after having dried off sufficiently they will be cultivated.

Redding is one of the smallest towns in the United States using sewage for irrigation, or having a sewerage system. It was the original intention of the town to discharge its sewage into the Sacramento river, but objection was made at Sacramento, where water is taken from the river to supply the city, and the State Board of Health gave notice to the authorities of Redding not to discharge the sewage into the river. The town authorities thereupon requested bids for taking care of the sewage, and a contract was entered into for a term of 40 years, the sewage to be disposed of at \$300 for the first year, the amount of yearly payment thereafter to increase in proportion to the increase of the assessment roll.

The contractors immediately purchased a tract of about 100 acres of land within the corporate limit, and prepared a portion of it, about a mile from the built-up part of the town, for the utilization of the sewage by irrigation. The land selected is comparatively level and the soil a sandy and gravelly loam 4 to 6 ft. in depth, underlaid with gravel. Land better adapted to the purpose would be hard to find. About ten acres have been prepared for irrigation by leveling and constructing open carrier ditches, elevated above the surface of the land to be irrigated.

The sewage is applied directly to the land by the broad surface irrigation system, either by being run in furrows between rows, or spread over the surface, according to the requirements of the crop. The sewage has been applied to various crops, grain, asparagus, potatoes, turnips, beets, orchard and some garden truck. It has been principally used in raising fruit trees for nursery stock, the young trees being irrigated between the rows. About five acres are used as a nursery.

Generally the land is cultivated as soon after an application of sewage as the soil becomes dry enough. Part of the year it is necessary to put the sewage on land on which no crops are growing. It is then customary to run the sewage on the same piece of land several days in succession, and after it becomes sufficiently dry to plow or cultivate it. This is more particularly the case in winter, when there is sufficient moisture for crops without irrigation.

The sewage is not allowed to flow continuously onto the land, as too much time would be required in taking care of it, besides which the ordinary flow is not of sufficient volume to operate successfully. A reservoir was constructed at the outlet of the sewer, at the upper line of the sewage farm. This reservoir has a capacity of 75,000 gallons, which is about equal to the daily sewage flow in the dry season. Each morning the outlet to the reservoir is opened, and the contents discharged in from two to four hours, as desired. The bottom and sides of the reservoir are so constructed that everything gravitates to the outlet, and special cleaning is seldom necessary. An abundant supply of water from the town water-works is at hand for use, if required. The reservoir is covered with a rough board structure, and a vent chimney of lumber is carried to an elevation of about 60 ft. This has been sufficient to prevent any nuisance, and none is complained of, although the reservoir is alongside the public road.

No difficulty has been experienced in preventing a nuisance on the irrigated lands. Care and attention to secure proper distribution and cultivation are required, and with these the results have been satisfactory. There is sometimes a slight odor in the immediate vicinity of freshly-irrigated land, or where it is ponded previous to its subsidence into the soil, but this odor is not noticeable at a distance of 200 feet.

THE DAIRY.

Making Gilt-Edge Butter.

Immediately after milking strain the milk through a thin cloth into a can from 12 to 20 inches high, and cool it to 60 degrees within 30 minutes, says W. C. Thornton in *Dairy World*. Keep it at that temperature 12 hours. Never mix new milk with previous milkings until it has been treated as above 12 hours. Never mix sweet milk and sour milk together. Never let milk or cream get to a higher temperature than 70 degrees. Stir the milk or cream well morning, noon and night while it is ripening. Never allow milk to get more than 36 hours old, unless it has been kept sweet longer than 12 hours. Milk or cream is ripe and ready to churn just as soon as it clabbers and is brought to its proper temperature.

In different climates, seasons, localities, surroundings and conditions the temperature for churning varies from 65 to 70 degrees. No person can tell the exact temper-

ature at which his neighbor should churn. In order to arrive at the proper temperature it is absolutely necessary to have a dairy thermometer. First, try the temperature at 62 degrees. When the butter comes the grains should be of uniform size, about the size of a turkey shot, very much resembling fish eggs, and have a glossy appearance. If the grains are smaller than turkey shot the churning was too cold. The colder you churn the finer the grains will be and the less butter you will get, as there will not be a complete separation. If you churn too cold, the milk will foam and not come at all. If you churn too warm, the butter will be soft and spongy and be only grease instead of butter. If you churn at the right temperature it should take from 45 to 60 minutes.

It is very important to stop churning at the right time. Churning after the butter has come will injure the butter. These round grains are solid butter; there is no milk in them, the milk is around these grains. At this stage the milk is easily washed from the butter. Never put your hands in the butter. Draw the buttermilk off, put enough cold water in the churn to float the butter; revolve the churn a few times or agitate it by shaking or rocking it gently; draw off the water and repeat the washing with pure, cold water three times and the milk will all be washed out. Put one-half ounce of dairy salt to the pound; work the salt in enough to get the water out; the less butter is worked the better.

It is impossible to work all the milk out of butter, but it is no trouble to wash it out. Water and butter will not mix; the water is easily worked out. Unnecessary working mashes the grain and ruins the butter; continuous working, mixing and smearing changes it from butter to grease, causing it to lose its flavor and ruins its keeping qualities, and very soon it will assume a cheesy smell and taste, and later on it will have a very pronounced and repellant odor.

Jersey Cheese Victory at World's Fair.

Chief Buchanan, in charge of the stock exhibit at the World's Fair, has announced the result of the cheese contest, which has been in progress there for several weeks. The test is pronounced the most complete, most carefully conducted and most thorough ever made. The contest was between 25 cows of the Jersey, Guernsey and Shorthorn breeds each.

The result was as follows, being a decided victory for the Jerseys: Milk in 15 days, Jerseys, 13,296 pounds; Guernseys, 10,938 pounds; Shorthorns, 12,186 pounds.

Cheese made—Jerseys, 1451 pounds; Guernseys, 1150 pounds; Shorthorns, 1077 pounds.

Value of cheese—Jerseys, \$193.98; Guernseys, \$135.92; Shorthorns, \$140.14.

Value of whey—Jerseys, \$9.26; Guernseys, \$7.73; Shorthorns, \$8.67.

Increase in live weight—Jerseys, \$14.72; Guernseys, \$27.60; Shorthorns, \$31.91.

Total value—Jerseys, \$217.96; Guernseys, \$164.55; Shorthorns, \$180.72.

Deduct cost of feeding—Jerseys, \$98.14; Guernseys, \$76.29; Shorthorns, \$99.36.

Net profit in 15 days—Jerseys, \$119.82; Guernseys, \$88.30; Shorthorns, \$81.36.

The award for the best breed and cow goes to the Jersey, Ida Marigold, owned by C. A. Sweet of Buffalo, N. Y.; the second to the Jersey, Merry Maiden, owned by O. and C. E. Graves of Maitland, Mo.; the third to the Jersey, Lilly Martin, owned by M. G. Campbell of Spring Mill, Tenn.; the fourth to the Jersey, Signal Queen, owned by Frank Eno, Pine Plains, N. Y.; the fifth to the Shorthorn, Nora, owned by Daniel Sheehan of Osage, Iowa, the four next best Jerseys.

THE APIARY.

Honey Notes.

TO THE EDITOR:—Not long ago I reported that very little honey was coming in, but now bees are storing honey with great rapidity. Last year we had an immense forest fire in this vicinity and a large stretch of country was burned over. This season a dense growth of vegetation sprang up of various nectar-secreting plants. The cardinal flower seems to be the leading honey plant in bloom at present, and the mountain-sides are painted for miles with its crimson glow; this, together with the snowdrop and buckeye, constitute the principal sources of the honey flow at present.

The honey from the buckeye, when first gathered, has a peculiar, disagreeable flavor, but when ripened with age it is a good quality of honey. The honey also gathered from the holly is unfit to eat when first gathered, but in time becomes very delicious. The nectar secreted by the snowdrop, when first stored by the bees, is sourish in taste; the honey from cardinal flower is very superior when first gathered, so also is wild raspberry.

All extracted honey should be thoroughly ripened after it is thrown from the combs; if it was sold at once the chances are that the apiarist who sold it would destroy his market. Extracted honey should ripen at least six weeks. It is best ripened by placing in shallow stone jars, tanks, etc., in a warm room, with as much of the light excluded as possible. Light tends to crystallize it very rapidly. Crystallized or candied honey can be brought to the liquid form again by placing the can in a vessel of warm water and allowing it to remain there a short time. The water must not be too warm, otherwise the honey might get scalded and its flavor destroyed.

The most vital point in the production of a superior article of honey is to have it thoroughly ripened. This is a point, however, where many beekeepers are at sea, and which accounts, to a great extent, for the glutted honey markets. The honey was not ripened, and was therefore an inferior article and dull of sale.

In producing superior comb honey there are many

essential points to observe. A beekeeper should study the flora of his section and know at about what time this and that variety will bloom. The nectar from some plants causes bees to make a dark-colored comb in the section, which in many markets is unsalable; the honey itself, though, may be of the highest quality. There are certain varieties of fruit bloom that bees work upon that make them secrete a dark wax; the manzanita is the same. If possible, it would be a good idea when such blooms keep bees busy to extract all such honey and allow comb honey to be built only when bees are building white combs.

The foundation for section-boxes should be as thin as possible to make a superior article of honey.

After the section-boxes are finished they should be removed as soon as possible to keep them from being travel-stained. All sections should also be scraped of bee glue to make them presentable for market and have the producer's name and address stamped on.

Grizzly Flats, Cal.

S. L. WATKINS.

WORLD'S FAIR.

A Californian's Comments.

TO THE EDITOR:—Prolonged hot weather in this section and throughout the Ohio valley has materially shortened crops, and is an added factor in the matter of hard times, now "knocking at the door" of many an agriculturist and mechanic in this and neighboring States. With the short crops there are low prices for much produce, notably grains. Economy is the watchword all along the agricultural line.

But depression is keenly felt in other circles than agricultural. In States near and far, failures are of frequent occurrence. Here, in Chicago, money is easier than a month ago, but there are vast sums locked up in real estate here. Anticipations of large returns for investments during the year of the great fair will, in many instances, be unfilled.

From causes as remote as last fall, or as near as this spring, of the definiteness of which there seems to be a question, the fruit crop of Illinois will be very short this fall. This is but a repetition of the experience of last season. Being "at home," this State has a large exhibit of fruits, frequently replenished. Other States in this immediate neighborhood and farther east, notably New York and New Jersey, have good displays of fruit on their tables. California's exhibit is fine, and excites much favorable comment. Our fruit in jars is very attractive; fresh fruit received two or three times per week adds to the beauty of our showing.

In the California display in the Horticultural Building, the southern counties have a large exhibit of citrus fruits that has been kept up since the opening of the Exposition, and strenuous efforts will be made to keep up the display for several weeks to come. This exhibit attracts much attention, and many are the inquiries regarding cost of growing the fruits and resultant profits.

These southern counties have made liberal appropriations for displaying their products at this fair, apparently appreciating the grand opportunity offered of advertising their separate localities. The result ought to be—will surely be—the increased development of that section. If half the enterprise had been manifested by our northern counties, the State would have made a far more creditable showing, and these latter named counties would share to a far greater extent than they will in the results, during years to come, of the liberal advertising made. As it is, all portions will undoubtedly be benefited, for the attention of thousands has been drawn to California as a State, but the southern counties will get the cream. Let the more north-

ern counties take lessons in advertising of the "Southern Citrus Belt."

This is written by a resident of one of the bay counties, who feels lonesome as he calls the roll of counties in that section and farther north and east. Where is Sonoma's exhibit? That is a wealthy, large county of varied resources, but the county has no special exhibit. What of the wealthy San Joaquin county? Could she not afford a few hundred dollars to advertise in a way she never will have again? Napa, Solano, Yolo, Mendocino and others—they are not known here. Our people, it would seem to "a looker-on in Venice," do not appreciate this golden opportunity to place our grandest of States before the world. Sacramento and Santa Clara have done well; Humboldt also. But there yet remains an opportunity, not so large, not so rare as this, at the World's Fair. If we are to hold an Exposition in San Francisco next winter, every county in the State should be well represented. People from far and near will visit us, and we should "put ourselves out" a great deal to entertain them in a way that will make favorable and lasting impressions on their minds.

The display of fruits of all kinds on the tables allotted to California in the Horticultural Building is very attractive. "California takes the cake," "California beats the world on fruit," and other kindred expressions are daily heard. Fruit-growers from abroad will send to our nurserymen for different varieties of fruit trees, anxious to raise as good fruit as we do, or at least attempt to do so. This investigation—the comparing of fruits by orchardists from different States—will result in much good to the horticultural interests of the whole country.

California has two orange and lemon groves here that are growing finely and make a splendid showing. A few other fruit trees are here, but almost all came from the southern counties. Ornamental trees and plants that are planted on the grounds surrounding the State building are doing well, their growth having been checked but little by transportation and transplanting. They greatly add to the looks of the surroundings, scattered as they are in the lawn kept evergreen and in excellent order.

When it comes to comparing our climate with that of Chicago, language fails. There is no comparison. When did we have such sultry days as have of late been so common here? Where in all California do we have to keep moist sponges on the heads of our horses lest they succumb to intense heat? Do we ever have the thermometer attain to its highest degree at 9 o'clock at night, and hold steadily away up in the nineties for hours thereafter? Are there numerous instances—are there any—where lightning strikes and burns dwelling-houses and valuable contents or destroys more precious lives? Home-sick for glorious California are her exiles in the "White City." Of the wonders of our State, of her grand climate, of her vast and remarkable resources, we ever sing.

The RURAL is a welcome visitor in the reading-room of our State building, and its well-filled columns are read by many a resident and by non-residents of California who fain would cast in their lot with ours.

Chicago, July 29, 1893.

THE Chino beet-sugar factory, one of the largest in the United States, with a maximum reducing capacity of 740 tons of beets per day, started up August 7th. This industry gives direct employment to 2000 men in Chino, to several hundred at Anaheim, and indirectly to many more, and will furnish an impetus to many branches of trade in the State. The crop of the Chino ranch is better than ever and is estimated at 50,000 tons. The crop to be shipped from Anaheim will reach 10,000 tons. The factory runs day and night through the season, reducing an average of 600 tons of beets daily. The acreage of beets on the Chino ranch is 4000; at Anaheim 1000. The output for the season will be 16,000,000 pounds of refined sugar.

POULTRY YARD.

Hens or Pullets.

The eggs from hens will hatch better than those from pullets, and chicks from hens will be stronger and more vigorous. Old hens will also lay as well as pullets, if properly managed, and they will usually begin to lay directly after moulting. Food and care will show their effect, no matter what the breed may be, but more dependence can be placed on some hens than on others, owing to the individual characteristics of each. Large, rosy combs are sure indications of thrift, and when such is the case the hens will soon lay.

Hens have been known to lay well until six or seven years of age, and just when to declare them too old for service is difficult, as some hens will last much longer than others. Probably the first year after the pullet becomes a hen, she will lay the largest number of eggs, but the eggs will be smaller from a pullet than those from a hen. It is difficult to feed highly for eggs without making some of the hens fat, as they will fatten sooner than pullets, owing to the latter appropriating a portion of the food to growth.

There is a great difference in the breeds, and in many respects. The pullets of the Leghorn breed will begin laying when they are but five months old, but pullets of the larger breeds sometimes grow until nearly ten months or a year old before they begin to lay. The number of eggs laid is entirely a matter concerning each individual, no two hens being alike. Fowls not only excel in certain characteristics according to the breeds, but they are good or bad only when viewed from the standpoint of their requirements, and in proportion to their treatment, in order to accomplish the purposes for which they are kept. Some excel as egg-producers and some for market, and they must be managed accordingly. If eggs are required, without regard to market quality, only the breeds that are active and vigorous should be kept. Poultry for market should be a secondary consideration on an "egg" farm.

Let Your Hens Sit.

The best results are obtained from hens that are allowed to sit than when they are prevented from incubating. When the hen goes on her nest to sit, she does so for the purpose of using the fat of her body to impart heat to the eggs, and as she seldom leaves the nest to feed, she becomes reduced in flesh by the time the eggs are hatched. She also secures rest and recuperates. As a rule, a sitting hen is nearly always fat, and to prevent her from sitting, simply keeps her in a condition unfavorable to laying. There are times, however, when no chicks are desired. In such cases, let the hen go on the nest, giving her a few porcelain eggs. Do not break her from sitting, as she will soon become broody again, and will lay but few eggs before going on the nest the second time; but if kept on the nest for two or three weeks, and then "broken up," she will come off in excellent condition for laying, and will lay more eggs than she would have done if prevented from sitting, including the time lost in incubation, and she will not become broody until she is in a fat condition again.—Poultry Keeper.

To Start Hens to Laying.

If your hens cease laying, the first duty is to search for lice. If you find lice, it is sufficient evidence that the hens were annoyed so severely as to debilitate them. Look in the poultry-house for mites and on the heads and necks for the large lice. If you find no lice, it means that your hens want something that you do not give, and that something is lean meat, fresh, and pounded bone. If the hens are confined in yards, they will also need chopped grass. Feed meat and keep down the lice, and the hens will lay right on.—Farm and Fireside.

THE CALIFORNIA STATE FAIR

Of 1893 will be held at SACRAMENTO,
SEPTEMBER 4th to 16th :: :: :: TWO WEEKS.

\$20,000 IN CASH PREMIUMS \$20,000
FOR CALIFORNIA PRODUCTIONS.

FARMERS AND HORTICULTURISTS!

As well as MECHANICS AND ARTISANS!

Should make preparation to exhibit at THE ANNUAL FAIR as the opportunity is specially given to show CALIFORNIA'S CAPABILITIES.

INVITE INVESTMENT of capital by showing the products of your section. INQUIRIES AS TO LOCALITIES are being constantly made. We reply by sending reports of exhibits, which speak for themselves.

OBJECT LESSONS are valuable, and when written upon and their description heralded, they become a standing advertisement.

SHOW WHAT YOUR COUNTY can produce, and capital will flow in the direction thereof.

LANDS HAVE BEEN IMPROVED by the hundreds of acres in tree and vine planting through capital attracted by exhibits made at the State Fair.

MECHANICAL PLANTS HAVE BEEN ENLARGED by means of extra capital attracted by exhibits made at the State Fairs.

THE STATE FAIR is the stimulating agent of progression.

THE STATE FAIR is the medium that brings the two electrical currents—labor and capital—together each year.

THE STATE FAIR aids all classes. It is the recreation ground of the farmer, the school of information for the breeder, the point of observation for the mechanic, and the period of investigation for capital.

FAILURE TO EXHIBIT is an acknowledgment of weakness.

KEEP YOUR PRODUCTIONS before the people, and the people will always keep your locality in view.

THE USUAL EXTRA ATTRACTIONS for entertainment of visitors at the State Fair of 1893 will be furnished in keeping with the occasion, that exhibitors may benefit thereby.

Information furnished upon application to the Secretary, at Sacramento. Send at once for premium lists.

JOHN BOGGS, President.

EDWIN F. SMITH, Secretary.

THE HOME CIRCLE.

Old Friends.

The old friends, the old friends
We loved when we were young,
With sunshine on their faces,
And music on their tongue!
The bees are in the almond flower,
The birds renew their strain;
But the old friends, once lost to us,
Can never come again.

The old friends, the old friends!
Their brow is lined with care;
They've furrows in their faded cheek,
And silver in their hair;
But to me they are the old friends still
In youth and bloom the same,
As when we drove the flying ball,
Or shouted in the game.

The old men, the old men,
How slow they creep along!
How naughtily we scoffed at them
In days when we were young!
Their prosing and their dosing,
Their prate of times gone by,
The shiver like an aspen leaf
If but a breath were by.

But we, we are the old men now,
Our blood is faint and chill;
We cannot leap the mighty brook,
Or climb the break-neck hill.
We mander down the shortest cuts,
We rest on stick or stile,
And the young men half ashamed to laugh
Yet pass us with a smile.

But the young men, the young men,
Their strength is fair to see;
The straight back, and the springy stride,
And the eyes as falcon free;
The shout above the frolic wind
As up the hill they go;
But, though so high above us now,
They soon shall be as low.

O weary, weary drags the years
As life draws near the end;
And sadly, sadly falls the tears
For loss of love and friend.
But we'll not doubt that there's good about
In all of human kind;
So here's a health before we go
To those we leave behind!

—London Spectator.

The Domestic Fly.

This is the time of the year when insects, and flies in particular, are in season. However, the fly is the insect which is the most familiar with our readers, hence he deserves more than a passing notice, says an exchange.

It is no wonder that flies are so numerous. One fly on the 20th of March is represented by 300 on the 20th of April, by 300 times 300, equaling 90,000, on the 20th of May, by 270,000 on the 3d of July, and hence, according to arithmetical progression, on the 5th of August by 468,973,246,841,000, the only wonder is that there are not more flies, as the female house fly, if in good health, can lay 35,467 eggs in a season. It is a great pity that a fly cannot be grafted on to a hen, but it is not probable science will ever get that far.

According to a savant who has made the subject a study, an ordinary house fly can fly three miles a day, and still have several hours to devote to his legitimate business of biting babies and bald heads. He seems at times to be slow in his movements, particularly when you want him to go out of doors, but quicker than quickness when he wants to come in.

There is no telling how much mischief is done by flies. The increase of profranity in summer is due largely to flies. No bald-headed man was ever converted during a sermon in fly-time. Perhaps the preachers realize this fact, and that is why they go off on vacations during fly-time. The domestic fly seems to have some way of getting his feet red hot, so that his thrilling footsteps will not be wasted upon sensitive baldness.

The fly has many peculiarities. According to insect sharps the ordinary fly has 16,000 eyes. Very likely he feels annoyed when he happens to mislay his nose glasses.

There is one sure way of getting rid of flies, and we make no charge for imparting the information to the suffering public. The remedy is to kill them.

Food for Thought.

The love of the country is inborn in children. Almost every child is an ardent lover of nature and a true poet in his enthusiastic appreciation of wide spaces of blue sky or green meadow land, of forest and stream, hill and valley. To a child born in the city rural things are a constant wonder and delight. The hay-field, the pasture with the lowing cattle, the barn with its rich store, the orchard with its delicious promise, are all glimpses of paradise to him. Yet there are scores and hundreds, nay, thousands, of children in every city who have scarcely seen a tree, and never a stretch of green, in their lives. The little can or pot on the window-sill, carefully and laboriously filled

with soil dug from the hard-trodden square of yard, wherein are planted a few spears of grass, some drooping weed or a bit of moss—procured, heaven only knows how!—represents the country to many a soul-starved, and, too often, body-starved child, and expands to the proportions of a wide domain in the dreaming brain of early youth.—Demorest's Family Magazine.

Saved by a Boy.

A dispatch from Atlantic City says: "The presence of mind of a young lad, whose name is unknown, on board the naphtha launch Swift, Monday, probably saved the lives of the passengers on board. The vessel plies between Longport and Somers' Point, and was on her way across the water in the evening with a complement of passengers, when she was struck by a sudden and strong squall. The waves and wind combined to beat her toward shoal water, where she would probably have capsized and drowned her passengers, but Engineer Frederick Booth, seeing the danger he was being driven into, put up his hand to shut off the supply of fuel, when several of his fingers were caught in the machinery, terribly lacerating them and putting the works beyond his control. A young boy who was among the passengers jumped down and turned the stop-cock, stopping the machinery and releasing the engineer, who then directed the boat to a place of safety. Booth's hand was in a terrible condition, but he remained on his boat until the return, when he was brought to the city and the injured member treated."

Worth Pondering.

Half the world is on the wrong scent after happiness. It consists not in getting and in being served by others, but in giving and in serving others.

A Christian is not a man with a selfish desire to save his own soul, but one who elevates the lives of those around him.

Theology is the most abstruse thing in the world; practical religion is the simplest.

The religion of Jesus has probably always suffered more from those who have misunderstood it than from those who have opposed it.

Christianity wants nothing so much as sunny people. The old are hungrier for love than bread, and the oil of joy is cheap.

The world is not a playground; it is a schoolroom. Life is not a holiday, but an education; and the one eternal lesson is how better we can love.

If we neglect almost any domestic animals they will rapidly revert to worthless forms. The same thing exactly would happen in the case of you and me.

Have you ever noticed how much of Christ's life was spent in doing kind things? —Prof. Henry Drummond.

Ben Butler's Tenderness.

Here is one of the numberless stories told of Ben Butler: The narrator had an important law case on hand, and believed that Ben Butler was the man to win it. Butler was in Washington, so he went to the capital, and after two days succeeded in obtaining an interview with the general, who declared he was overwhelmed with work. He would not take the case for \$1000 a day. "General," said his visitor, as the general turned abruptly to his work, "I was born in the same town with you."

He grunted, but wasn't otherwise affected, so far as the visitor could see.

"Did you remember little Miss —? and the boy who used to send notes to her, and the boy who used to take them? I am the boy who took the notes."

"And I am the boy that sent them," said the general.

He held out his hand.

"I guess I'll take your case after all," he said. And he did, and won it.

The Murmuring Sea.

"They used to tell me when I was a boy," said a middle-aged man, "that if I would hold up to my ear a sea-shell of a certain kind I would hear in it the murmuring of the sea. I have tried it many times and it never failed. Now comes my son, a boy of 12, who holds up a tumbler at the dinner-table and says: 'Pop, do you want to hear the sea murmur?' And I say yes; and then he holds the mouth of the tumbler to his ear, and I do likewise with mine, and, bless my heart! there's the murmur, sure enough. And then the boy goes on to talk about sound waves, and to tell me just what makes the sound in the tumbler, and all that sort of thing. And I say to myself it's a fine thing, no doubt, the advanced education that the boys of the present generation are getting; and yet I am not altogether pleased to have one of the pleasantest old faucies disposed

of so summarily. I like tumblers well enough to drink out of, but I think I'd rather have my sea murmurings out of a sea-shell." —New York Sun.

How to Clean Dresses.

Get five cents' worth of soap-bark from the druggist (about a teacupful). For one dress take half of it and steep in about one quart of boiling water for about half an hour or more, then strain through a cloth.

For a silk dress, while the liquid is warm take a piece of white flannel and dip into it at intervals, and rub the silk or satin with it until it seems cleansed. When done, pull the material straight and hang it to dry. Do not iron either the silk or satin. If the dress is very much soiled, use clean liquor to rinse it; but do not use clear water for silk, or it will not stiffen up well.

For a woolen dress, dip the part to be cleansed, or the whole of it, if needed, into the liquor. This can be rinsed in the same after washing, or in clean, warm water. If very dirty, put the dress to soak in a tub in the liquor with more water added before cleaning or washing. The woolen goods should be pressed until quite dry.

Water in which potatoes have been boiled will cleanse delicate-colored woolen or worsted goods. The dress should be wet all over. Use no soap. Rinse in clear, warm water. Press while still damp. This will not injure the most delicate colors.—Farm and Fireside.

What Religion Does.

It gives a peace that the world cannot take away.

It makes men pay debts that the law cannot collect.

It makes women stop talking scandal.

It makes children obey their parents.

It makes men do good with their money.

It makes those who have been vicious strive continually to control themselves.

It makes the drunkard stop buying beef-steak for the saloon-keeper and go to providing for his own family.

It throws the jailer out of employment and raises the workman's wages.

It builds hospitals and asylums and furnishes the money to run them.

It makes men unselfish and women more lovable.

It throws a bright light into the valley of death, and shows that there is a city of eternal beauty just beyond it.

True Peacemakers.

Don't be a grumbler. Some people contrive to get hold of the prickly side of everything, to run against all the sharp corners and disagreeable things. Half the strength spent in growling would often set things right. You may as well make up your mind, to begin with, that no one ever found the world quite as he would like it; but you are to take your part of the trouble and bear it bravely. You will be sure to have burdens laid upon you that belong to other people, unless you are a shirker yourself; but don't grumble. If the work needs doing, and you can do it, never mind about the other fellow who ought to have done it and didn't. These workers who fill up the gaps and smooth away the rough spots and finish up the jobs that others leave undone—they are the true peace-makers, and worth a whole regiment of growlers.

How Absurd Is Quarrelling.

What absurd little things people quarrel about. What trivial matters cause ill-feeling in families. The mutton being roasted too little, or the beef too much, an opinion about the temperature of the house, or the style of the curtains that ought to be bought for the front windows, the definition of a word or its pronunciation, are not topics worth a quarrel when peace and good-will are of so much importance in the home.

A little ill-feeling is like a little seed that may grow into a large tree which will shadow the whole house. Many a man and woman must look back with regret on the hasty word or the cold reproach which was the entering wedge that split a household in two; and yet how few make a point of uttering the soft word that turneth away wrath.—Once a Week.

A Gratuitous Compliment.

"Gentlemen," said the sheriff, putting his head into the jury-room, "if there is no chance of your agreeing immediately on a verdict, the judge will step out to lunch."

"Tell his honor he may go to lunch," said the foreman.

"I was about to add," continued the sheriff, "that the circus comes into town at 2 o'clock, and it's twenty minutes to 2, now." "H'm!" said the foreman, "tell the judge to hold on half a minute."

Hints to Housekeepers.

Ink spots can frequently be taken from white clothes by rubbing on common tallow, leaving it for a day or two, and then washing as usual.

A pretty stove-holder can be made from some bright material cut in the shape of a leaf, with a loop of braid by which to hang it up resembling the stem. Why not make such a holder as a surprise for mother and have it in readiness to use on next ironing day?

Lavender, loosely strewn in bureau drawers and presses, is an excellent preventive of moths. For fans, feathers and other small belongings that need protection, the aromatic flowers are especially useful, since they lend a fragrance as well as keep off the destroyer.

The secret of scrambled eggs is not to beat them before cooking, to have a hot skillet, and to take them off while they are yet very soft; they cook a half minute after they are taken off, which many cooks do not allow for. A dash of lemon juice just as they are going to the table in a hot dish is an addition.

A simple remedy for sunburn that has been used with excellent results is composed of 12 drams of elderflower water and six drams of common soda and six drams of powdered borax. Bathe the face gently with tepid water on coming in from the hot sunshine; dry it carefully with a soft towel, and apply the mixture by saturating a linen cloth with it and "patting" it on the face.

To keep gooseberries for tarts: When the weather is dry, pick the gooseberries that are full grown but not ripe, remove the tops and tails, and put them into open-mouthed bottles; gently cork them with quite new corks, and set them into a warm oven. Let them stand until shrunken a quarter part; then take them out of the oven and immediately beat the corks in tight; cut off the tops and rosin them tightly down. Set in a dry place.

A careful woman permits neither her silver spoons nor the knives and forks to be laid upon dishes of china or glass when the table is being cleared. This care often prevents delicate pieces of tableware from being broken or scratched, and also keeps the silver in better condition. Knives and forks are placed in one common earthenware pitcher, with the handles standing, and the spoons in another. Treated in this way, the handles of knives do not become stained and the silver needs less frequent cleaning.

Cloths made about three-fourths of a yard square, out of stout, colored cotton cloth—either domestic gingham or colored shirting being excellent for this use—are far more convenient than the clumsy holder. They will also do more to abolish the careless habit which many cooks have of utilizing dish towels for this purpose than anything I have tried. One or two thicknesses of manilla paper are excellent put inside of ironing holders. —American Cultivator.

Mrs. Cleveland's Housekeeping.

The mistress of the White House has little trouble in housekeeping, for all the servants are under control of the steward. On him devolves the duty of preparing a bill of fare and of marketing; then he sees that the other domestics are fulfilling their duties properly. Over the kitchen, two housemaids, butler and assistant laundry-woman and stable servants, he has the entire supervision, and if he wishes to discharge help he gives his reason and complaint to the mistress of the house, who acts as she thinks best. All of the servants except the cook and coachman are paid for out of the President's salary, and as there are about ten in all, the item is no small one. For running expenses—such as repairs—the Government allows a certain sum each year.

Putting It Delicately.

"I came to see you about this parrot," she said with a mildness that showed her to be a patient woman.

"Doesn't he talk?"

"A great deal."

"Doesn't he talk plainly?"

"Very. It was his—his theology, so to speak, that puzzled me."

"What's the matter with it?"

"Well, he seems to be thoroughly orthodox in his remarks, but his method of emphasis is extremely erratic."

Measure for Measure.

"Mrs. Mulcahy," said the justice, "why did you strike Mrs. Muldoon?"

"Sure, yer anner," said the defendant, with the air of one who has suffered, "I says to her as pleasant as dho shpakin' to an angel, says I, 'You has brass enough in yer

face sufficient to mek a six-quart pail!" An' wid that Missis Muldoon ups an' says, says she, 'It's yersilf as hasn't manners enough to fill the half of it, Missis Mulcahy,' says she; an' 't was thin I interrupted her wid a little tap, sor.'—Puck.

Ram's Horn Wrinkles.

The devil often wears a white cravat. A shiftless man loves to talk about his bad luck.

When God borrows from man he pays good interest.

Debts to God cannot be paid with the devil's money.

The devil sees to it that a scolding woman never gets hoarse.

When a man is mad the devil can make him believe anything.

You can't tell much about a man's generosity by reading his will.

The devil would have to go out of business if he couldn't use whitewash.

When a man is hungry he never complains that his wife is a poor cook.

If gambling could be exchanged for gold, how many of us would soon be rich?

It is hard to understand how some people can profess so much and do so little.

There isn't much power in the prayer of a man who is a loafer in Christian work.

Whether you ever get to heaven or not may depend upon whether you start now.

Nothing will so prepare a man for going among men as to first be alone with God.

There are parents who work for their children to much and talk to them too little.

There is no blinder man than the one who can nowhere see the footprints of Christ.

Determine to be a Christain everywhere, and you will not find it hard to be one anywhere.

If there were no men to cook for, some women would almost starve themselves to death.

It is hard for a woman to remember that economy is a virtue when she goes into a millinery shop.

How to Open a New Book.

Hold the book with its back on a smooth or covered table; let the front board down, then the other, holding the leaves in one hand while you open a few leaves at the back, then a few at the front, and so on, alternately opening back and front, gently pressing open the sections until you reach the center of the volume. Do this two or three times and you will obtain the best results. Open the volume violently or carelessly in one place, and you will likely break the back and cause a start in the leaves. Never force the back; if it does not yield to gentle opening, rely upon it the back is too tightly or strongly lined.

Forethought.

A bit of household wisdom that is practiced by many women and will bear handing round, is to straighten up the rooms before leaving them for the night. "I always straighten up the parlor before leaving it," exclaimed the hostess to an overnight guest recently, and she straightened up pillows, set chairs in order, piled up music and arranged the draperies before going up stairs. "One thing, I like to have things in order in case of anything happening, and besides this, while it is very little exertion to me, it is a good bit of help to a bnsy maid who often has this much more than she can accomplish before breakfast."—Buffalo News.

Timely Knowledge.

Ready knowledge was illustrated in a telling manner a few days ago, when the little daughter of a physician in a country town swallowed some oxalic acid, supposing it to be citrate of magnesia. The father, thinking on the instant that lime would be the proper antidote and not having any on hand, scraped some with his knife from a newly whitewashed wall, threw it into water and poured it down the child's throat, thus saving her life, where a moment's delay would have been fatal. This circumstance affords a hint worth remembering.

Ornamented Fireplaces.

Among the pretty devices for keeping fireplaces ornamented during the warm season is that of getting some fresh moss from the woods—the more varied the shades of green the better; fasten it onto a fireboard, or, better still, sew it with a thread through its roots onto a square of birch bark fitted to the fireplace. This will enable you to keep the moss wet every day and so preserve it green without injury to the fireplace. If desired the moss may be filled with fresh flowers, which the moisture of the moss will keep in condition a long time.

YOUNG FOLKS' COLUMN.

"I Thank You."

Three little words, nine letters wide,
And yet how much these words betide!
How much of thought or tenderness
This short "I thank you" may express!

When spoken with a proud disdain,
'Twill chill the heart like frozen rain,
Or, when indifference marks its tone,
Turn love's sweet impulse into stone.

Be not afraid, my little one,
As time goes on beneath the sun,
While marching in life's motley ranks,
For all your blessings to "give thanks."

First, thank your God for life so fair,
For tender mercies great and rare,
For health and strength, for home and friends,
And loving care, that never ends.

Then thank the ones, whoe'er they be,
That do a kindness unto thee;
'Twill cost you little, pain you less,
This sweet "I thank you!" to express.

—M. A. Kidder.

Perkins and the King.

Emerson's saying that a boy is the true democrat was illustrated by the adventure of a Maine sailor lad. He was at Christiana and made up his mind that he would see the celebrated King, Oscar. Accompanied by another boy from the same ship, Jack Branscombe, he walked to the palace and found it surrounded by a moat that looked impassable. But the boy, whose perseverance and courage merit commendation, however his assurance may seem to deserve rebuke, would not be balked. After some search he discovered under the moat a narrow tunnel leading into the royal garden.

The mouth of the tunnel was choked with rubbish, but the young sailors made their way through and into the gardens. Here they were at once surrounded by guards, who could not understand their explanation, but tried to conceal them from the view of an approaching party.

The party were the King and his retinue. Seeing the disturbance, a gentleman stepped forward and asked what was the matter. The Maine boy acting as spokesman—his companion by this time shaking with fear—answered that they had come to see his majesty, Oscar I. They were from Boston, and on their return home would like to tell friends that they had been face to face with the King.

"Well," answered the gentleman, in per-

fect English, "you have seen him. I am the King." He gave each boy several coins as souvenirs of the visit.

Thirty years after the sailor lad, George C. Perkins, had become Governor of California. One day he was on board a pilot boat bound for Monterey and noticed that one of the sailors was eyeing him intently.

"Who is the Governor? What State does he come from?" asked the sailor of an officer.

"From Maine," was the reply.

"I thought I knew him. You ask him if he ever met with a boy by the name of Jack Branscombe who served on board the Lena."

The Governor at once came forward and greeted his old shipmate who, 30 years ago, had trembled in the presence of royalty.—Youth's Companion.

Better Whistle Than Whine.

As I was taking a walk early in December, I noticed two little boys on their way to school. The smaller stumbled and fell, and though he was not much hurt, he began to whine in a boyish way, not a regular roaring boy's cry, as though he were half killed, but a little cross whine. The older boy took his hand in a kind, fatherly way and said:

"Oh, never mind, Jimmy, don't whine; it's a great deal better to whistle."

And he began in the merriest way a cheerful boy whistle. Jimmy tried to join in the whistle.

"I can't whistle as nice as you, Charlie," said he; "my lips won't pucker up good."

"Oh, that's because you've not got all the whine out yet," said Charlie. "But you try a minute and the whistle will drive the whine away."

So he did, and the last I saw or heard of the little fellows, they were whistling away as earnestly as though that was the chief end of life. I learned a lesson which I hope I shall not soon forget.

Dream of a Cat.

The other day, when kitty lay sound asleep in the cushioned chair she uses for a bed, I put a small piece of fresh beef on the end of a toothpick and held it within half an inch of her nose. After a few seconds the muscles of her throat twitched slightly, the mouth opened, the jaws began to work, and every detail of chewing and swallowing followed, after which she licked her lips, but slept right on, and she did not awake for some time afterward.—Forest and Stream.

DOMESTIC ECONOMY.

The Cold Potato.

Don't throw away cold potato. Save and utilize it. There are numerous ways in which it can be quickly rewarmed, and in many of them, when properly done, it is almost as good as when first cooked. Much of the potato served up at hotels is merely rewarmed potato and can be under fanciful foreign names, prepared similarly in any private kitchen very easily, very inexpensively.

Plain Stewed.—Slice cold boiled potato, put in a stew pan with cold gravy of any kind, season with salt and pepper, stew gently for ten minutes, or until thoroughly heated, and then serve as plain stewed potato.

Potato au Gratin.—Slice cold boiled potato, stew in broth or milk, season with salt and pepper, sprinkle with grated cheese and bread crumbs mixed, and brown in oven, and it becomes potato au gratin.

Potato Polonaise.—Stew cold sliced boiled potatoes in broth or milk and dress with caper sauce, and you will have potato polonaise.

A Brown Fry.—Cut cold boiled potato in even slices, dredge lightly with flour and fry brown in butter, drippings or lard.

Potato Provencale.—Cut cold boiled potato in little balls with a vegetable scoop, and fry, with a few slices of onion added, in butter or drippings, and it will be potato provencale.

Potato a la Baragoule.—Cut cold boiled potato the shape and size of olives, and fry, with a spoonful of minced herbs added, in olive, oil and you will have potato a la baragoule.

Lyonnaise Potatoes.—Cut cold boiled potato into little dice-shaped pieces, add minced onion, fry in butter, season with salt and pepper, sprinkle with chopped parsley, and you will have lyonnaise potatoes.

Cakes and Balls.—Enrich cold mashed potato with beaten egg yolk; make the mixture into balls, dip the balls into beaten egg, roll in bread crumbs or cornmeal, and brown in a quick oven. These will be potato balls. Make the prepared mixture into flat cakes and brown in a little hot fat, and you will have potato cakes.

Potato Biscuits.—Add a cup of milk and half a teaspoonful of salt to a quart of cold mashed potato, work in flour until the dough is sufficiently stiff to roll out and cut into biscuit. Bake on a floured griddle or baking pan. Serve hot.—St. Louis Republic.

California State Analyst.

Royal Baking Powder is Superior to all in Purity and Strength.

"For purity and care in preparation the Royal Baking Powder equals any in the market, and our test shows that it has greater leavening power than any of which we have any knowledge."

N. B. Rising

Prof. Chemistry, University of California,

Analyst California State Board of Health, etc., etc.

No careful housekeeper can afford to use any baking powder but Royal.

PATRONS OF HUSBANDRY.

From Worthy Master Davis.

Bro. S. H. Ellis, past master of Ohio State Grange, has been nominated by the Prohibition party for Lieutenant-Governor of the Buckeye State.

W. E. Harbaugh, the efficient master of the State Grange of Missonri, is now in charge of grange headquarters at the World's Fair.

Worthy Lecturer Bro. Mortimer Whitehead of the National Grange, and W. L. Wilson, master of Mississippi State Grange, are making a stirring campaign of Mississippi. They will do some splendid talking for the order they love so well, and will, no doubt, plant seed that will soon show an increase of membership for the grange.

Did you ever see wheat selling so low as it is selling just now? Do you wonder that the farmer complains? How can he pay taxes, educate children and get the hard-working, economic wife and daughter a new hat and gown? Will some of our millionaires tell the farmer how to run his farm so it will produce two-cent wheat?

Only those silver mines in Nevada, Arizona, Colorado, Montana, Wyoming, Idaho and the Dakotas are being operated, says report, that produce a considerable per cent of gold to each ton of ore. The owners of silver mines declare they cannot operate the mines at the present low price of silver bullion. But the farmer has to operate his wheat field at the present low price of wheat, or the miner and the world would soon starve. Let us hope that farmer, miner, artisan and mill-owner will each one and all soon see better times and realize better prices.

One factory in New Hampshire which the writer had the pleasure to visit last November, when there were 7200 employees busily at work, has now closed down. These 7200 workers, no doubt, earned a living for at least 15,000 persons. Just think of the amount of suffering soon to come if those people all continue idle. And this is but one of many such factories closed down.

Do you think the United States should own and operate the railroad and telegraph lines within its territory? There are those who say they fear such an ownership would tend too much to centralization of political power. What do you think about it? The Government operates the Postal Department, and we do not hear of any charge of centralization, or any attempt to centralize a political sentiment in the Postal Department. Then, too, Uncle Sam supports and operates an Army and a Navy Department, but has any one ever charged that there is any attempt to centralize on that account? The question of Federal ownership of railroads and telegraphs is soon to be a live one. Study it up and give the readers of the RURAL the benefit of your ideas. The grange is already on record as favoring Government ownership. Let subordinates discuss these subjects, and when our venerable Uncle owns and operates the railroads, perhaps the farmer will be able to market his crop without paying "all the traffic will bear."

What is of greater consequence to a nation than the prosperity of its agriculture? All lines of trade suffer when agriculture lies crippled. And to say that it is not sorely crippled at this time is to speak without knowing. Let wise men, let philanthropists, let statesmen and all others join hands and restore prosperity to the farmer, and, right away, factories will start up, sails will be spread, extra trains will be run, labor will be employed and idleness will be supplanted with happiness, discontent will give place to contentment, and prosperity will reign and rule where want and sorrow sit enthroned. Let the plowshare and the pruning-hook be bright with use and the owner fairly well paid, and happy homes and bright-eyed children will be seen all about our "native land." When agriculture gets its just reward our country will be the happiest, richest, most progressive of all lands and of all times. Mortgages will pass away then, and there will be more of joy and more of heaven on earth than is to be found now. When the farmer—"who feeds them all"—can sit beneath his vine and fig tree and feel that he is realizing for the products of his farm a fair reward for honest toil, then prosperity and confidence will reign and the songs of the birds will be more fully enjoyed by the millions who toil than they are to-day. Let's hope for the speedy return of prosperity to the agriculturists, and that means to all who live on our own dear native land.

WATSONVILLE GRANGE.—Secretary Cromarty writes August 7th: "Our grange had a lively discussion on the free coinage of

silver, on the 29th of July. There was a full attendance, and the speeches of our talented brothers were most enthusiastic. The vote was unanimous in favor of free coinage, on the scale of 16 to 1."

From Yuba City Grange.

TO THE EDITOR:—Yuba City Grange held its regular meeting on Saturday last, with a fair attendance considering the season and the weather. Speaking of the weather, let me say that it has evidently come to order for our fruit-growers, for better drying weather would be hard to find. While it has not been excessively hot, it has been uniform, which has been of great advantage to fruit-drying and curing as well as to the grain-harvesters, enabling them to work more hours and do better work cutting and thrashing; hence you see we make a virtue out of necessity, for you know we are sometimes accused of harboring warm weather in these parts, and this virtue catches other sections sometimes as well, as I was made to understand two years ago. I was in search of coast breezes, shady nooks and a little recreation, when I brought up at the famous town of Riverside, the center of attraction in all the south. Intending to be there only for lunch, I registered at the grandest hotel in the place—I think it was the Arlington. It was hot. I approached a thermometer and found it registering 106 inside the room. The landlord observed it, and came to the rescue by saying "it was just the kind of weather they wanted, as it was putting sugar into the oranges and raisins, without which the crop would be a failure." I nodded assent and felt glad that the wonderful south had not been able to corner the sugar weather.

The fruit harvest is at its best and everybody is busy. The grain harvest is practically over and the crop is seeking the customary storehouses to await events.

The exodus to the mountains and seacoast has set in, reducing the census to a low figure. But I was going to say something about the grange, wasn't I? Well, the reading of the "Gleaner" was first in order, and was one of the best productions of the series. The most illustrious members were illustrated during the reading of their biographies and rounds of applause were showered upon the readers. The wanderings of a silver dollar were chronicled from the time it left the mint until it fetched up in a lady's pocket, where it got lost. It, the dollar, like some men, was found in some queer places.

Let me tell you, these exercises develop or bring forth good reading, and don't you know that sometimes I think this highest of all accomplishments is sadly neglected in the schools? To me it is an unspeakable pleasure to listen to good reading, and in the grange is where we find the best place to cultivate the art.

The new piano did not "show up," but decided progress was made in that direction and I feel I shall yet have the pleasure of announcing its arrival.

Several papers were read on the subject of a grangers' hall. The plans submitted were quite appropriate and well received. The subject was continued and will probably lay dormant until times revive or we have free coinage.

The subject of a free parcel delivery by the postal department was brought up and the grange decided not to press the matter on the Government until after the "extra session."

Several new members were admitted and more are coming, but owing to the busy harvest time we are moving slowly.

I am glad to see so many successful efforts throughout the State at co-operation. I have read whole sermons in your several suggestions, "That the way to co-operate is to co-operate." GEORGE OHLEYER.

Yuba City, August 7, 1893.

From the State Lecturer.

TO THE EDITOR:—I see that Worthy Master Bro. Davis has put me on the Committee on Credentials for the coming session of the State Grange, and in the absence of any specific law upon the subject as to the time of electing alternates, I would suggest to all the granges in the jurisdiction to elect at the first regular meeting in September, and the secretary report the names of the alternates soon thereafter to the worthy secretary of the State Grange, in order that we may have the roll prepared and complete on the first day and at the opening of the session. The committee hopes that the secretary of each grange will be prompt in this matter.

I would further recommend that each subordinate grange elect alternates upon the basis of two representatives to each subordinate grange—a brother and sister of the

order. There is no doubt but that an amendment will be made to Article 2, Section 1, of the State Grange Constitution, that each subordinate grange will be entitled to two representatives—a brother and sister of the order and members of the subordinate grange—and in no case can two brothers or two sisters be voting representatives at the same time in the State Grange. Fraternally, J. D. HUFFMAN, Committee on Credentials.

San Jose Grange.

TO THE EDITOR:—Last Saturday was young ladies' day in our grange under the leadership of Miss Holland, who had provided an excellent program.

The subject of the Midwinter Fair received the unqualified endorsement of the entire grange, and the following was unanimously adopted:

WHEREAS, Efforts are being made with success almost in sight to hold a midwinter fair in San Francisco; therefore,

Resolved, That San Jose Grange heartily indorses the project and hereby tenders its support in every way possible to make the proposed fair a grand success.

Resolved, That as individual members of San Jose Grange, we promise to contribute from our fields and our orchards the best specimens grown thereon, and will otherwise aid the citizens of San Francisco in their efforts to make the proposed fair a success and a credit to California.

A committee consisting of Tarleton, Dunn and Knowles was appointed to find a site, ascertain the cost of a suitable building for a grange hall, and report thereon.

At our next meeting the first two degrees will be conferred on a class of six or eight. These degree meetings are looked forward to by members of San Jose Grange with dark scowls on their faces—in fact, with disgust. Not that there is anything in the degrees that is objectionable, but rather, on the contrary, every word and every charge in the four degrees are beautiful and ennobling, and, if fully lived up to, would make all better men and better women. But, constituted as human nature is at present, it is not conducive to the equanimity of temper to listen constantly even to the most exalted thoughts without being given time to attempt to put in practice some of the good lessons contained in each of the four degrees. We have too many degrees; they are too long. They should not require more than one-quarter of the time in conferring them than is at present required. I am glad to see other correspondents entering complaints of "too much walking around"—of course, referring to the great length of our degree work.

If there should be any considerable number of members who think it absolutely necessary that those who hereafter become members of our order should listen to the reading of the various charges in open grange, to them I would suggest a compromise. Have slips of paper on which is printed all the degree work except that portion which is now given orally; give these slips to each applicant to read over at leisure, and if they are returned with an application for membership, if qualified, admit them, and, when inside of the walls, give only such instructions as will prevent trespass and keep out the uninitiated.

San Jose Grange has appointed a committee to condense the degrees to one or two at most. May the panacea soon be found and adopted by all of the subordinate granges, and let it go to the National Grange with such power that even those with good vision can see the tendency of the times.

It has been said by some high in authority that our degree work will never be shortened so long as any of the founders of our order are living. If this statement be true, then the interest and well-being of our order would justify the members in praying to the good Lord to lay up our treasures in Heaven at his earliest convenience. AMOS ADAMS.

San Jose, Aug. 7th.

Temescal Grange.

According to previous arrangement, the California Midwinter Fair was discussed Saturday evening, August 5th, all present seeming to be favorable to the enterprise, and the following was adopted:

Resolved, That the members of Temescal Grange will give the California Midwinter International Exposition its hearty support; that it hopes all patrons and citizens will render the Fair all the substantial aid possible; that it recommends suitable reception rooms be provided by the management of the Fair for the intercourse of members of fraternal orders; that in the course of the Exposition a day be set apart for the assembling of and appropriate exercises by each leading fraternity.

In accordance with the recommendation of Watsonville Grange, the silver question was discussed in its various phases, and the following resolutions adopted by nearly a universal vote:

Resolved, That Temescal Grange is in favor of

the free and unlimited coinage of American silver by our Government.

Resolved, That the volume of money in the United States should be increased by the Government until equivalent to fifty dollars to each inhabitant.

Resolved, That the United States Government should impose a tariff on foreign silver equal to the difference between United States coin and bullion.

"The Cause of and Remedy for Hard Times" was selected for discussion at the next meeting.

Santa Cruz Grange Closed Out.

Secretary Pilkington writes to the State Secretary as follows:

I am requested by Santa Cruz Grange to say that this day it closed its grange, there being in the chair P. Bro. John Morgan presiding, Bro. Wardwell, its former master, having gone to meet the grange above. The following resolution was placed upon its records by a unanimous vote of all members present:

Being as a grange without password, master and no quorum of members, also without money to pay even our State dues, we this day dissolve Santa Cruz Grange, and hereby desire Bro. Pilkington, the secretary hereof, so to inform the State Grange.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

The yield of grain to the acre this year in the vicinity of Mt. Eden is generally reported to be comparatively light. The quality, however, is the best known for years.

Butte.

Oroville Register: The planting of large orchards in Rio Bonito and also on the east side of Feather river has been of much advantage this season, as work has been given to a great many men, women and children, both in Biggs and Thermalito, while numbers from this town and Palermo have found employment. Had the same area been planted to grain, not one-tenth of the number of persons would have been given work.

Dr. Coon reports to the Oroville Register that the fruit trees in the Treat, Reed & Johnson, Hatch & Rock and other orchards look very thrifty, and, although he passed thousands of trees, he did not see but three that were dead. Dr. Coon's observations extended as far as the Reyman & Evans ranch, where he found the biggest crop of alfalfa that had been cut for years. One barn contained 800 tons, two others had 400 tons each, while there were still other barns and numerous stacks. The third crop is now being cut, and there will be two more crops to be cut before fall. Some of the hay is being sold, but the owners have some 750 head of cattle, now being pastured on Butte creek, to feed this winter, so that most of the hay will be used. The crop of alfalfa, owing to the high water, is the best it has been for a long time.

Colusa.

The Colusa Sun says the cheapest that wheat can be produced, estimating the farmer to do his own work, is 45 cents a bushel. He must own 2000 acres of land and farm 1000 acres each year to grow wheat at this price. Most farmers cannot produce wheat at less than one cent a pound. Senator Peffer of Kansas is trying to show that we can plant, raise and harvest wheat here at 23 cents a bushel.

Contra Costa.

Concord Sun: A ton of fine, plump wheat to the acre, this being the average for 150 acres owned by Foskett & Elworthy, passed almost belief, but it appears true nevertheless.

A fire in the field of R. Cakebread near Brentwood on Wednesday burned three stacks of headed grain belonging to him, a stack of hay owned by C. Shaffer, and 25 acres of standing grain belonging to George Cople. The loss is \$1200 and is covered by insurance. The thrashing outfit of W. J. Robinson had a narrow escape, as it was near where the fire started. By the united efforts of the harvesting crews the outfit was saved. A cow and a calf that were staked out in the stubble were burned before they could be rescued.

Fresno.

Fresno Examiner: The peach crop is heavy, and if the cannery does not start up in a few days there will be a large amount of that fruit go to waste, thus benefiting no one.

Fresno Examiner: The Fresno Canning Co. was forced to close down because it could not borrow money on its goods. Last year the labor expenses alone amounted to nearly \$25,000. Add this to what was paid the farmer for his fruit, and it can readily be seen what a large sum of ready money this industry alone distributed in this city and vicinity. No Chinamen were employed, but mainly women and girls of this city, and so what money was paid out for work went directly into the channels of trade.

Kern.

Echo: Farmers living out on the plains, especially west of Rosedale, report a great mortality among the jackrabbits. These pests seem to be dying off by thousands.

Echo: Some fatal disease has struck J. M. Hunter's band of thoroughbred Berkshire hogs, and they are dying rapidly, the prospect being favorable for him to lose his whole band. He

had some beauties, and the demand for them was greater than the supply.

Bakersfield Californian: Eighteen years ago Mr. Stockton huddled some sort of prune, he did not know what, upon a tree at Lakeside. It has turned out to be an extraordinary bearer, and stands frost and heat equally well. C. C. Stockton brought a sample to town the other day, and the bulk of the horticultural wisdom which held a coroner's inquest over the fruit brought in a verdict that it was the Fellenberg or Italian prune and a valuable variety.

Los Angeles.

Pomona Progress: Fruit-shippers who can are going to hold their dried fruits for two or three months until the market improves.

Monterey.

Salinas Index: The thrashing machine belonging to Douglass & Strong thrashed 2002 sacks of barley this side of Salinas last Friday. During the thrashing, the machine moved once. This is the largest thrashing for a day's work that has ever occurred hereabouts.

Napa.

C. W. Lawson, manager of the Cutting Packing Co.'s orchard, reported to the *Register* last week that out of the 35,000 fruit trees planted last spring he has lost 6000 from sour sap. He considers this extremely fortunate, as he expected to lose not less than one-third. He also says these foggy mornings help the tomatoes, of which he has 60 acres, all looking fine. Eleven men are employed at the orchard, and thrashing out peas is just now a leading occupation.

Orange.

Viticultural Commissioner Wetmore last week found the Santa Ana vineyards in healthy condition. This year's crop will be large.

An Eastern buyer is paying 5½¢ per pound for walnuts at Anaheim; for soft-shells one cent more is paid. The crop is good, and it is expected that 22 carloads will be shipped from Anaheim.

The beet-growers of Anaheim have made arrangements for the construction of a beet factory to handle their crops next year. It will have 350 tons capacity daily. The beets from the vicinity of Anaheim are reported to be making a big showing of saccharine this year, and the district promises to be one of the rich sugar-beet districts of the country. Each new factory but hastens the time when the United States will be able to make all the sugar it wants for home consumption.

San Benito.

San Benito Advance: Notwithstanding the low price of wheat, the cost of steam thrashing still remains at ten cents per hundred. There are at present six harvesters running in the county, and with the experience of farmers this year it is safe to predict that there will be trouble that number next season. The harvester owner cuts and thrashes grain at the rate of \$2 per acre, the farmer boarding the men and feeding the horses. Five men are required to run the harvester at total wages of \$12. Twenty-four horses are required, with an extra span in attendance in case of accident. A fair day's run is 30 acres, as work cannot be started too early in the morning or until the grain is thoroughly dry. In addition to the great saving in price, it is claimed that the saving of grain is equal to one bag per acre. The grain is also put in condition for hauling much quicker, resulting in a lower insurance rate.

San Bernardino.

Redlands Leader: E. M. Marshall has a piece of ground in strawberries at his home on Silvera avenue that makes a fine record. The area of the piece is 75x125 feet, about one-fourth of an acre. From April 1st to July 20th he picked 3020 boxes of berries, which sold for 6½ cents a box on an average, or a total of \$203.66. This is the first crop, but the plants will be in bearing again probably by September 1st and will yield another good crop. This would give for the first crop over \$800 an acre and the second crop will easily increase it to \$1200.

Santa Clara.

San Jose Mercury: Chris Hansen, a hay-baler of San Jose, on the first day of July, baled for Hennen Smith, on the Flint ranch at Hollister, 376 bales of hay, weighing 101,200 pounds. It was done between sunrise and sunset, and it is claimed that is the largest day's work ever done by any crew, and Mr. Hansen is ready to defend his title as champion against all comers. The crew consists of pitchers Harry Tully, Robert McCollough and Jacob Joerer; weigher, James McCarthy; driver, Sam Cohn.

San Jose Mercury: From all parts of the State, and especially in this valley, now come reports of a really serious dropping of prunes, which, if continued another week, will decidedly effect our output. There is also a fair prospect of a reduction of freights, of which growers will get the benefit if they have not sold when it comes.

Santa Cruz.

The Watsonville Fruit-Growers' Association was organized last week. Officers: President, Thomas Beck; vice-president, James Waters; secretary, M. E. Martinelli; treasurer, C. G. Redman. The first effort of this association will be for better shipping facilities at Watsonville.

Watsonville Pajaronian: The depressed state of the fruit market is going to cause quite an increase in the amount of dried fruit that will be sent out from this valley. Apricots have dropped in price until the packers say that the margin for returns is so small after paying freight and commission that there is practically no return for them, and so they are going to dry all the 'cots they have. Redman & Bixby are drying at the orchard, W. H.

Bowman is going to dry on a large scale at Corralitos, J. A. McCune is drying at Green Valley, and all of the packing-houses located here are drying. Some of them are talking of shipping the fruit to Gilroy and dry there in the sun, but the weather has been so favorable here through the season that most of the packers will do their sun-drying at home. The market for peaches is in the same condition as that for 'cots, and the bulk of the Pajaro crop will be dried.

Sonoma.

Index-Tribune: Fruit of all kinds is ripening very fast, much of which will be left to rot on the ground if the canneries in this and adjoining counties do not start up soon to their full capacity.

Santa Rosa Republican: Hay balers are hard at work in this section. Hay is selling now for \$12 per ton, an increase in price of \$3 per ton over last year. Hay of superior quality is very scarce and will be very high during the winter and spring months.

Two of the Healdsburg packing companies will operate during the season. The Russian River cannery may yet open for the season and can a fair quantity of fruit, but there can be nothing definitely said about it yet. The great depression in the canned-fruit market and the stringency of money has, like everything else, put the affairs of the company in a state of uncertainty.

A Guerneville correspondent of the Sonoma County *Farmer* says: "We are all red hot for a Sonoma county exhibit at the Midwinter Fair. There will be a seven-year-old Picholine olive tree, 25 feet high and in full bearing, from Dr. Proke's. Some second-crop alfalfa, seven feet high, grown without irrigation, is already gathered and carefully stored away with some second-crop timothy, five feet high, from the same field.

The proprietors of both the canneries at Santa Rosa, says the *Republican*, have offered virtually to put their business in the hands of the fruit-growers. In effect, this is the proposition of the Cutting Company. Hunt Bros. will do the same, letting the growers assume the risk in buying cans, sugar, etc., and saying just when the fruit shall be sold. Now, this whole matter rests with the fruit producers. If they are willing to take the risk and are able to wait, in time they will secure all the money there is in the crop. If they dry their peaches they must take all the risk both as to future markets and the insects that damage dried fruit.

Santa Rosa Republican: The hop yield will be considerably less than last season but the young yards coming into bearing will more than make up the deficiency. J. N. Bailhache last year marketed 13 tons but anticipates harvesting 15 tons this season. J. D. Grant informs me that he does not anticipate a full yield but his young hopyard will more than fill the deficiency. The Grant hopyard consists of 24 acres. Mr. Redding has a fine yard of 27 acres, from which last year he picked 15 tons of hops, but does not expect to gather more than 11 tons this season. Off his 18-acre hop yard John Brown harvested 13½ tons last year, but considers he will do well if he saves 11 tons this season.

Santa Rosa Democrat: A Democrat reporter was informed Tuesday, by a gentleman who has long been identified with the fruit and canning interests, that some of the growers were making arrangements to can as well as dry the product of their orchards. J. W. Rose went to San Francisco Monday to negotiate the purchase of a boiler and other appliances needed in canning fruit for market. It is probable Mr. Rose's example will be followed by others. The cost of putting in a small plant for canning is not out of proportion to the value, if one owns a large orchard. Of course those who have but a few tons of fruit could not afford to put in the plant needed, and will be forced to dry if the canneries do not start.

Sutter.

Sutter Farmer: The cannery is running now with a force of 130 hands putting up plums and peaches. The plum pack will be about 1500 cases, mostly of the Green Gage variety. Peaches are coming in rapidly, and a good run is expected on the same. The average price contracted for the fruit is about 1½ cents per pound, and none but first-class and extra quality and size used. At the cannery, peaches bring about the same prices as peaches. In picking the peaches, the growers are requested to pick the larger ones first, so as to give the smaller ones a chance to grow larger. Grapes will also be put up, but as yet no contract price on the fruit has been set.

Tulare.

Citizen: From Dudley, grain is being hauled to Huron, about 40 miles, for \$4 a ton, and water has to be bought for stock on the road.

Grangeville letter to Visalia Delta: By actual measurement the pruned peach trees on George Bartlett's place measured two inches less around the trunk than those trees that were not pruned; so that up to date the peach trees that were not pruned are away ahead of those that were cut back, but time will tell the tale. We measured a two-year-old almond tree that was 19 inches around the trunk close to the ground. George has quite a number of orange trees that are doing finely. He found that by cutting off the old leaves, new branches would start out; but unless the old leaves were cut off, the trees failed to make any headway.

Yolo.

It is proposed to establish a cannery at Washington.

Woodland Democrat: The tule farmers are plowing as fast as the water recedes. A very large area of tule land will be sown to wheat this year if the water falls in time.

FARMERS!

Now is the time when you should protect your families.

Take a policy in the only company which loans its money to the farmers of California—

THE PACIFIC MUTUAL LIFE INS. CO.,

KILGARIF & BEAVER, General Agents,

PACIFIC MUTUAL BUILDING, - - SAN FRANCISCO, CAL

AT AUCTION AT STATE FAIR.

GILT EDGE BROOD MARES

STINTED TO FAMOUS STALLIONS.

Being a Draft from the World-renowned

PALO ALTO STOCK FARM.

It having been determined to reduce the breeding plant at this famous stock farm, the undersigned have been authorized to dispose of at

SACRAMENTO,

WEDNESDAY, SEPT. 13, 1893, at 10 A.M.

FORTY HEAD CHOICE BROOD MARES,

Daughters of Electioneer, Ansel, Falls, Woolsey, Antevolo, Nephew, Wild Boy, Piedmont, Etc.,

STINTED TO THE NOTED STALLIONS

TRUMAN, 2:12; WHIPS, 2:27½; MONACO, 2:19½; AZMOOR, 2:20½; NORRIS, 2:22½; ELECTRICITY, 2:17½; PAOLA, 2:28½; HUGO, 2:29½; PIEDMONT, 2:17½, etc.

Catalogues, giving description and pedigrees, will be ready Aug. 20th. Apply to

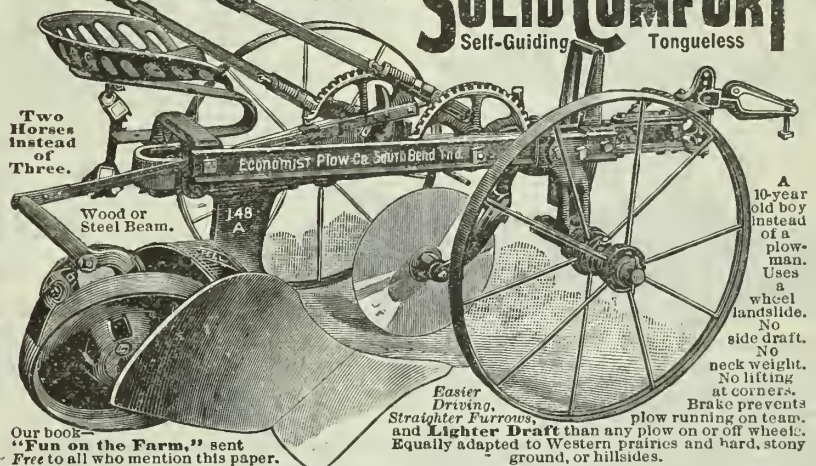
EDWIN F. SMITH, Agricultural Pavilion, Sacramento, Cal.,

OR

KILLIP & CO., Live Stock Auctioneers, 22 Montgomery St., S. F.

THE "WONDER ON WHEELS."
NO POLE.

SOLID COMFORT
Self-Guiding Tongueless



Our book—
"Fun on the Farm," sent
Free to all who mention this paper.

ECONOMIST PLOW CO., So. Bend, Ind., or Stanton, Thomson & Co., Sacramento.
Special prices and time for trial given on first orders from points where we have no agents.

GRANGERS' BUSINESS ASSOCIATION, SHIPPING AND COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.

Full Cargoes of Wheat furnished Shippers at short Notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

A. M. BELT, Assistant Manager.

FRUIT PAPER!

RAISIN WRAPS, SWEAT PAPER

FROM THE MANUFACTURER DIRECT AT LOWEST PRICE.

Raisin-packers are advised that we will make and carry in stock the "Azure Blue" "Top Wrap," which has been used for years by the packers of Spain.

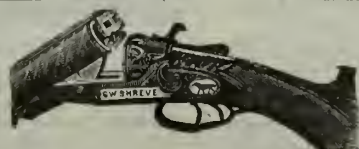
S. P. TAYLOR PAPER CO.,

414 & 416 CLAY STREET.....SAN FRANCISCO.

Send for Price Lists

OF GUNS

And all Articles used
by Hunters and
Anglers.



GUNS SENT ON
TRIAL.

OLD GUNS TAKEN
IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.

WILL pay you to send 25c. for Encyclopedia, of

The Markets.

(Continued from preceding page.)

enhous Plums, \$1.60; Prunes, \$1.10; Cling Peaches, \$1.15@1.60; Early Crawford Peaches, 70c@1.45; Foster Peaches, 75c@1.40; Tuscan Cling Peaches, \$1@1.05; Red Nectarines, \$1.25; Grapes, \$1.15; Bulgarian Plums, \$1.20.

CHICAGO, Aug. 8.—Porter Brothers' Company sold to-day at auction ten cars of California fruit at the following prices: Bartlett Pears, \$1.50@1.80; single crates Tokay Grapes, \$2.60; single crates Muscat Grapes, \$1.10@1.15; Rees de Peru Grapes, 75c@95c; Fontainebleau Grapes, 70c@1.10; Grapes, \$1.20; Gros Plums, \$1.60@1.70; Mormon Prunes, \$1.05@1.40; Columbia Plums, \$1@1.20; Silver Prunes, \$1.00; Tragedy Prunes (small), 90c@1.15; Egg Plums, 85c@1.10; Purple Duane Plums, \$1.15; Bradshaw Plums, 90c@1.05; Golden Drop Plums, 75c; Plums, 75c@80c; Early Crawford Peaches, \$1@1.35; Foster Peaches, \$1.05@1.25; Tuscan Cling Peaches, \$1.20; Decker Peaches, \$1@1.20; Clings, 95c; Nectarines, 35c@50c; Washington Plums, 90c.

MINNEAPOLIS, Aug. 8.—Porter Brothers' Company sold one car California fruit to-day at auction at the following prices: Pears, \$1.65@1.70; Plums, \$1.05@1.45.

OMAHA, August 8.—Porter Brothers' Company sold three cars California fruit to-day as follows: Pears, \$1.50@2; Peaches, 90c@1.15.

NEW YORK, August 8.—The Earl Fruit Company sold California fruit to-day at auction as follows: Bartlett Pears, \$1.65@2.20; Gros Prunes, \$2.15; German Prunes, \$1.35@1.60; Egg Plums, \$1.20@1.40; Washington Plums, \$1.25@1.40; Crawford Peaches, 80c@1.35.

CHICAGO, August 8.—The Earl Fruit Company sold California fruit to-day at auction as follows: Bartlett Pears, \$1.65@2; Purple Duane Plums, \$1.05@1.15; Columbia Plums, \$1@1.15; Egg Plums, \$1@1.15; Sweetwater Grapes, half crates, 85c@95c; Red Nectarines, \$1.15@1.25.

MINNEAPOLIS, August 8.—The Earl Fruit Company sold California fruit to-day at auction as follows: Bartlett Pears, \$1.45@1.60; Early Crawford Peaches, \$1.35@1.40; Foster Peaches, \$1.35@1.40; Tokay Grapes, half crates, \$2.65@2.75; Fontainebleau Grapes, half crates, \$1@1.10; Egg Plums, \$1.10@1.60.

BOSTON, August 8.—The Earl Fruit Company to-day sold California fruit at auction as follows: Bartlett Pears, \$1.90@2.30; Early Crawford Peaches, \$1.45@2.15; Hare's Early Peaches, \$1; Purple Duane Plums, \$1.50@1.60; Egg Plums, \$1.35@2.10; Bradshaw Plums, \$1.65@1.80; Magnum Bonum Plums, \$1.40@1.70; Washington Plums, \$1.25@1.30; Columbia Plums, \$1.60@1.75; Peach Plums, \$1.50@1.60; German Prunes, \$1.40@2.25; Sweetwater Grapes, half crates, 65c@70c; White Nectarines, 60c.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per cwt. for the past week:

	Aug.	Sept.	Oct.	Nov.	Dec.
Thursday	5607 d	5608 d	5609 d	5609 d	5611 d
Friday	5607 d	5607 d	5608 d	5609 d	5610 d
Saturday	5607 d	5607 d	5608 d	5609 d	5610 d
Monday	5607 d	5607 d	5608 d	5609 d	5610 d
Tuesday	5606 d	5606 d	5607 d	5608 d	5609 d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. O.	P. S.	N. D.	Market for P. S.
Thursday	2866 d	2863 d	2864 d	Firmer
Friday	2866 d	2863 d	2864 d	Quiet
Saturday	2866 d	2863 d	2864 d	Quiet
Monday	2866 d	2863 d	2864 d	Quiet
Tuesday	2866 d	2863 d	2864 d	Steady

To-day's cablegram is as follows:
LIVERPOOL, Aug. 9.—Wheat—Buyers hold off. California spot lots, 5s 3d; off coast, 28s 6d; just shipped, 28s 6d; nearly due, 28s 6d; cargoes off coast, quiet; on passage, very little demand; Mark Lane wheat market quite of a holiday character.

Eastern Markets.

The following shows the closing prices per bushel of wheat for the past week at

Day	Aug.	Sept.	Oct.	Dec.
Thursday	68 1/2	72 1/2	76 1/2	76 1/2
Friday	68 1/2	72 1/2	76 1/2	76 1/2
Saturday	68 1/2	72 1/2	76 1/2	76 1/2
Monday	68 1/2	72 1/2	76 1/2	76 1/2
Tuesday	68 1/2	72 1/2	76 1/2	76 1/2

The following is to-day's telegram—per bushel:

NEW YORK, Aug. 9.—August, 66 1/2; October, 71; December, 75 1/2.

Chicago.

Day	Aug.	Sept.	Oct.	Dec.
Thursday	59 1/2	61 1/2	63 1/2	63 1/2
Friday	59 1/2	61 1/2	63 1/2	63 1/2
Saturday	59 1/2	61 1/2	63 1/2	63 1/2
Monday	59 1/2	61 1/2	63 1/2	63 1/2
Tuesday	59 1/2	61 1/2	63 1/2	63 1/2

The following is to-day's telegram—per bushel:

CHICAGO, Aug. 9.—August, 58 1/2; September, 59 1/2; December, 67 1/2.

Local Markets.

WHEAT.

	New.	Dec.
Thursday, highest	\$1 24 1/2	24 1/2
" lowest	1 23 1/2	23 1/2
Friday, highest	1 12 1/2	12 1/2
" lowest	1 12 1/2	12 1/2
Saturday, highest	1 13 1/2	13 1/2
" lowest	1 13 1/2	13 1/2
Monday, highest	1 13 1/2	13 1/2
" lowest	1 13 1/2	13 1/2
Tuesday, highest	1 11 1/2	11 1/2
" lowest	1 11 1/2	11 1/2

*After Sept. 1.

The following are to-day's recorded sales on Call:
Wheat—Morning—Informal Session—December, 600 tons, \$1.21 1/2; 500, \$1.21 1/2; 300, \$1.21 1/2. Seller 1893, new, after September 1st—100 tons, \$1.11 per cwt. Regular Session—December, 400 tons, \$1.21 1/2; 1700, \$1.21 1/2. Seller 1893, new, after September 1st—100 tons, \$1.10 1/2; 100, \$1.11 per cwt. Afternoon—December, 200 tons, \$1.21 1/2; 1300, \$1.21 per cwt.

BARLEY.

	New	Dec.
Thursday, highest	\$1 75 1/2	85 1/2
" lowest	75 1/2	85 1/2
Friday, highest	74 1/2	84 1/2
" lowest	74 1/2	84 1/2
Saturday, highest	76 1/2	86 1/2
" lowest	76 1/2	86 1/2
Monday, highest	74 1/2	84 1/2
" lowest	74 1/2	84 1/2
Tuesday, highest	82 1/2	92 1/2
" lowest	82 1/2	92 1/2

The following are to-day's recorded sales on Call:

Barley—Morning—Informal Session—December, 100 tons, 81c per cwt. Regular Session—Seller 1893, new—100 tons, 71c; 100, 70 1/2c; December, 100 tons, 80c; 100, 80 1/2c. No. 1 Brewing, October, 100 tons, 90c; 200, 90c per cwt. Afternoon—December, 400 tons, 80c. No. 1 Brewing, October, 100 tons, 90c per cwt.

Live Stock.

BEEF.
MUTTON.

Stall fed.....	5 1/2 @	Wethers.....	5 1/2 @
Grass fed, extra.....	6 1/2 @	Ewes.....	5 1/2 @
First quality.....	(4) 5 1/2 @	HOGS.	
Second quality.....	4 1/2 @	Light, 7 lb. cuts.....	6 1/2 @
Third quality.....	4 @ (4)	Medium.....	6 1/2 @
Bulls and thin Cows.....	3 @	Heavy.....	6 1/2 @
VEAL.		Feeders.....	6 @
Range, heavy.....	4 @	Stock Hogs.....	5 1/2 @
Do light.....	5 @	Dressed.....	9 @ 2 1/2
Dairy.....	5 @		

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. AUG. 9, 1893.

BEANS AND PEAS.		BAGS.	
Bayo, chl.	2 15 @ 2 25	Standard Calc Grain	6 @ 6 1/2
Butter	2 15 @ 2 25	Spot	6 @ 6 1/2
Pea	2 55 @ 2 65	June & July delivery	6 @ 6 1/2
Red	3 00 @ 3 25	Potatoes, gnassia	14 @ 15
Pink	3 00 @ 3 25	Wool, 3 lb.	30 @ 32
Small White	2 55 @ 2 65	Wool, 4 lb.	32 @ 34
Large White	2 55 @ 2 65		
Lima	2 70 @ 2 80		

BUTTER.		HOPS.	
Oal, poor to	15 @	1892, fair	16 @
fair, lb.	15 @	Good	18 @
Do g'd to choice	18 @ 20	Choice	20 @
Do Giltedged	22 @ 24		
Do Creamery	24 @ 25		
Do do Giltedged	25 @ 26		
Cal. Pickled	21 @ 22		
Cal. Keg	19 @ 21		

CHEESE.		FLOUR.	
Oal, choice	8 @ 10	Extra, city mills	3 90 @ 4 00
Do fair to good	8 @ 9	Do country mls	3 90 @ 4 00
Do Giltedged	10 @	Superfine	2 80 @ 2 90
Do Skim	5 @ 6 1/2		
Young America	10 @ 11		

EGGS.		NUTS—JOBBER.	
Store	22 @ 23	Walnuts, hard	5 @ 7
Range	17 @ 18	shell, Cal. lb.	— @ —
Eastern	17 @ 18	Do soft shell	— @ —
Outside prices for selected		Do paper-shell	15 @ 18
large eggs and inside prices		Almonds, aftshl	7 @ 8
for mixed sizes—small eggs		Hardshell	8 @ 9
are hard to sell.		Pecans, small	8 @ 10

FEED.		ONIONS.	
Brant, ton	17 50 @ 18 50	Silver	75 @ 90
Feedmeal	23 50 @ 24 00		
Grd Barley	18 00 @ 19 00		
Middlings	21 00 @ 24 00		
Oil Cake Meal	— @ 35 00		

HAY.		POTATOES.	
Compressed	7 00 @ 11 00	New, chl.	
Wheat, per ton	9 00 @	Early Rose	35 @ 60
Do choice	— @ 12 00	Peerless	40 @ 60
Wheat and oats	8 00 @ 11 00	Burbank	60 @ 90
Wild Oats	8 50 @ 10 00	Garner, Chl.	50 @ 60
Cultivated do.	7 00 @ 10 00		
Barley	7 00 @ 9 00		
Alfalfa	8 00 @ 11 00		
Olover	8 00 @ 10 00		

GRAIN, ETC.		POULTRY.	
Barley, feed, chl	70 @ —	Hens, doz	5 50 @ 6 50
Do good	72 @ —	Roosters, old	5 50 @ 6 00
Do choice	75 @ —	Do young	6 00 @ 8 50
Do brewing	87 1/2 @ —	Broilers, small	2 75 @ —
Corn, white	87 1/2 @ 92 1/2	Do large	3 00 @ 4 00
Yellow, large	90 @ 95	Young Ducks	4 00 @ 5 00
Do small	97 1/2 @ 1 00	Old Ducks	4 00 @ 4 50
Oats, milling	1 25 @ 1 35	Geese, pair	1 00 @ 1 50
Feed, choice	1 25 @ —	Turkeys, goblr	15 @ 17
Do good	1 27 1/2 @ —	Turkeys, hens	15 @ 17
Do fair	1 20 @ —		
Do common	1 15 @ —		

WOOL.		PROVISIONS.	
California, year's fleece	8 @ 10 1/2	Oal, bacon	— @ 12
Do, 6 to 8 months	8 @ 10 1/2	heavy, per lb.	— @ 12
Do, Foothill	10 @ 13 1/2	Medium	— @ 12
Do, Northern	12 @ 14 1/2	Light	14 1/2 @ 16
Do, extra Humboldt	— @ —	Card	8 1/2 @ 11
and Mendocino	13 @ 15 1/2	Cal and d beef	10 @ 10 1/2
Nevada, choice, light	9 @ 10 1/2	Hams, Cal	— @ 13 1/2
Do, heavy	9 @ 10 1/2	Do Eastern	— @ 13 1/2
Oregon, East'n, choice	12 @ 15 1/2		
Do, Eastern, poor	8 @ 10 1/2		
Do, Valley	12 @ 15 1/2		

SEEDS.		HONEY.	
Alfalfa	9 @ 10	Oomb, 2-lb frame	7 @ 10
Clover, Red	15 @ —	Nevada, choice, light	11 @ 12
Do, 6 to 8 months	8 @ 10 1/2	Do, heavy	9 @ 10 1/2
Do, Foothill	10 @ 13 1/2	Oregon, East'n, choice	12 @ 15 1/2
Do, Northern	12 @ 14 1/2	Do, Eastern, poor	8 @ 10 1/2
Do, extra Humboldt	— @ —	Do, Valley	12 @ 15 1/2
and Mendocino	13 @ 15 1/2		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. AUG. 9, 1893.

Strawberries, chest		Nectarines, box	
Longworth	5 00 @ 8 00	Red	40 @ 50
Sharpless	3 00 @ 5 00	White	25 @ 50
Gooseberry	2 @ 3	Cranberries	25 @ 50
Raspberries	— @ —	Huckleberry, lb.	6 @ 8
chest	3 00 @ 6 00	Extra choice fruit for special	
Blackberries	2 00 @ 3 00	purpose sells at an advance	
Limes, Mex	4 00 @ 5 00	on outside quotations	
Lemons, box	1 50 @ 3 00	Beets, sk	— @ 1 25
Do Santa Bar	4 00 @ 5 00	Carrots, sk	45 @ 50
Do Stilly choice	4 50 @ 5 50	Oats, dry, lb.	— @ —
Green Apples, bx	25 @ 35	Okra, green, bx	25 @ 50
Red Apples, bx	50 @ 75	Parmips, chl	1 50 @ 2 00
Apricots, box	— @ —	Peppers, dry, lb	5 @ —
Royal	30 @ 50	Peppers, gr'n, bx	25 @ 75
Plums	15 @ 40	Peas, lb.	2 @ 2 1/2
Pears, bx	30 @ 50	Turnips, chl	— @ 75
Pears, Bart, bx	30 @ 50	Cabbages, 100 lb	50 @ 55
Peaches, box	25 @ 50	Garlic, 3 lb	1 @ —
Peaches, hkt	— @ —	Oatflower	60 @ 70
Crawford	25 @ 40	Tomatoes, box	40 @ 50
Figs, Black, box	— @ —	String Beans	14 @ 3
Figs, White, box	— @ —	Sparagus, box	50 @ 1 25
Apples	25 @ 75	Cucumbers, box	10 @ —
Watermelons	6 00 @ 12 00	Eggplant, bx	25 @ 50
per 100		Summer squash	— @ —
Cantaloupes	— @ —	box	15 @ 30
per crate	50 @ 1 00	Corn, green, sk	50 @ 1 00
Do River	1 25 @ 1 75	Corn, bay, box	1 00 @ 1 50
Grapes (green)	25 @ 75		

Attention, Nurserymen.

There will be a call meeting of the nurserymen of this State at the Assembly hall of the State Board of Horticulture, 220 Sutter street, San Francisco, on the 14th day of August at 1 P. M., for the purpose of forming a "State Nurserymen's Association." All nurserymen are cordially invited to attend. Many of the leading nurserymen of the State have already signified their intention of being present.

Dr. A. E. BUZARD, VETERINARY SURGEON.

MEMBER OF THE ROYAL COLLEGE OF VETERINARY SURGEONS, London, England. Late Veterinary Surgeon in the United States Army. Veterinary Contributor to the "Pacific Rural Press." The Diseases of all Domestic Animals treated on Scientific Principles. Special attention given to Chronic Lameness and Surgical Operations. 405 BRODERICK ST., SAN FRANCISCO. Calls to the country promptly attended to. Telephone No. 4667.

AGENTS \$50 to \$100—A WEEK.
Ladies of Gentle, Best seller known. Needed every house, place of business or farm the year round. "Home" Electric Motor runs all kinds of light machinery. Cheap power on earth. Connected instantly to wash or sewing machine, corn sheller, pump, fan, lathe, Jeweler's or dentist's machinery, &c. Clean, safe, lasts a life-time. No experience needed. To show in operation comes a sale. Guaranteed. Free literature. Circulars free.
W. C. HARRISON & CO., Columbus, O.

A SUBSTITUTE

Advantages of this Paper for a Drying Surface.

ABSOLUTELY ODORLESS

WATER, ACID AND ALKALI PROOF.

WILL IMPART NO TASTE NOR ODOR TO FRUIT.

CHEAP AND DURABLE.

ITS BRILLIANT BLACK

SURFACE, which absorbs

the heat, drying both sides

of fruit at the same time,

and rendering the labor of

turning unnecessary.

E. G. JUDAH, Agent, 221 South Broadway St., Los Angeles.

Breeder's Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of most first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

JOHN LYNCH, Petaluma. Breeder of Thoroughbred Shorthorns. Young Stock for sale.

PER

California Crops.

[Summary of Report of Observer James A. Barwick, for Week Ending August 5, 1893.]

Sutter County (Yuba City)—The wheat harvest is nearly over and the yield in some cases very satisfactory. Fruit is turning out well and prices satisfactory.

Butte County (Gridley)—Fruit coming in rapidly with heavy shipments daily. (Palermo)—Peach-picking has commenced and crop a heavy one. The warm weather has started orange trees growing.

Yuba County—Hops in the vicinity of Nicolaus in pretty fair condition, being better than for several seasons previous. One yard of 24 acres will yield a full ton to the acre.

Sacramento County (Galt)—Late fruit rapidly maturing and is of better flavor than the early varieties. Especially is this so of the peach crop. Grapes are doing nicely and present a thrifty and healthy growth, while the crop will be a large one.

Yolo County (Davisville)—The latest varieties of grapes have passed the stage of uncertainty. The crop will be a large one.

Colusa County (Colusa)—D. H. Arnold dug about 50 tons of potatoes, but as the first crop will not keep, he is now planting the second crop, which will keep all summer.

Solano County (Rio Vista)—The wheat crop in the Montezuma hills is turning out a little over 16 sacks to the acre. A large amount of fruit is being packed and shipped on the Sacramento river.

Sonoma County (Sonoma)—The extremely warm weather is ripening fruit very rapidly. (Petaluma)—Potatoes will be planted next season in acreage five times greater than this season on account of the starch factory being established here. (Bennett Valley)—New wineries are going up, because our vineyardists have concluded to make up their own grapes into wine. (Healdsburg)—Hay-balers busy. Hay selling for \$12 per ton, an increase of \$3 over last year. Hay of superior quality is scarce and is expected to be high during the winter and spring months.

Mendocino County (Ukiah)—Hop prospects in this vicinity and in the Laurel valley will produce an average yield. Sheep-raisers not selling any of their spring clip on account of poor prices. Lambs and early mutton were sold at good enough prices to enable the raisers to hold their wool for an advance in the market.

Stanislaus County (Turlock)—The wheat yield in this vicinity will be seven bushels to the acre, and not seven sacks as was reported in previous crop bulletin.

Alameda County (Livermore)—Thrashing in full blast and yield good and of good quality.

San Luis Obispo County (San Luis Obispo)—Beans and corn doing well. Cattle are generally very healthy for this season of the year.

Fresno County (Selma)—Fruits and grapes ripening rapidly. The Muscat grape is sugaring nicely and will soon be in the market. There promises to be a large yield of good quality of grapes.

Tulare County (Grangeville)—Peach-cutting has commenced for the season. (Lindsey)—Harvesting nearly finished. The warehouses are already being filled to overflowing, as no one wishes to sell at the present low prices. (San Jacinto)—Trees in our orchards are breaking down under their heavy load, and that, too, without irrigation.

San Bernardino County (Redlands)—Sunshine beneficent for drying and curing the fruit crop. Peaches are plentiful, of superior size and quality. Plums and grapes are also plentiful. Lemon and other citrus fruits looking fine. Good prospects. Blackberries, strawberries, melons and raspberries plentiful and weather warm.

Santa Barbara County (Santa Maria)—Cool, foggy weather was interrupted by two hot days. Summer crops continue to do well, though the beans were somewhat touched by the hot weather. Apricot-drying in full blast. The crop is a light one. Thrashing grain continues, with yield above the average.

Three and One-Half Days to the World's Fair.

We take pleasure in advising the readers of the PACIFIC RURAL PRESS that the UNION PACIFIC is the most direct and quickest line from San Francisco and all points in California to the WORLD'S FAIR.

It is the ONLY LINE running Pullman's latest improved vestibuled Drawing-Room Sleepers and Dining Cars from San Francisco to Chicago without change, and only one change of cars to New York or Boston.

Select Tourist Excursions via the UNION PACIFIC leave San Francisco every Thursday for Chicago, New York and Boston in charge of experienced managers, who give their personal attention to the comfort of ladies and children traveling alone.

Steamship Tickets to and from all points in Europe. For tickets to the World's Fair and all points east and for Sleeping-Car accommodations call on or address D. W. Hitchcock, General Agent Union Pacific System, No. 1 Montgomery street, San Francisco.

SPECIAL ANNOUNCEMENT.

We have made arrangements with Dr. B. J. Kendall Co., publishers of "A Treatise on the Horse and his Diseases," which will enable all our subscribers to obtain a copy of that valuable work free by sending their address (enclosing a two-cent stamp for mailing same) to Dr. B. J. KENDALL CO., ENOSBURGH FALLS, VT. This book is now recognized as standard authority upon all diseases of the horse, as its phenomenal sale attests, over four million copies having been sold in the past ten years, a sale never before reached by any publication in the same period of time. We feel confident that our patrons will appreciate the work, and be glad to avail themselves of this opportunity of obtaining a valuable book.

It is necessary that you mention this paper in sending for the "Treatise." This offer will remain open for only a short time.

MUSHROOM CULTURE.

An expert in mushroom culture desires engagement. English open-air method; harvest all the year round; profits heavy. Address, G. C. M., this office.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California street, San Francisco.

Hay Pressing.

If you are interested in pressing hay write Truman, Hooker & Co., San Francisco. They will save you money.

Horse Owners! Try GOMBAULT'S Caustic Balsam

A Safe Speedy and Positive Cure
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

DEWEY & CO.
AMERICAN AND FOREIGN PATENT SOLICITORS
ESTABLISHED 1860.
OFFICE OF THE "Mining and Scientific Press" Pacific Rural Press
No 220 Market St.
TAKE ELEVATOR NO 12 FRONT ST.
SAN FRANCISCO, CAL.

GEM STEEL WIND MILL
WITH GRAPHITE BOXES.
Never Requires Oiling or Climbing of Towers.
Guaranteed more durable without oil than other mills that are oiled. Practically, these mills require no attention. TRULY A GEM, and worth its weight in Gold. It combines beauty, strength, durability and simplicity. Governors itself perfectly, is easily erected and is sold on its merits; in fact, it is the best mill on earth. They are geared back three to one—the wheel making three revolutions to one stroke of pump—making them run in the lightest wind or breeze. The mill is made entirely of Steel and Cast Iron. Each one of our Gem Wind Mills is warranted. If not satisfactory, freight will be paid both ways and money refunded. We also carry Pumps of all kinds, Tanks, Pipe Fittings, Hose, Etc. **WOODIN & LITTLE, 312 MARKET ST., San Francisco, Cal.**



J.W. FISKE N.Y.

WEATHER VANES

COFFEE MILLS

For the Cheapest and Best

SCALE

Of any style known to the trade

Address

Grain & Store TRUCKS

GROCERS' FIXTURES

HOWE SCALE CO.

75 Front St., Portland, Or. 3 & 5 Front St., San Francisco

HERRMANN THE HATTER

WILL GIVE YOU A BETTER HAT FOR YOUR MONEY THAN ANY STORE ON THE COAST.

Send for Illustrated Catalogue, mailed free.

332 & 336 KEARNY ST., SAN FRANCISCO.



Educational.

Bowens Academy,

University Ave., Berkeley.

BOARDING AND DAY SCHOOL For Boys and Young Men.

Special university preparation, depending not on time but on progress in studies.

T. S. BOWENS, M. A. Head Master.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,

Surveying, Architecture, Drawing and Assaying, 728 MARKET ST., SAN FRANCISCO, CAL. Open All Year.

A. VAN DER NAILLEN, President.

Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. ESTABLISHED 1864. Send for circular

HEALD'S

BUSINESS COLLEGE.

24 POST STREET.....SAN FRANCISCO. FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Book-keeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR. E. P. HEALD, Pres. C. S. HALEY, Sec.

MAKE YOUR OWN GAS!
BADLAM BROS..

519 Market St., San Francisco.

SOLE MANUFACTURERS OF THE CELEBRATED PEERLESS GAS WORKS. New process, safe and inexpensive, from \$100 upward. Light cheaper than coal oil. Send for catalogue and prices.

CALIFORNIA If you want to know about California and the Pacific States, send for the **PACIFIC RURAL PRESS**, the best illustrated and leading Farming and Horticultural Weekly of the Far West. Trial, 50c for 3 mos. Two sample copies, 10 cents. Established 1870. DEWEY PUBLISHING CO., 220 Market St., San Francisco.

Seeds, Plants, Etc.

AN INVITATION

IS EXTENDED TO ALL INTERESTED TO VISIT THE SAUSAL FRUIT FARM DURING THE FRUITING SEASON, WHERE ALL VARIETIES ARE TESTED THAT ARE GROWN AT

NAPA VALLEY NURSERIES.

AN INSPECTION OF THE NURSERIES ALSO SOLICITED. CLEAN STOCK, UNIRRIGATED, PROPAGATED FROM BEARING TREES.

LEONARD COATES, NAPA, CAL.

OLIVE TREES.

ALL KINDS OF

Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,

Pomona, Cal.

Spark's Mammoth Apricot.

A superior quality, healthy and vigorous grower. Particularly fine for canning, and an excellent long-distance shipper. They run three and four to the pound. The largest and finest fruit of the apricot variety. A large stock of trees for sale. For further information address N. B. SMITH, Ventura, Ventura Co., California.

**HEADQUARTERS**

For Rare new Tropical fruit and ornamental plants and trees. Palms, Ferns, Orange Trees, Pineapples, Bamboos, Aquatics, Etc.

Plants safely shipped everywhere. Send stamp for new and full catalogue which tells all about this subject.

REASONER BROS.,

Oneco, Fla.

Dormant Buds

FROM HEADQUARTERS.

I offer a very fine stock and assortment of Dormant Buds of Peach, Apricot, Nectarine, Prune and Plum. Prices low. NOW is the time to place your order. I also offer a general supply of choice nursery stock.

F. S. PHOENIX,

Bloomington, - - Illinois.

The FAIRBANKS

GALVANIZED

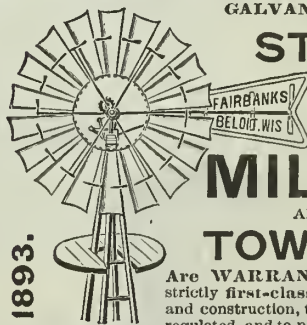
STEEL

WIND

MILLS

AND

TOWERS



1893.

Are WARRANTED to be strictly first-class in material and construction, to be the best regulated, and to produce more power than any other steel mill.

THE ECLIPSE WIND MILL
the Original Self-regulating Wood Wheel.

Pumps, Tanks, &c. Send for Catalogue and Prices.
FAIRBANKS, MORSE & CO., CHICAGO, ILL.

ROOFING

GUM ELASTIC ROOFING FELT costs only \$2 per 100 square feet. Makes a good roof for years, and any one can put it on.

GUM ELASTIC PAINT costs only 60 cents per gal. in hbl. lots or \$1.50 for 5 gal. tubs. Color red. Will stop leaks in tin or iron roofs that will last for years. TRY IT.

Gum Elastic Roofing Co.,

39 & 41 West Broadway, NEW YORK.

Local Agents Wanted.



FOR THE BEST IMPROVED

ARTIFICIAL LIMBS

ADDRESS

MENZO SPRING,

9 Geary St.

SAN FRANCISCO, Cal.

OFFICE 5, Up-Stairs.

THE JOHN DEERE PLOWS ARE THE BEST ON EARTH.



NEW DEAL GANG.

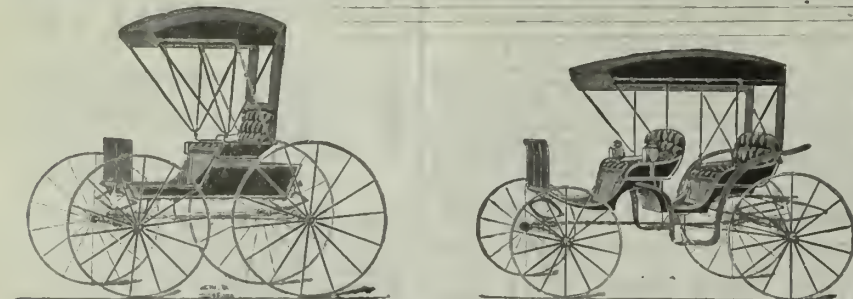
TWO, THREE, FOUR OR FIVE GANG,
WITH SEAT OR WITHOUT,
STEEL OR CHILLED BOTTOMS.

DEERE IMPLEMENT CO.,
305 and 307 MARKET ST., SAN FRANCISCO.

50% SAVED.



HARNESS, \$7. BUGGIES, \$75. SURREYS, \$130.



No. 10 Cal. 4 Spring,
1 1/2 Concord Axle,
1 1/2 Steel Tires,
This wagon is made here by us
of Select Timber.
PRICE, \$110.
TOP, Extra, \$30.

WRITE FOR
CATALOGUE
OR CALL.

CALIFORNIA WAGON & CARRIAGE CO.,

36 1/2 to 44 1/2 FREMONT STREET,

SAN FRANCISCO, CAL.

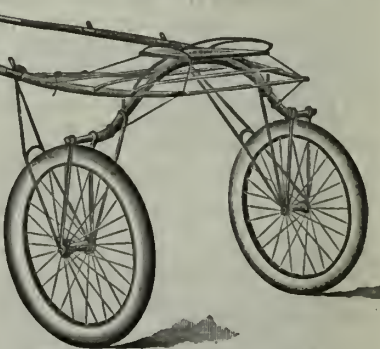


NOW! NOW!!
IS THE APPOINTED TIME.
Less than Actual Cost.

No. 542
"MAUDS" Double-Axle Sulky
Acknowledged by Leading
Horsemen to be the
STIFFEST AND BEST
Track Sulky Now Made at
Any Price.

WE HAVE AN OVERSTOCK
OF THE
Regular and Pneumatic Tire Sulkies,
And for a Limited Time Will Sell for Less
Than Actual Cost.

NANCY HANKS TROTTED THE FASTEST
Record 2:04
mille on record when hitched
to a Sulky with Ball
Bearing, Pneumatic Tired
Wheels. We can furnish you with a No. 2 1/2 Nancy
Hanks Sulky with Pneumatic Tired Ball Bearing Wheels.
This price includes the regular Sulky wheels as well
and either style may be used. We solicit your order.
Remember we give you the regular wheels in addition to
the Pneumatic Tired Wheels. So you have two sets of
wheels with each Sulky.



WRITE FOR PRICES.

Truman, Hooker & Co.
SAN FRANCISCO and FRESNO.



The **Anderson Prune Dipper**
W. O. ANDERSON, Patentee and Sole Manufacturer.

THIS WELL-KNOWN DIPPER is to use in almost every plum-growing
section of the State and has given perfect satisfaction wherever tried.
WE HAVE MADE SEVERAL IMPROVEMENTS THIS SEASON in ad-
ditional heating capacity, facility for spreading the fruit, etc., which
makes the machine indispensable both for the factory and the farm.
We also keep a full line of FIELD CARS, TURNABLES, TRANSFER
CARS, Etc.
For further information address the Manufacturer,

P. O. BOX 970, SAN JOSE, CAL.

DEWEY & CO. { 220 MARKET ST., S. F. } PATENT AGENTS.
Elevator, 12 Front.

PACIFIC RURAL PRESS

Vol. XLVI. No. 8.

SAN FRANCISCO, SATURDAY, AUGUST 19, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market St.

The Combined Harvester.

We give on this page an engraving of a class of harvesting machines which has reached a high excellence in design and a wide usefulness in the broad grain-fields of the California valleys. The harvesting scene which the picture presents is familiar enough to valley residents, but may be new to dwellers in parts of the State where such ships of the plains cannot find room for their evolutions. It requires a large acreage of grain on level or rolling lands without break of fence or other obstacle to secure the greatest benefit from such machines. For this reason they have never made much headway on hilly lands or in small valleys with many fenced fields.

The term "combined harvester" is employed for this class of machines because they perform at one continuous operation the work which is usually given to several machines. They cut, thrash, clean and sack the grain, so that standing grain is on one side of the machine and tied sacks of grain are dropped along on the other as it proceeds on its way. Grain is much more expeditiously and cheaply handled in this way than was possible before these machines were introduced. There sometimes arises a question whether they are as desirable as claimed because of the grain lost or injured in passing through the machine. Farmers

also have some other grounds of objection to them, still they are widely used and they have enabled grain-growers who are situated so as to be able to use them to put grain in the sack more cheaply than ever before.

The reader should not accept the grain-field shown in the engraving as representing the ordinary California grain-field at harvest time. It is evidently an exceedingly thin, short crop, if the photograph rightly represents it. This fact, too, may be significant, for, with such a poor stand of grain, probably nothing but a combined harvester could be run cheaply enough to make the harvesting pay for its cost. Still the field has served one good purpose. It enabled the photographer to get a better picture of the machine than he could if it was struggling along with high grain. This may seem little enough to be thankful for, but in such dull times small favors should evoke gratitude.

The engraving shows the harvester with animals as motive power. Harvesters are also drawn by traction engines, the same engines which, in some cases at least, will soon be attached to gang-plows in preparing land for subsequent sowing.

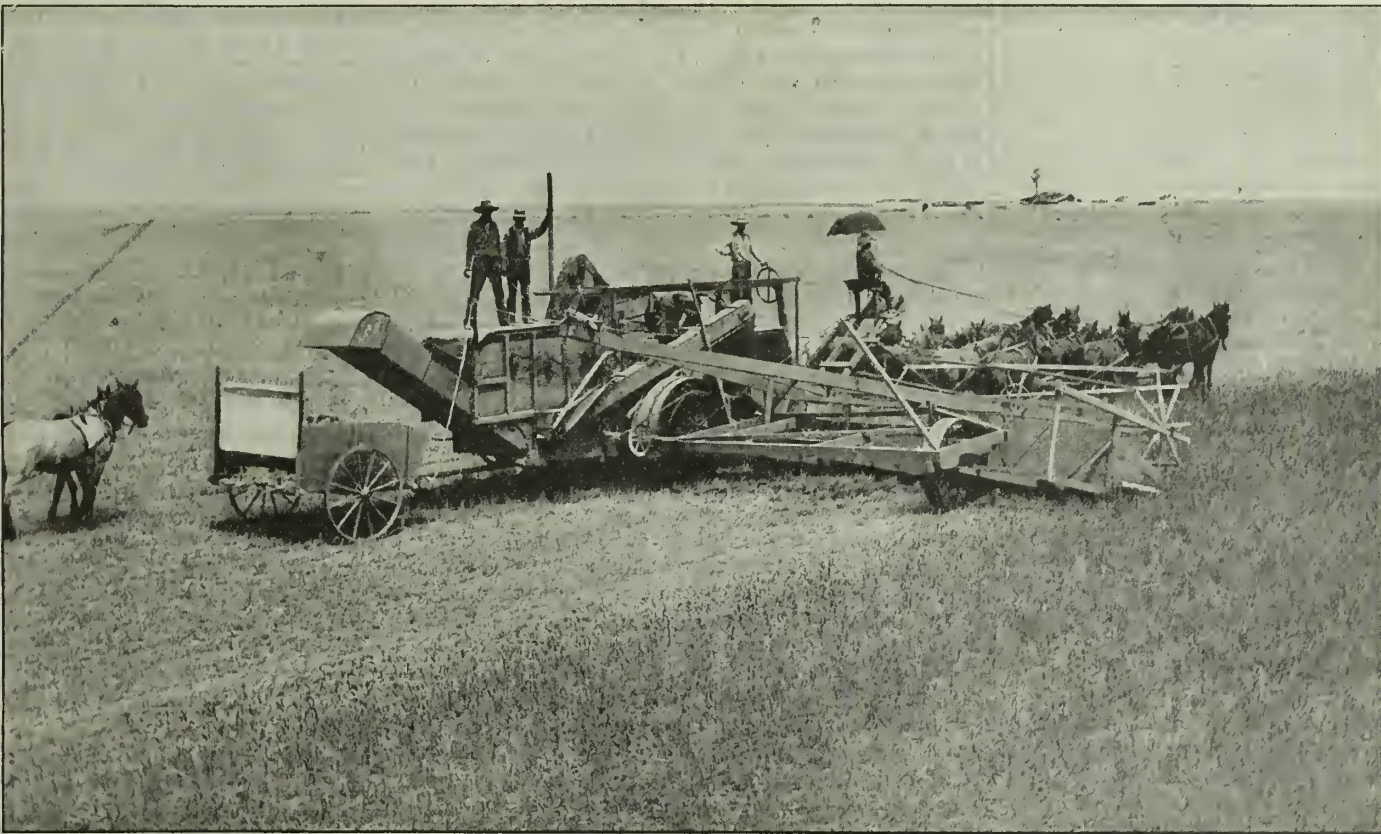
Summer Treatment of Apricots.

Apricot-growers at the South seem to be waking up well on the question of intelligent summer treatment of their trees. A writer in the *Pomona Progress* says he has seen this year several apricot-growers, whose orchards were allowed to grow to weeds about half the year and not intelligently cared for the other half, hauling their apricots from one fruit-buyer to another, trying to find some one who would take them. The prices for apricots have not been high this year, yet those who took good care of their orchards and had nice fruit and a good yield made money. The writer is a strong advocate of summer pruning and a copious irrigation immediately afterward. He says: "It is a waste of fruit and money to allow trees to consume their strength forming thousands of buds that

Imported Lemons in Trouble.

Lemons are to the fore again in connection with the cholera introduction. There have been a few cases of the disease on emigrant steamships in New York harbor, and the lemon importers are up in arms because Italian lemons are liable to quarantine. Such a rumor seems to have arisen from a newspaper report that Surgeon-General Wyman of the Marine Hospital, Washington, D. C., had taken exception to the admission of lemons shipped from cholera-infected Mediterranean ports. These importers claim that the merchants of Messina had recently agreed not to ship any lemons in vessels which carried emigrants. Some of the importers were positive that the California lemon-growers now in Washington were aiming a blow at the importers in the East, and they

will send a committee to the Surgeon-General to labor with him on the question and prevent quarantine. We do not imagine that they will accomplish much if the cholera makes any determined threat of entrance, for all trade will be suspended with infested countries. The importers claim that lemons are a good cure for cholera, but people will not care to take cholera bacilli and their cure in the same mouthful. The healthy California lemons will answer all the anti-cholera demand until the danger has



CUTTING GRAIN WITH A CALIFORNIA COMBINED HARVESTER.

are of no use. The branches may afterwards be cut off, but the mischief has been done, the strength of the tree has been wasted. Apricot trees should be pruned as soon after the crop has been gathered as possible. If it has not been done already this year, it should be done at once. Then the trees should have one good irrigation right away. It helps to tone up the trees and give them vigor for the formation of strong and healthy buds. Some trim their trees and let the irrigating go for a month or two. They do it whenever it happens to be convenient, and care for their orchards all the time on that plan, and never raise good fruit." This is sound doctrine in regions of high summer heat, where the trees make heavy early growth and need irrigation to finish up the season with.

IN Sonoma county there are 832 vineyards aggregating 23,291½ acres, of which 21,908½ acres are in bearing. Of these 21,618 acres are planted in wine grapes, 2328½ acres being on resistant stocks. The crop of 1892 amounted to 48,409 tons of grapes. To store this there has been made a cooperage of 5,676,300 gallons, 2,595,000 being of oak and 5,081,300 gallons being redwood.

passed at least. It will be just as well to give the eastern people to learn how good California lemons are.

THE BEET SUGAR BUSINESS seems to be proceeding in a lively manner at Chino. Trainloads of beets are going from Anaheim and Orange, and the Chino fields are doing their full share. The output of sugar at the factory for the week ending August 10 was 633,605 pounds. This makes the total so far 430½ tons. The Chino sugar factory is the first beet-sugar factory to start up this season. The Watsonville, Alvarado and Lehigh factories will not start up for several weeks. The Norfolk, Nebraska, factory will start up about the middle of September and the Grand Island, Nebraska, factory about the first of October. A. J. Young has delivered beets to the Chino sugar factory during the past week analyzing 30 per cent of sugar—something unheard of in Europe.

GOVERNOR MARKHAM has appointed E. L. Sturgeon and Henry Nelson of Merced directors of Agricultural District No. 35, and H. Meacham and Robert Crane of Sonoma directors of Agricultural District No. 4.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half Inch (1 square).....	1.00	2.50	6.50	22.00
One Inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, August 19, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—Cutting Grain With a California Combined Harvester, 133.
EDITORIALS.—The Combined Harvester; Imported Lemons in Trouble; Summer Treatment of Apricots; Miscellaneous, 133. The Week; The Nurserymen; State Bags Tied Up; Miscellaneous, 134. From an Independent Standpoint, 135.
MISCELLANEOUS.—What a Floridian Thinks of California, 135. California Nurserymen's Association; American Tea Growing; Notes on Drainage; Canals in New Mexico; Gleanings, 136.
HORTICULTURE.—Uses for Dried Apricots; Fruit-Evaporating Under Glass; What an Eastern Buyer Thinks of California Fruit; Fruit Show at Marysville Fair, 137. The Effect of Lichens on Trees, 138.
THE STOCK YARD.—Dehorning, 138.
THE DAIRY.—The Cheese Victory of the Jerseys, 138.
WORLD'S FAIR.—California at the Fair, 139.
THE FIELD.—California Tobacco, 139.
THE HOME CIRCLE.—Miscellaneous, 140.
YOUNG FOLKS' COLUMN.—Miscellaneous, 141.
DOMESTIC ECONOMY.—Miscellaneous, 141.
PATRONS OF HUSBANDRY.—From Worthy Master Davis; From Danville Grange; From Mr. Ohleyer; Field Day at Two Rock; From San Antonio Grange; Grange Resolutions; Notes, 142.
AGRICULTURAL NOTES.—142-143.
MARKET REPORTS.—144-145.

The Week.

And now comes the confirmation of the reports that the Eastern apple crop is a sad failure, and travellers who buy for export have the blues over the outlook. This is unfortunate for the apple States, but fortunately for the consumers and for us there will be a vast output of California dried fruit to take the place of Eastern apple sass this winter. Our fruit prices at the East are running lower now, owing to conflict with home-grown supplies, but these will not last long and our grapes and pears will help out the apple deficiency during the late autumn months.

The season of the county and district fairs has opened, but the exhibitions hardly attract the usual attention. People are too busy saving the fruit and tiding over hard times to indulge freely in festivities. Then, too, the Chicago gleam pales lesser lights. The time for the State Fair is approaching, and that annual round-up of the industries and entertainments should not be overlooked. There are good premiums for those who can capture them.

The Nurserymen.

At the meeting for the organization of a State association of nurserymen, as described on another page, there was naturally considerable discussion upon what may be called the rights and wrongs of nurserymen. One of the speakers incidentally remarked: "We always find the RURAL PRESS fairer to us than some other papers." We are not surprised at the admission, though we are gratified by it. If the RURAL knows its own heart, it has a genuine love for truth and fairness. We count these among the highest attributes of the true journalistic spirit, and they clothe our ideal of the work we would do. Guided by such an ideal we must be fair to the various interests we aim to serve and represent. We would be true and fair not alone to these, but we would show like disposition to every interest we may be called upon to antagonize. The RURAL has something of a reputation for brains and conscience, and we hope always to maintain it.

It is not difficult to be fair to the nurserymen. Of course to be fair to them one must know their work, their difficulties, their honesty as a class, their horticultural achievements, and their public services. If a fair-minded man has these items of knowledge he cannot but guard the nurserymen against unfair impeachment and defend from unjust and unwarranted accusation. Unquestionably the nurserymen are often placed in an unfair light before the community. They are too often blamed and slandered for accidents which they could not avoid, and for failures of trees and plants which are due to ignorance or neglect of the planter. Attempts are sometimes made to mulct

them for damages far in excess of any real injury suffered through their mistakes. They are sometimes denounced as shining examples of greed, avarice and fraud, and consigned to a place in perdition adjoining the reservation for plumbers. Of course the RURAL PRESS shields the nurserymen from such intemperate and unjust attack. We would do the same for any other honorable producing class in our constituency.

The reason why the RURAL is fairer to the nurserymen than other papers is due in part to the fact that newspapers generally have a lack of knowledge of nursery-work and nurserymen, which is as painful to contemplate as the bovine conception of music. The result is that the disappointed planter, failing to recognize his own neglect, or wrong-doing, or the asperity of the season which he did not mollify, rushes in to expose the swindling nurseryman who sold him trees which would not grow, or did some other alleged wrong. The well-disposed newspaper man lights the fires of his indignation, roasts the poor nurseryman, condemns his whole class, and wipes the face of the earth clean of such human dust. The complainant is satisfied, in fact so well pleased with the conflagration that he does not notice that in another column there is a gorgeous write-up of all the nurserymen who advertise in the journal, snatching them like brands from the burning and applying cooling ointment to their sores. It is no wonder that the nurseryman's head rings when he is given a cuff on one ear and a poultice on the other; no wonder he loses consciousness of his geographical position and exclaims distractedly to his fellows, "Where are we at?"

It is probably because he is subjected to so much of this distracting and unreasonable treatment elsewhere that the nurseryman finds consolation in the fairness which he noted in the RURAL PRESS. And in being fair we do not drop to fulsome. We consider it very important that nurserymen be continually reminded of the important trust which the planting public is, in the nature of things, obliged to confide in them. They should never be allowed to forget that the eye of the public is upon them and that carelessness and imposition in plant propagation and distribution are crimes, in a moral sense at least. The nurseryman who wilfully or carelessly induces a planter to waste his time and money and incur his ground with varieties he does not intend to plant, should be held to a fair responsibility for the wrong he does. He should not be blackmailed or menaced or sued for damages a hundred times greater than any possible loss which could have occurred. He should, however, understand that he is doing serious business which involves other men's time and money and means of livelihood, and should abhor a false label as he would a counterfeit coin. For this reason we would not have the public any less firm in impressing upon the nurseryman his obligation and his duty. He cannot afford to be careless or dishonest, nor can the public afford to allow him to lapse into such conditions.

The RURAL desires to be fair to the nurserymen and to advance their enterprises because, as a class, they are honest, enterprising and desirable producers. California's fruit product could never have attained its present extent and value without their constant effort. It cannot maintain this position nor grow to dimensions which we anticipate unless they continue their search for the most desirable varieties and multiplication of them. Were it not for wide-awake, progressive nurserymen, the spread of fruit varieties which pay best would be very slow and expensive business. Now the best can be had in any quantity at a fair price—sometimes at a very low price. There is no monopoly in the nursery business—it is full of the quickening force of competition. It deserves well of California, and now that an association has been formed, we anticipate that it will, if rightly conducted, assist the nursery industry to attain a more comfortable and satisfactory condition in its own affairs and to occupy a place of greater dignity and esteem in the public mind.

We are pleased to note that there is good promise of activity in nursery business this year in spite of the dull times. Fruit sales and prices have been so much more satisfactory than transactions in other lines of produce, as has already been pointed out in these columns, that considerable extension of orchard area on sound and conservative lines seems probable. We believe such enterprise is fully warranted.

THE condition of the fruit-canning and drying industries remains practically unchanged. Of about 25 canneries in this State possibly 15 are in operation, and these at one-half or less than that proportion of their full capacity. Many of the packers are simply filling a few orders which they have received and their operations are but nominal. Of about 50 fruit-drying establishments in the State, less than one-half are running, and these at far below their capacity. There is a large crop of the finest fruit in the world, but the general financial depression, which

seems to affect the commercial world in periodical waves, has caused a stagnation which has included in its baneful influence the great fruit industry of California. The conservatism of the banks in declining to loan money to the growers and packers with the liberality of previous years is not alone the cause of the inactivity of the canneries. There has been a falling off in the demand for the fruit caused by the financial depression in other parts of the world. The loss to the laboring classes is apparent when such a house as the Cutting Packing Company, which formerly had a payroll of \$5000 a week during the season, is now paying not to exceed \$6000 a month for labor and only running two of its three canneries and those on very short time. A. Lusk & Co. do not hesitate to say that they will not have more than one-half their usual output if they do that.

State Bags Tied Up.

Two States are now considerably in the bag business with full stocks on hand and no customers. California has at San Quentin prison upward of a million and a quarter on hand and is turning out eleven thousand per day. The State of Washington also has a bag plant turning out bags at its penitentiary. In both States the bags are not selling because they can only be sold for cash, and farmers cannot get the cash. The result is that, although the farmers if they had the money could get bags from the State nearly at cost, they are obliged to patronize old line bag merchants and pay higher prices because the merchants will extend the usual commercial credits. The statement of the situation in Washington is as follows:

COLFAX (Wash.), August 12.—The farmers of eastern Washington are anxiously inquiring why burlapsacks manufactured at the State Penitentiary cannot be sold on 60 or 90 day's credit with good security. The prevailing scarcity of money makes it impossible for them to pay cash as the regulations require, and in consequence the burlap sacks from California factories have advanced 3 cents within two weeks. While money was plenty the sacks from the State Penitentiary were selling readily at 6 cents cash, or 6½ cents on three months' time, though previous to the penitentiary competition they commanded 10 cents cash and 11 cents on credit. The penitentiary broke the monopoly, but under the present conditions the penitentiary article might just as well not be on the market. If Governor McGraw would use his influence with the penitentiary commission and effect time sales he would render an inestimable service to the farming community.

The "California factories" alluded to are of course the private firms who make bags in this State—not the State bag factory. Our bag dealers will not be slow to push their northern trade while the official bags are all tied up, as it were. The situation is quite the same as in California. At the last meeting of the Prison Directors it was shown that in 1890 3,183,915 bags were sold up to August 1st; in 1891, 2,661,025; in 1892, 1,127,460, and in 1893 but 741,000. The State offers bags at 5.73 cents each and regular dealers ask 6½ cents, but the State cannot make sales. One of the Prison Directors said:

Under the bill passed, we cannot sell bags to farmers, and we will have to close the jute mill. This bill bankrupts the jute mill. It prevents us giving credit to the farmer. Now we can turn out 5,000,000 bags a year and sell 1,000,000. Now our hands are tied. We do not need money till next spring, but as we can sell bags only to the farmers and only for cash, they will have to buy from the outside. We will have the bags on hand and be prohibited from disposing of them, and thereby shall be unable to replenish the revolving fund with which to buy more jute next spring. We will have to close down the jute mill.

Upon the face of it, this requirement that responsible farmers could only get bags for cash seems to be working great hardship to the people whom the enterprise was inaugurated to help. The State has the bags and does not need the money; the farmer needs the bags and has no money. It would seem to be a good chance for a safe degree of paternalism in the government.

EX-GOVERNOR ARTHUR L. THOMAS of Utah, chairman of the National Executive Committee of the Irrigation Congress, to-day issued a call for the meeting of the congress at Los Angeles during the week ending October 10, 1893, to consider the following subjects: Irrigation as applied to agriculture, irrigation legislation, irrigation securities, and irrigation machinery and appliances. Mr. Thomas has a circular letter announcing these facts, with instructions as to the representation and qualified delegates. We will refer to these at another time.

THE grizzlies will have mutton chops for Admission Day this year. Parties arriving at Fresno from the country beyond the Yosemite report that a band of 2000 sheep has been lost there. The sheep wandered on the Government reservation and the soldiers drove them off and into the country so rugged and places so inaccessible that when the herders followed and tried to collect the scattered band only a few could be found and these could not be gotten out, so the whole band was a total loss.

From an Independent Standpoint.

The business situation is a trifle easier than last week. The average man finds it just as hard to get what is due him and just as difficult to pay what he owes as before, but he has whatever consolation there may be in the fact that the balance of trade as between the United States and Europe has turned in our favor, and that money is "easier" in New York. In California money is still far from easy, in the sense of being easy to get, but there is certainly more confidence all round; and some of the funds withdrawn from the banks and put away for safe-keeping in old stockings and bedticks is being returned to the depositaries and must soon find its way into circulation. While the San Francisco banks have no money to put out in the ordinary way of business, they are doing a little better by the interior than earlier in the season. It is this change of policy that has enabled canneries to start up; and which has put out a little money in the hands of producers in the way of advances upon grain.

In the meantime a good deal of money is being brought into the country directly through the sales of products. Every grain ship that sails—and departures through the Golden Gate average three each week—involves the distribution of from forty to sixty thousand dollars; and the returns from the sales of California ripe fruits in the Eastern markets form a steady stream of ready cash. Neither for grain nor for fruit are prices what they ought to be, but still, since something beats nothing out of sight, light returns are a long way better than no returns at all.

The necessities of the time are forcing holders of produce to unload, and while this oftentimes involves serious sacrifice on the part of the individuals, it all goes to help the financial health of the general public. Still, times are hard enough and every branch of business is living from hand to mouth, waiting for a change and praying for some action on the part of Congress calculated to put matters in better shape.

What Congress will do is as much of a conundrum now as it was before the session opened. There seems little doubt that the Sherman or Silver-Purchase law will be repealed; but it is by no means certain that it will, in accordance with the President's suggestion, be repealed unconditionally. If Mr. Cleveland had said a friendly word for bimetalism in his message, then his plan of unconditional repeal would have been carried out, for the bimetalists would have trusted to his help in the future. But the message was so plainly a move for the single gold standard that those who approve the extreme gold policy are forced to act in a measure with the extreme silver men as a means of protecting bimetalism. Thus by arraying the administration on the side of the gold standard, the President has driven the moderate men who would have supported him into an attitude of opposition. They do not and cannot stand with the silver radicals from Nevada and Colorado, but for the present they are co-operating with these extremists until some plan shall be devised which they can reasonably support. As we look at it, the hope of the country rests upon these men who reject alike Mr. Cleveland's policy of a gold standard and Mr. Bland's policy of a silver standard. We believe with them that a way can and will be found for the concurrent use of both gold and silver in the money system of the country and of the world.

Everybody in Washington excepting Frank Newlands of Nevada admits that the silver-purchase law must go; and almost everybody declares that something must take its place. But just what this substitute is to be nobody is able to say. A caucus of silver men was held last week, but ideas were so wide apart that it was found impossible to formulate a measure. There was a proposition to support free coinage at the ratio of twenty of silver to one of gold, but the caucus would not father the plan. To start the ball rolling, Bland of Missouri, the "old original Dr. Jacob Townsend" of fiat finance, introduced a bill for free coinage at a ratio not named, supporting it in a speech recommending the old ratio of sixteen to one, though intimating that he would be satisfied with a ratio of twenty to one. His attitude is like that of the clothing dealer who "will sell you dat goods for den tollars gash down and not a zent less, so hel-up me Got; vat vill you give?" Upon this indefinite proposition, the silver men are now killing time in the House, reciting to empty benches the old songs of financial economics, while the members crowd the halls and ante-rooms and swap yarns till time to adjourn for the day. As yet there has been little speech-making on the anti-silver side, and it is said there will be but little. The idea is to let the silver men talk their cause to death, and to give them no chance for a parliamentary fight. In the Senate there is some desultory talk but nothing to the point, that body simply waiting on the House. It has informally

been determined to allow this sort of thing to go on for two weeks from the date of opening, and then (on the 21st—next Monday) to bring the issue of repeal of the Sherman law to a direct vote. The situation, as it appears close at hand, is summed up in the following telegram which we clip from the *Chronicle* of this (Wednesday) morning:

WASHINGTON, August 15.—If unconditional repeal of the Sherman act passes both Houses of Congress it will be one of the most surprising events of this decade. If a silver bill is signed by the President it will be still more surprising. Everything points to a deadlock, and when that crisis is reached nobody can tell what will grow out of it. There is a strong prospect that the President will lead the House by the nose up to the point of unconditional repeal, but the Senate promises to pass a silver bill of some sort, and, failing in that, to prevent a direct vote being taken even if the Senators find themselves in their seats in the dog days of 1894.

There are some cool calculating gentlemen on both sides of the question, who fully believe that the session will prove a fizzle, and that even in the regular session after December 1st, the labors of both sides will end in naught. In the meantime they think the troubles in the financial world will adjust themselves so satisfactorily that business will go on as of yore, before the New York banks discovered the trick of suspending payments, and at the same time keeping their doors open to receive deposits. Nobody dreams that Congress can overthrow the President, but it seems to be settled in the minds of nearly all thinking men in Washington, that unless a new coinage law is placed on the statute book, the Sherman act will remain as it is. No other result seems possible. Even Senator Voorhees, strong administration man as he is, confessed to-night that he did not think that the Senate and House could come together on this question inside of six months, if they ever did so.

This estimate of the situation comes from a source firmly attached to the silver side of the question, and must be taken with a grain of salt. It illustrates, however, the difficulties of a situation which has no parallel in the legislative history of the country. In our judgment, however, the elements of weakness are relatively most numerous with the silver men. They have no organization, and the proceedings of last week's caucus shows that they cannot make one. They have no measure upon which they can unite; in fact, they can have none, since they have no common ground of purpose or conviction. The wild-eyed radical who insists upon free coinage because it will promote the mining industry is not in closer communion with the rational bimetalist of—well, say of the *RURAL*'s type—than with the simon-pure gold standardists from New York or the Yankee States. On the other hand, the gold forces are united upon a definite plan, and have the prodigious advantage of such definite and indefinite help as the administration can give. This being the situation, it looks to us as if repeal of the Sherman law was a thing foreordained; and that the most the silver men will get will be a general declaration favorable to bi-metalism. This much they ought to insist upon, for nothing can be more certain than that the American people will not submit to the gold standard scheme.

As we surmised last week, the President's message was read with glee in England, where it was understood to imply that the United States had abandoned bimetalism. Several of the leading London journals took occasion to tell Mr. Balfour and other English bimetalists that they might as well abandon bimetalism altogether since its last tower of strength had fallen. Such comments are based, of course, upon a misconception, but they serve to annoy and obstruct those who seek to co-operate with us and to inspire and aid those who would do us harm. Thus much has the President accomplished by disregarding his duty as the official spokesman of American policy.

Mr. Cleveland surprised Congress and the country on Friday of last week by leaving Washington for a month's stay at his summer home at Buzzard's Bay, Mass. He explained his going by a public statement that he was advised by his physicians to take a season of absolute rest. This, no doubt, is the exact fact, nevertheless it only half explains why the President is away from the Capital at this crisis. The truth is, the Cleverlands are preparing for what the newspapers call "an interesting domestic event,"—in other words, they are expecting a new baby—and it is this, quite as much as his health, which calls Mr. Cleveland to Buzzard's Bay. In these matters there is a fellow feeling which makes the world wondrous kind and nobody will criticise Mr. Cleveland's absence. As a matter of fact, it should make no difference. The duty of legislation, in this financial matter as well as in other concerns, rests with Congress alone; and the President's part was done when he called Congress together and put the facts of the situation before its members. He will have nothing more to do till Congress submits to him the results of its deliberations in the form of an enactment.

It is curious how terrible things lose their terrors when they cease to be novel. Last year the whole American nation was in a panic because a few cases of cholera were found on steamships arriving from Europe. This year we have a precisely similar state of facts, and nobody cares anything about it. We read in the morning paper that three or five new cholera cases have developed at quaran-

tine in New York; that the disease is raging in Naples, Marseilles and Rome; that steamers are leaving the infected countries for America each week; and it seems something very remote. We depend upon the New York health officers to protect the country, and give the matter no further thought. If we had been able to take the same calm and common-sense view of the daily reports last year, it would have saved us a severe nervous shock. As a matter of fact, there is small danger from cholera in this country. It seems to thrive only in the more crowded and filthy parts of cities which totally disregard the plainest sanitary rules. In cities not crowded, with abundant pure water and even tolerably drained, the cholera rarely comes and never remains long. An epidemic in such a place has never been known.

What a Floridian Thinks of California.

Mr. R. W. Pierce, of Sunet Hill, Florida, doubts whether the recent comparative test of Florida and California oranges, held in the office of the *Florida Agriculturist*, was conclusive; at least he does not desire his Florida neighbors to hug themselves to too great joy over their own conclusions. As he has recently visited California, he gives a long letter, from which we clip the following:

Anything tending to convey the idea that California is not "in it," and cannot produce good fruit, will eventually do us harm. We cannot afford to rest on our laurels that some claim we secured on our Florida seedlings. This is an age of progression. I trust we are progressing some. I think I can see some changes in the eighteen years I have been here. California has a progressive people. They have enterprise and vim. If any one doubts it, let him visit the great World's Fair. View the two State buildings from as far as you can see them. Note the contrast: Ours, typical of an old prison pen of barbaric ages. Theirs, typical of the great christian mission. They have put into their exhibition money without stint. They have whole orange groves, and waving palms, and many other plants to greet the eyes of lovers of tropical scenery. They do not fail to improve every opportunity offered to advertise the resources of their State. While alas! where, oh! where are we? Why! the men whom we employed to make our laws were so imbued with the spirit of this age of progression, they thought Florida had attained to such a high principle of fame that they could not afford to appropriate even the small sum of \$5000 to further advertise her world-renowned oranges.

In the interest of my business, I left here on the 23rd of February last and went direct to Riverside, California, leaving the State on April 5th. Most of my time was spent in and about the principal citrus-growing sections of the State.

I was the guest of Mr. C. S. Burgess most of the time, also Mr. George Frost and the Gulick Bros., who did all they could to make my stay pleasant and to give me an opportunity to learn all I could about citrus culture in California. Messrs. Frost and Burgess are old residents and very prominent men. Gulick Bros. have gone there quite recently from this State, and are also well known. I went there with my eyes and ears open, to see and hear what I could, especially about the orange industry. I think I had an exceptionally good chance for observation. I was shown around the different groves by these gentlemen, and introduced to many of the prominent growers, especially by Mr. Burgess, and when he was not at liberty his horse was at my command, so I could visit any place I pleased. The State Citrus Fair was having an exhibit while I was there, which I attended.

I was appointed one of the judges of citrus fruits but was not able to serve but a short time. This exhibit gave me a fine chance to see and test the fruits, which I must say looked very nice. It was a grand display. All the fruit was very fine in color, not a smutty orange in the whole building, most of them had a very deep color, especially those from Redlands. All the Bloods were very highly colored, both outside and in. I have never seen them so much as here. The show of lemons was perfectly magnificent. I do not think it could be beaten in the world. They were all uniform in size, and all of such a rich lemon color. All had been subjected to the curing process which is generally practiced there.

I visited nearly all of the orange section, including Riverside, South Riverside, San Bernardino, Colton, Highlands, Redlands, Banning, Rialto, Ontario, Pomona, Los Angeles, Orange, San Diego, Chula Vista, also the orange section about Sacramento, Marysville and Oroville, and other points not mentioned.

I visited numerous packing houses, and did not see a smutty orange while I was in the State, but did see smutty lemons near the Sweetwater dam, some 12 miles from San Diego. It seems to me, on the whole, that they cannot suffer much from the smut.

About the quality of fruit. I tested them in all places, and found some good and some poor, the same as we find them here, but most of the fruit I did not think was fully ripe, as all that were on the trees were as firm as ours are in November. Trees were generally in bloom. In regard to the fruit, the rind was of a coarser texture and thicker than ours, inclining to be more acid, showing indications of not having the proper food. I tested some fruit that was very fine, could be no better anywhere. The varieties were not known, as the party that grew them had recently died. He was considered a crank on varieties and fertilizers. We have been told that they could not grow nursery stock there—else why should they come here for trees? I found nursery stock grown there everywhere.

Door yards and fence corners were full, besides nurseries of 20 to 30 acres. You can hardly look in any direction

without seeing nurseries. There would seem to be enough to supply the world, and a very large percentage of them were as fine as I ever saw. They will have no more occasion to come to Florida after trees. Most of the grove trees looked fine with the exception of some about Los Angeles.

Riverside alone has shipped this year 2470 carloads of oranges up to date, and has been in the business only about 20 years, and this comprises but a small portion of the territory engaged in the orange industry, yet we are trying to make ourselves believe that California is not "in it." In view of all the facts, I think the proper course for us to pursue is to grow only the very best, and send to market only the very choicest, very carefully handled, and tastily packed, so that every box shall be an advertisement, and one that every Floridian shall be proud of.

California Nurserymen's Association.

In accordance with announcement a meeting was held at the office of the State Board of Horticulture in this city on the afternoon of August 14th, for the purpose of organizing an association of California nurserymen. There were about 25 present. Mr. George C. Roeding of Fresno was chosen temporary chairman, and R. D. Fox of San Jose, secretary.

On taking the chair Mr. Roeding made an address in which he stated that the association contemplated did not intend to intrude upon private business nor to fix prices for nursery stock, but to discuss matters of general interest and to promote the nursery industry, to examine new fruits, etc. He also urged the desirability of the extension of the lien law so as to cover trees for which pay could not be collected; also the need of protection against ignorant or dishonest pest inspectors, etc. Mr. W. P. Hammon advocated such an association. Individual nurserymen are imposed upon by wrong application of regulations and in many ways which could be resisted by an association but which cannot be resisted by an individual. John Rock and Leonard Coates also urged the desirability of forming an association.

On motion a committee of five was appointed to draft articles of association, consisting of Messrs. Hammon, Rock, Coates, Bogue and Royce.

The entrance fee is fixed at \$2; annual dues \$5. Membership is restricted to nurserymen, florists and seedsmen actually engaged in the propagation of stock. Annual meetings are to be held the last Saturday in May of each year. Semi-annual meetings will also be held and special meetings as called by the Executive Committee.

The following signed the membership roll:

A. F. Boardman, Auburn; John Rock, Niles; James Waters, Watsonville; J. T. Bogue, Marysville; Leonard Coates, Napa; J. F. Unglish, San Jose; F. Gonzalez & Co., San Francisco; B. Godfrey & Co., Davisville; L. F. Sander-son, San Jose; W. C. Hammon, Biggs; Duane Brothers, Martinez; Wm. Kelly, San Jose; C. C. Royce, Chico; James O'Neil, Hayward; F. M. Tenny, San Jose; G. C. Roeding, Fresno; R. D. Fox, San Jose; Thos. L. Bohlender, Chico.

A committee to nominate officers was appointed as follows: Leonard Coates, J. T. Bogue, A. F. Boardman, James Waters; F. M. Tenny.

The following report was made and the officers elected by ballot cast by the secretary:

President, G. C. Roeding; Vice-president, Leonard Coates; Secretary, R. D. Fox, San Jose; Treasurer, John Rock. Executive Committee, W. P. Hammon, J. Waters, A. F. Boardman, John Rock and C. C. Royce.

The secretary was authorized to issue a circular inviting all nurserymen, seedsmen and florists to join the association.

The following resolution was adopted:

WHEREAS, It has been announced that the American Pomological Society desires, if practicable, to hold its next regular meeting on the Pacific coast, therefore,

Resolved, That the California Nurserymen's Association ratifies the action of the State Horticultural Society in extending to the American Pomological Society an invitation to meet in San Francisco and will do all in its power to give the members a cordial welcome to California.

Attention was called to the desirability of uniform bundling of trees in the nursery. Mr. Bogue had used 10, 15 and 25 to the bundle, according to the size of trees. Mr. Coates used to do this but had now used 10 to each bundle uniformly.

Mr. Coates spoke of unwarranted action of quarantine officers and the habit of careless planters to blame all mishaps and diseases to the nurserymen. There should be some protection against such evil.

Mr. Hammon spoke of protection against excessive damages which are sometimes claimed for trees not true to name. If nurserymen all used similar contracts under which trees are sold, claim for such unreasonable damages could be prevented. Upon motion the Executive Committee was directed to ascertain and to advise the members what measure could be adopted to protect the nurserymen in this direction.

Mr. Bogue suggested that an effort should be made to secure reduced railway rates on nursery stock; also to publish schedules of rates for trees baled or boxed and by the carload. The opinion seemed to prevail that little could be expected from such effort.

QUITE a favorable report appears in the *Commercial Bulletin* of New York on California honey. It is in eager demand both for home consumption and export to England, Germany and the Netherlands, in all of which countries it has become a feature. The honey abroad is deficient this year.

American Tea Growing.

Those who remember the early enterprises in the line of tea growing in California, and others who have now tea plants growing thriftily in their gardens, will be interested to know that the tea industry is being carried forward experimentally in South Carolina. Mr. Charles U. Shepard writes to the *American Agriculturist* about the "Pinehurst" tea plantation where it appears there were produced last year 150 pounds of cured tea. Mr. Shepard gives the following conclusions from his experience thus far:

1. Tea plants may be successfully grown either from seed or from cuttings. It is certain that the Chinese and Japanese sorts, as also very many of the Assam hybrids develop into luxuriant plants here.

2. The yield of tea leaf during the season of 1892 and under the stimulus of high cultivation, proved equal to that of the best Indian gardens of the same age. The rate of production of a well-situated and highly-manured garden of say 1500 plants, at six years of age, should amount to from 250 to 500 pounds, according to the size of the leaf that is picked. It is highly improbable that it can ever pay to pick any but the small young leaf which alone is suitable for the manufacture of the higher grades of tea. Asiatic cheap labor—at six to eleven cents daily wages—precludes competition in the inferior sorts.

3. The quality of the tea prepared during the past season has received most favorable notice from competent authorities, and the tea has found a ready market at comparatively high prices wherever offered. Thus far only Assam hybrid leaf has been picked at Pinehurst; and it is better adapted for the manufacture of black or fermented tea. But this season some Chinese and Japanese plants should be in a condition to furnish leaf for experimentation, and it is not improbable that green and oolong teas similar to the Chinese may be made therefrom. Should this leaf prove adapted to this product, the great host of American green tea drinkers may be supplied absolutely pure and American tea to their liking.

As to the question of profit, the problem must remain unsolved for several years yet. Without reference to unforeseen dangers—such as destruction by insects or other foes—the pivotal factor is that of production, and the Pinehurst gardens are too young to afford satisfactory conclusions. They are also too small to warrant the substitution of machinery in the manufacture of tea, a step rendered indispensable by Asiatic competition; but the difference in cost between the two systems may be calculated. We have produced good leaf. It is possible that enough customers may like the style in which the Pinehurst tea of the past season was prepared to consume any possible crop from this farm, otherwise it can be prepared to suit them.

At this writing, the outlook for the success of a tea estate of a few hundred acres is good, but it would involve the expenditure of large sums of money. The business should control its own labor, which can be done in the south; it must be cheap, obedient, reliable and intelligent, to a small degree. Perhaps the poorer white classes might be taught to cultivate and properly pick tea, disposing of the product to a central factory; but it is doubtful if they could afford to wait the four or five years after seed planting, which are necessary before any considerable amount of leaf can be gathered. The principal demand for labor in the tea industry is in leaf plucking; it is not arduous, and should be done by women and children. We are hopeful that the possible tea culture may open a congenial employment to them, both white and black.

Notes on Drainage.

TO THE EDITOR:—Mr. Ohleyer's letter is timely. The RURAL should keep agitating this subject.

Begin by correcting one very wrong idea which even Mr. Ohleyer seems to hold, that drainage reduces moisture. On the contrary, it conserves it; curiously enough the more soil is aerated in winter the better it holds moisture in summer. Actual experiment has shown that drained land retains moisture nearly twice as well as undrained land. Indeed, this is one of the main reasons why a drainage system would so greatly benefit California soil.

The difficulties in the matter are largely practical, and one of the greatest to my mind is the absence of frost in the ground. Our soil has no natural loosening up and gets very solid. So important to my mind is this element that I am doubtful as to the success of underdrainage. Three years ago I ran some surface ditches to prevent collection of surface water in low spots. At one point there is a ditch three feet deep and a foot wide at the bottom. Last year I sent some soil from within two feet of the ditch edge to Prof. Hilgard, and he reported a "bad case of white alkali." Now this spot had been plowed ten inches deep for two years and was within two feet of a ditch three feet deep and yet so little drainage had occurred that the alkali was but little, if at all, removed in two years. My explanation is the absence of any loosening of the sub-soil and so no drainage. I am told that in Illinois it is the practice to cover the drains with brush up to the frost line to keep the soil porous, while the frost does the rest. The most discouraging feature in California is that the soil which needs underdraining most is generally the most compact and least porous.

Cannot the RURAL's readers contribute experience on this point? Apart from co-operation there are many cases of private work in this line which are hindered by reason of the uncertainty of the result. There is no question of the great benefit of underdrainage, especially in dry years; the doubt is whether subsoil drains will underdrain in a frostless country.

A. GUILLOU.

Hueneme, August 7.

Gleanings.

—A lighted cigarette started a grain fire at Brentwood, which caused a loss of \$800.

—First Stranger: "It seems to me I have seen your face before." Second Stranger: "Quite likely. That's where I carry it."—*Tid-Bits*.

—It seems that everything is short this year. Even the icebergs on the Atlantic have diminished in number, only 68 having been reported this season against 179 last year.

—There is no use of Americans worrying about the future. Should this country go to grass we will be able to dispose of the hay at from \$30 to \$50 a ton.—*Georgia paper*.

—First Store Boy: "How do you like your new place?" Second Store Boy: "Don't like it. If I don't do things right they'll get another boy, and if I do do things right they keep me doin' 'em."—*Good News*.

THE careless girl in a bathing suit,
May seek the ocean's brim,
But the thrifty girl who cans the fruit
Is the one that's in the swim.

—San Jose Mercury.

—Col. McClure of Philadelphia remarked the other day: "Bad as journalism is, bad as politics is, bad as our churches are, bad as society is to-day, bad as commerce is, there never was a time in the history of this or any other land when the church, religion, politics or journalism were as good as they are to-day."

—Prince Frederick von Lippe, who is a cousin of Emperor William, and who is coming to the World's Fair, is loyal to the "fatherland." He has caused it to be announced in advance of his visit that he neither intends nor desires to marry an American. But then, remarks the *Hanford Journal*, he has not seen the American girls yet.

—Some one says: "To prevent flies from soiling your picture frames boil three or four onions in a pint of water; then with a brush go over the glasses and frames, and the flies will not alight on them. The liquid will not injure the frames in the least." It works like a charm on bald-headed men, too, and saves many a cuss word.

—The *Sanger Herald* says that a young lady visiting at a big vineyard north of Sanger went out among the vines early one morning last week, and her dress becoming quite damp, she remarked to the owner that the dress was quite heavy on the place. "Yes," said he, "there's about \$8000 done on this place, and it is drawing eight per cent interest."

—The hardest slam on our glorious climate comes from Chico. A merry old bachelor named McBride, aged 63, saw the advertisement of Angelina G. McAllister, a damsel of 53, in a San Francisco paper, and met, courted and married her all in a week. He took her home and she was satisfied with everything but Butte's climate, and she deserted him for the cyclones and hydrophobia of an eastern State. Our glorious climate has not received such a setback in years.—*Oroville Mercury*.

—James Knapp Reeve, a prominent New Yorker, who writes a long letter on California to the *New York Independent*, has the following to say in conclusion: "It may not be out of place for me to state that I came to California somewhat prejudiced against it, prepared to criticize rather than blindly accept the many rose-colored pictures which its enthusiasts draw so liberally, but I will confess that its gentle airs and blue skies, its verdant hills and fertile valleys and brilliant groves have quite disarmed me; and I believe that, as it becomes known more and more, it will fill with a great people and become an empire within itself, an empire filled with the happiest, healthiest and richest population of any upon the earth."

—The *Solano Republican* reports that a lot of apricots consisting of 46 crates shipped on consignment by Jos. Danielson arrived in Chicago just at the time the panic occurred there, and just when there was a stagnation in the fruit market. Upon receiving the returns for this fruit, the balance showed that on the entire shipment just one cent was due him. This, Mrs. Danielson demanded, and, with some reluctance, the agent finally made the payment with a copper cent. As she expressed the intention of keeping this coin as a souvenir, the agent asked and received permission to have the coin made more attractive. A few days ago Mrs. D. received a small package which contained the one cent plated with gold, with looped gold band around it.

Canaigre in New Mexico.

Concerning this native plant (*Rumex hymenosepalus*) which is now in quick demand for tanning, as was fully described in the RURAL some months ago, G. O. Shields of Eddy, N. M., writes to the *Irrigation Age* as follows:

The most of the farmers in this valley who planted canaigre last fall have raised fine crops. The plant is now putting on seed and will soon become dormant until about September, when the new tops would begin to grow if let alone. Meantime, however, most of the farmers will dig the roots and either dry them themselves, for shipment, or will sell them to the dealers. One or two of the parties who have heretofore engaged in shipping canaigre from this valley will again establish large slicing, drying and shipping camps, and will buy all the canaigre they can get.

Competition in the business of handling canaigre is growing strong. An agent of a Boston commission house recently visited Eddy and urged upon several of the farmers and commission men there not to sell their product to any one until they gave him a chance to figure on it next fall. He insisted that he would pay better prices than any one else.

As already stated, a New York house recently offered to contract with parties here for 75,000 tons of canaigre each year, for the next five years, at the rate of \$10 a ton for the green root, on board cars at Eddy. It is gratifying to know that the new industry is attracting so much attention, and that farmers in the arid region have the inside track on a product that is destined to bring so much wealth to their doors.

HORTICULTURE.

Uses for Dried Apricots.

TO THE EDITOR:—Many who have taken up the occupation of fruit-growing in California, even in the last ten years, have gone to raising fruits for a livelihood that they had never seen or tasted. This is particularly true of the apricot.

I think till California grew this fruit in commercial quantities few American housewives were acquainted with its use as a cooked dish. Few, even, had ever seen an apricot. I am quite sure, also, that not till recently, say within the last 12 or 15 years, have dried apricots and the cooks of our American homes become anyway acquainted. They are not very well acquainted now. Yet for centuries the cooks of the Orient have used the apricot dried, in a variety of curious, dainty ways.

We California housewives, however, have had, in the cooking of the apricot, dried, a field of original experiment. The apricots were with us, but the foreign recipes were not; at least, not at first.

I am going to give the RURAL PRESS some of my home ways of handling the dried apricot; also some few recipes from foreign sources, modified by use to American conditions. I hope that I may elicit thereby more valuable recipes from other housewives, not only for apricots, but for other semi-tropic fruits. Let us compare notes and exchange recipes. The bright housewives of California must have by this time concocted many original, delicious dishes. For have we not at hand materials which have only heretofore been common to the cooks of the Orient? Our occidental pride should make us rivals in ingenuity, ambitious to produce unheard-of dainties from apricot and prune, from loquats and nectarines, guavas and pomegranates, olives and Japanese persimmons, and all the rest of the list.

Of course, like a true American housewife brought up in New England, I began my course of experimenting in dried apricots by making them into pies. That is, after I'd served an apprenticeship in making dried-apricot sauce. For I found that of all the dried fruits I ever undertook to cook, to make a delicate, palatable sauce of the dried apricot was the hardest. Perhaps this is a good deal owing to the fastidious taste we, who eat this lovely fruit fresh, acquire. Indeed, one who has canned and fresh apricots cares little for the dried product, I think.

Dried-Apricot Sauce.—Wash the fruit thoroughly in several waters. Then give it two soda baths. To do this, scatter bicarbonate of soda (in proportion of one level teaspoonful of soda to a quart of fruit) over the fruit, and then pour boiling water on the fruit enough to cover. Give the mass a gentle stir immediately and drain off the water. Then repeat this process, only the second time let the hot soda-water stand on the fruit two or three minutes, while the sauce-kettle with its contents is placed on the range, where it will keep scalding hot, but not boil. Then drain thoroughly but carefully so as not to break the fruit. Next take sugar, one-half pound of sugar to one pound of fruit (or more or less to taste), scatter over the fruit, pour on boiling water to the depth of two inches over the fruit, place where it can simmer gently. It is best to have an asbestos plate underneath the kettle if the range is anyway too hot, as dried apricots burn very readily. When a straw passes readily through the fruit, place the kettle, tightly covered, where its contents will keep scalding hot for an hour or two more, if possible. There is something in the long, continuous application of heat to this dried fruit that helps give it a delicate flavor. Do not let the quantity of water diminish perceptibly, unless, indeed, you are cooking the fruit for pies instead of sauce.

Prunes stewed in boiling water till they can be pitted, then cooked with the apricots in proportion of one-third apricots to two-thirds prunes, are a very delicious sauce—particularly appetizing and healthful during the winter months as a breakfast dish. To vary this dish, it may be cooked till nearly dry, then eaten with a thick or whipped cream, as an accompaniment to the morning bowl of mush.

Dried-Apricot Pies.—With a pan of the sauce at hand, the cook on pie day may stand at her molding-board and make half a dozen kinds of apricot pies "and not stir out of her tracks," as Miss Hetty said, some years since, after reading a report of my experiments. First, there is the plain pie, which is made by simply covering the bottom crust of the pie with the halves of cooked apricots, forked from the dish of sauce so as to be as free from juice as possible. Add a few bits of butter, two ounces more sugar, a little cinnamon, and a dredging of cloves. Cover and bake. This may be varied by adding stoned and chopped raisins or whole Sultanas, and a greater variety of spice.

Then there is the *one-crust dried-apricot pie*. Manipulate the under crust as for custard pie; cover with the halves of fruit, add sugar, cinnamon and plenty bits of fresh, sweet butter. Bake on the bottom of the oven. To be eaten with thick cream, dairy butter, or any preferred sauce, at dessert. This can be varied by the addition of a meringue, and will then need no sauce. It can also be made daintier by straining the sauce through a colander, seasoning to taste and adding the yolks of two eggs to a pie. The whites are used in a meringue for the same pie, or the pie can be ornamented with fancy strips and shapes of pie-crust laid over the top and so turned into the popular tart pie. This may be almost endlessly varied by combination with other fruits, spices, etc.

Dried apricots, taken after the second soda bath and chopped, make a good substitute for apples in making mince pies. For years I used them thus, for apples were very high-priced and scarce. Then, combined with raisins alone, a delectable "mock-mince" can be made of this fruit. Where one has their own dried apricots and raisins, and lemons and oranges, too, it is a great saving, to be able to make such palatable use of them.

But I will not go into further details as to pies. "A word

to the wise" is sufficient. These recipes I found for myself, but I feel sure many others have found more and nicer ones.

This last winter I have been trying some Arabian recipes for dried apricots. They were given by Jahera in *Harper's Bazar* some time since.

Apricots in the Arabian market must be quite a different article from the California product. I see, for one thing, by these recipes that apricots in Asia are dried with the pits in—probably a clingstone. They also must be a much harder, tougher fruit to handle, *i. e.*, require much more soaking and cooking to be palatable than our fruit. This I found out to my cost when I tried to follow some of these Arabian recipes literally; hence those that I have experimented with I shall give with such a "twist" to them that they are almost "twist." New recipes:

Candied Apricots.—Make a "strong" syrup of one to two gills of water to one pound of sugar. Into this, while boiling hot, slide your apricots after their first soda bath. Let the mass boil very gently for some 15 to 30 minutes. Set away in the syrup. Boil a few minutes every day till all the syrup is absorbed. Dry on plates sprinkled with fine sugar, turning the fruit every day. Roll in fine sugar when dry and pack in boxes with thick paper between the layers.

Apricot Creams.—In making the candied apricots, while carefully taking out with a silver fork the unbroken halves, some fruit will be left that is too mushy for the candied fruit. This leave in the pan and mash to a paste with one of the old-fashioned potato-mashers. Add to this mass more than its bulk of finely-chopped walnuts (blanched almonds and pistachio nuts pounded to a paste in a mortar are added in the original recipe) and flavor with rose-water, cinnamon, a little mace and (if walnuts are the only nuts used) a few drops of extract of bitter almonds. Mix these ingredients well together with the masher and then make the mass into little balls. Dip each ball into a cream fondant and lay it on paraffine paper to harden. These are better to be eaten within a few days after making, as the contents color the "cream" after; but the balls will keep good as to flavor for several weeks. To treat the balls after the Arabian method, dip them in a very strong syrup and sift sugar over them.

I made the only *apricot creams* I ever saw. Those who partook of them pronounced them the most delicious confection they ever tasted.

Apricot Nougat.—For this, mix the above paste for balls with the fondant, make in a long roll, let harden; then cut in thin slices or any shape preferred. Roll in fine sugar. The paste for the nougat can be more highly flavored than for the balls or creams.

There is another Arabian dish wherein dried apricots are used, interchangeably with many other kinds of fruit. I have not tried it yet, but I will give an idea of the dish taken from Jahera's recipe. It is called *yukne*. Take a pound of meat, cut into small pieces and fry brown in dripping; then boil in water with a little salt, no pepper, until well done. Add the fruit and let both simmer for 15 minutes. Serve with rice. Lemon juice is said to improve the flavor.

Quinces, pears and apples, as well as dried apricots, are prepared in this way in Arabian cooking. Of course the fruit part is cooked until tender before putting in with the well-done meat. The simmering after mixing is to blend the flavor of meat and fruit. It seems to me the fruit must help the meat digest. I have heard that in Cornwall the miners who live almost continually underground, working so hard, have for a favorite dish a meat pie wherein tart apples are liberally used. They consider it "heartening" and very digestible, so I am going to try this Arabian dish soon, for I think my family, ever fond of culinary novelties, will like it.

Fruit-Evaporating Under Glass.

Fruitmen who remember the earnest efforts of the late W. A. Meeker to introduce an apparatus for using sun heat upon glass-covered fruit, and remember the obstacles he contended with, *viz.*, the lack of capacity proportional to the cost involved, will take a conservative view of the reports which come from Los Angeles of recent attempts to cure fruit in the same way, even though the arrangements be different. The needs of fruit-driers are for acres of space and sunshine. Acres of glass are of high cost and involve much labor. However, a few notes of what C. G. Calkins of Los Angeles is doing will be read with interest. We condense from a letter to the *Call* as follows:

Mr. Calkins' plan is to dry fruit under glass or a thin cotton cloth. Of course glass is preferable, though more expensive, and it is chiefly of the latter that he claims the most because all his experiments have been in this line.

Glass cases about 6x8 feet in surface measurement and about eight inches in depth, are provided for the fruit, which is laid in on two trays. The trays are placed on rollers in such a way that they may be inclined toward the sun's rays as the sun changes.

Mr. Calkins' experiments prove that the glass cases conserve the heat of the sun to a considerable extent and increase its intensity almost twofold. When the normal temperature is 60, the sun shining on these glass cases increases the interior temperature to 80 degrees. And the rate of interior temperature is cumulative, so that an outside temperature of say 100 degrees would make a temperature inside the glass of fully or more than 150 degrees.

Though the glass cases are more expensive than the dry mother earth, they are not nearly so expensive as the evaporators. Nor do they perform their work as quickly as the evaporators can. But the difference in the cost of the two plants—to say nothing of the fuel necessary for the quick work of the evaporator—more than compensates for the slowness of the glass process. And the slowness is only relative Mr. Calkins has proved. It is a far quicker

process than that of earth-drying, far cleaner, far safer and surer, and very much cheaper than the evaporator process.

Mr. Calkins says his device is particularly adapted to places where the sunshine is intermittent. During the absence of the sun, for a time at least, the drying process continues under the influences of the heat stored up in the glass cases, and the fruit itself is not subjected to the ravages of worms or to the influences of moisture at night or incipient showers in the daytime.

Danger of burning the fruit under these glass cases is obviated by ventilators. Some look with favor upon Mr. Calkins' plan of using cheese cloth or some thin cotton stuff as a covering in place of the glass. Its chief merit is its cheapness. However, it affords about the same protection to the fruit, except from showers, and is almost as valuable in accumulating and storing the heat from the sun's rays.

An ample proof of the cumulative power of cotton cloth as applied to heat is given on a hot day in a closed tent. When the sun is beaming down fiercely on the canvas and the flap in front is hermetically sealed by pins, the tepidarium of a Hammam bath establishment is not to be mentioned in the same breath.

What an Eastern Buyer Thinks of California Fruit.

TO THE EDITOR:—I am moved to write a remonstrance to the fruit-growers and shippers of your State, and the cause of this indictment is some California fruit that I have just been trying to eat. It was nectarines—fresh, I mean—which not only were unripe, but by no possibility ever could be so. It was nice-looking fruit, but was picked so long before maturity that it never would become eatable. Now I shall never be tempted to buy again. My experience has been the same with other of your fruits, as peaches, apricots, plums, etc., all prove "vanity and vexation of spirit," and I shall buy no more of it. The general opinion seems to be in this part of the country that your fruit is not good—that it lacks flavor, and is not equal to Eastern fruit. Such are the expressions I have heard many times, together with the same determination as I expressed above to buy no more.

Now, how can a great and growing trade in fresh California fruit be built up in the face of such a sentiment. In the RURAL PRESS of July 29th, page 90, third column, "An Australian in Our Orchards" says: "A great deal of fruit here is picked and packed so green for the Eastern markets that it will never have the flavor of ripe fruit. Upon asking why the fruit was put up so unripe, one large grower assured me that they were packed to *sell*, not to *eat*." Can it be that intelligent business men consider that good business policy?

The writer, formerly a fruit-grower in this locality, hopes soon to be engaged in the same occupation in California, and hence has a selfish interest in the subject in hand. Let me tell you, gentlemen, there will have to be a radical change in your methods before you can hope to capture the great markets of the East, and still we only wait the advent of good, ripe fruit to consume it in almost unlimited quantities, and I am confident California can easily furnish such when she shall be brought to see what is required.

Of canned and dried goods I have nothing to say except that, while there are cheap and poor grades, there are also good and excellent, which latter prove to some extent that your fruits are of good flavor and high quality, notwithstanding the current impression to the contrary.

Albany, Ill.

C. B. PADDOCK.

[Such a frank statement will serve a good purpose. Eastern buyers hold the key to the situation. If they will refuse to buy such fruit as is shipped, shippers will soon find a way to send something else. Freedom of conference between purchasers, Eastern dealers, main point receivers and growers will do much good in the line of getting the fruit to suit. It is possible to allow the fruit to acquire almost full qualities and yet be firm enough to carry well in refrigerated cars.

There is much poor fruit as well as unripe, good fruit sent forward. Fortunately, shippers of poor fruit are likely to get lessons which they cannot overlook. When they have to send money after the fruit to meet the bill of the Eastern agent for balance of freight charges due him, they will learn that it does not pay to ship poor stuff. This is more likely to reach and influence the foolish shipper of poor fruit than any other appeal. Exhortation avails little with him. He will be willing to concede that shipping poor fruit will ruin the business, but he will always think that it is his neighbor who ships the poor fruit. Low returns for his fruit, with an occasional pungle for freight when his fruit does not sell for enough to pay transportation, will convince him that something is the matter. This seems to be about the only way to reach transgressors; their way is hard, and we are glad of it.—EDITOR.]

Fruit Show at Marysville Fair.

The managers of the Marysville Fair are doing wisely in developing the fruit features of the coming exposition. Under the management of G. W. Hutchins, B. F. Walton and R. C. Kells, three prominent farmers and fruit-growers, it is intended to make the Marysville Pavilion a place of beauty during the week of the fair, which will open August 29. The *Democrat* says: The horticultural exhibits should be the chief attraction, as it is to-day the leading industry in this district. Bringing these fine specimens to the fair will cause them to be seen by thousands of people from different parts of the State, and to see them is to

admire them and cause their good qualities to be talked about and written of. The directors of the district have offered very liberal premiums in the department of horticulture as an inducement and to encourage growers to exhibit.

In green fruit the most artistic and best display will be awarded \$50; second best, \$30; third, \$20. Then for other exhibits the awards offered are, for the best and largest display by one person, \$50; second, \$25. There will also be separate awards for each kind of fruit.

The Effect of Lichens on Trees.

[The following paper by Samuel J. Holmes of the University of California was recently read at a meeting of the State Horticultural Society. It relates to the growth on the bark of trees which is commonly termed "moss," and is thus of direct interest to orchardists, especially in regions near the coast where this growth is greatest. It has long been a question whether the moss was injurious or not, and Mr. Holmes' investigation shows that clean trees are the proper trees to grow.]

A New Subject.—The effect of lichens on trees is a subject which, we believe, has never been thoroughly studied. We have not been able to find more than a passing remark on the subject in any of the literature to which we have had access. The attention of botanists has been devoted to the morphology and physiology of lichens themselves, without much reference to their relations to their hosts. They certainly have not regarded them in the light of serious enemies to the trees on which they live. They are generally held to be epiphytes, or air plants, the bark of the tree forming the substrate for their support.

Throughout the damper portions of California, where the fruit trees become thickly covered with lichens, they have been regarded by the fruit-growers as a serious pest. Much money and labor are expended to clean the trees of these foreign growths. It is certainly a fact that trees that are badly overgrown with lichens are apt to be lacking in vigor. This, however, is not conclusive evidence that the lichens are the cause of the phenomenon, although it strongly supports this conclusion. Dead trees are generally covered more thickly than live ones, thus showing that the lichens are not dependent for their support upon materials that the tree elaborates. On comparing the dead twigs with the live ones on the same tree, the lichens will be found to be the largest on the dead twigs. This may be because the lichens are parasitic and have killed the twigs or because they are saprophytic and thrive best on the bark which is most decayed. Entire parasitism is out of the question, for the parasite in that case would die when its host died, but there is nothing against the supposition that the lichens are partially parasitic. This would account for less vigor of the badly infested trees and the fact that the lichens continued to live after the death of their host. Another reason might be brought forward to account for the greater prevalence of lichens on sickly or dead trees. The bark of thrifty and vigorous trees is generally brighter and smoother than the bark of sickly ones, and the spores of lichens would find less chance of attachment. This is probably the reason why smooth-barked trees, like the cherry and apricot are almost entirely free from lichens, while the rough-barked oaks and soft maples are often thickly overgrown with them.

How Lichens Grow.—The character of the bark is an important element in determining what species of lichens will grow upon it. Our common lichens will not thrive well on the bark of pines and cedars, though there are some species of lichens which are peculiar to those trees. There are lichens which grow upon mosses, and there are others which are peculiar to other species of lichens. These facts point strongly to the conclusion that lichens derive their support, in part at least, from their substrate. A further argument in the same direction is the fact that lichens often contain a large percentage of mineral matter. The only other source of the mineral constituents beside the bark is the dust which always collects more or less around their base; it seems more probable that the minerals were derived from the bark than from this source.

The Method of Investigation.—The foregoing facts are not conclusive evidence of the injurious effect of lichens on trees. In order to gain further light upon the subject we began a study of the method of attachment of the lichen to the bark. The bark used was that of the soft maple, which was overgrown with a foliaceous lichen, *Ramalina Menziesii*. Sections were cut through the point of attachment of bark and lichen, and examined by the microscope for evidences of local injury. In order to trace the course of the mycelium of the lichen, we tried several methods of double staining. Decidedly the best results were obtained with the aniline colors. About the only other stain that we found of service was acetic acid carmine. Sections were left in a strong solution for 24 hours and then slightly decolorized. The mycelium was tinged red, the cork cells remaining unstained. The action of the cork toward the aniline stains was peculiar and quite decided. We found that several of the stains would color it quite strongly and leave the lichen almost uncolored; others again would stain the lichen and not tinge the cork cells; others, as Bismark brown, would stain both bark and lichen uniformly. Picronigrosin stains the mycelium a very dark blue and the cork yellow. Aniline green colors the cork cells a bright green and the mycelium with brown. By combining different stains we were able to differentiate the cork and mycelium quite sharply. Aniline green (saturated solution in one per cent acetic acid solution in water) with an equal amount of picronigrosin, and aniline green and gentian violet, gentian violet and saffranin, are combinations which give good results. Sections were left in these stains 24 hours and decolorized.

On examining a section through the point of attachment of the lichen to the bark, it will be seen that the connection between the two is not superficial, but that the mycelium threads of the lichen ramify and intertwine themselves among the cells of the bark in the most intimate manner. The mycelium threads penetrate between the cells, loosen them from each other and gradually force them farther and

farther apart. The cells thus come to be imbedded in the substance of the lichen, and as the lichen grows they are carried farther and farther away from their original positions. Having removed the superficial layers of cells of the bark, the lichen attacks those next beneath, and so on until it penetrates the entire thickness of the corky layer. The specimen shown and called Fig. 1 is a section across the base of a large lichen. All the superficial cells are surrounded by the mycelium threads, which have separated them from each other and are carrying them out. Farther out can be seen cells which have been transported quite a distance from their original situations. Often large groups are surrounded by the lichen and drawn up into its substance. It is usual to find under a large lichen a hole through the entire corky layer, which has been excavated by this process. This is probably the cause of the gap in the layer of cork in Fig. 1.

Specimen shown as Fig. 2 is a section a little to one side of the middle of the attachment of a lichen. It can there be seen how several layers of cells are being carried outward. This stage shows the beginning of what subsequently would become one of the holes through the cork at the base of the lichen. All stages can be traced from this the conditions shown in Figs. 1 and 5.

Specimen shown as Fig. 3 is a cut showing how the lichen has penetrated nearly if not quite to the growing cells. The mycelium acts as a kind of wedge, forcing the cells apart and growing deeper and deeper into the bark. The cells from the sides of the opening are being removed at the same time. In a short time a hole would be made here through the cork as deep as the live part. A hole having been thus excavated, it is continually enlarged by the same process of removing cells.

Specimen shown as Fig. 5 is a section through the base of quite a large lichen. The base is hollow—it being an old lichen—and the cells removed from the middle portion of the excavation do not appear. Cells are being carried away from the edges as well as the upper side of the bark. A large mass of cells on the left of the hole is being carried away entirely. Similar evidence of the removal of cells is to be seen in almost any section through the base of a lichen.

What is the Effect of This Removal of the Cells of the Bark?—An examination of the tissue below the point of removal shows us unmistakably that an additional production of cells occurs there to supply the place of the bark which has been removed. Specimen shown as Fig. 4 shows us what invariably occurs whenever the lichen has penetrated the center bark. We see, then, a hole that has been excavated through the regularly arranged cells of the cork and filled with the mycelium of the lichen. Immediately under this excavation we can see a triangular eminence of cork cells which have been produced there in great abundance to fill the gap and have caused the other layers to be tilted up. Fig. 5 shows under the edges of the old cork layer, which, being torn away, masses of cells which are forming to take its place. The break in the bark is not healed, however, for the new formation of cells becomes stripped off as the old layer was taken away. The process of removing cells and the production of new ones goes on continuously.

Specimen shown as Fig. 6 is a typical illustration of a quite common state of affairs under a lichen. It will be seen that the aggregate thickness of the disturbed layers of bark is much greater than thickness of the bark on either side. The spaces between these layers are filled by the mycelium of the lichen, which as they grow push the layers of bark outward. The interpretation of this section is, I think, that successive cork layers have been produced and carried out, the new bark forming as the old is carried away. As a new layer of cork is formed the mycelium threads of the lichen work their way through it, split it off and gradually push it farther and farther outward. A new layer forms under this and is carried out in the same manner. Successive layers having been thus formed and split off would bring about the condition shown in the figure.

How the Injury is Done.—The process by which a lichen injures a tree, then, is this: The mycelium threads pervade the corky layer of the bark, break it up and carry the cells outward. As a remedy for this, or, perhaps, as a result of the unnatural stimulation due to the presence of the mycelium threads, an extra growth of cork cells is produced at the point of injury. Now, the production of this additional amount of cork cells is plainly a tax upon the vitality of the tree. In the case of an exceedingly "mossy" specimen where the lichens are as thick as they can well grow, the effect upon the vigor of the tree must be great. It is common to find in situations where the air contains much moisture trees which are simply a mass of lichens as far as the new growth. The entire bark would be in that case in an unnatural and unhealthy condition, and it is no wonder, therefore, that such trees are often found to lack vigor.

Besides the mode of injury just described there are probably other modes by which lichens injure their hosts. The products of vegetable decomposition may accumulate under the lichens and may have an injurious effect. The retention of moisture forms decomposition, and any soluble materials thus produced and prevented by the lichens from being removed would work their way into the crevices in the bark along with the mycelium threads, and quite likely produce injurious effects upon the growing tissue.

We are not in a position to decide whether or not the lichens draw water from the lining tissue. It seems very certain that they draw moisture from the outer bark and I see no reason why the transference of moisture from the inner to the outer bark would not take place by osmosis to compensate for that which is withdrawn by the lichen. If water be thus withdrawn the food materials which are dissolved in it must also be withdrawn and the tree must then suffer from a direct loss of nutritive material. In order to prove that a transfer of sap takes place we introduced coloring matter into the bark with the purpose of finding out whether or not it worked its way into the lichen. The coloring matter could get into the lichen only by being car-

ried there by means of the water withdrawn from the growing tissue. Our experiments in this direction were incomplete and their negative results should therefore be given little weight. We hope to test this matter more thoroughly in the future.

The first ripe Thompson's seedless grapes brought to San Francisco this season were raised by J. Guilford at Semitropic, Kern county, in the artesian belt. The earliest were picked July 13th.

THE STOCK YARD.

Dehorning.

Director Roberts of the Cornell University Experiment Station has issued a bulletin on "Dehorning," an outline of which will be acceptable to our stock-growing readers. He gives a review of the legal status of the practice as related to the laws for the prevention of cruelty to animals, and concludes as follows:

In the United States, so far as we have been able to learn, all trials upon charges of cruelty to animals by dehorning have resulted in the acquittal of the accused parties.

In Canada at least two trials resulted in the acquittal of the accused, but in a third trial the conviction of the parties resulted in the appointment of a Government Commission, which made a report strongly recommending the practice and urging the passage of the necessary legislation to give it effect.

In Great Britain there have been decisions on both sides, those in Ireland and Scotland being in favor of the legality of the practice and those in England, notably that of Lord Chief Justice Coleridge and Mr. Justice Hawkins, against. Of 20 judges of higher courts who have passed upon the subject, 16 declared the practice to be legal, while four pronounced it illegal.

On Preventing the Growth of Horns.—Ever since the practice of dehorning has come into favor, it has seemed to many that if by some means the horns could be prevented from growing, it would be for many reasons much preferable to removing the horns from full-grown animals. As several so-called "Chemical Dehorning" have been on the market for some time, it has seemed well to undertake some experiments with certain caustic reagents to ascertain, if possible, if any could be relied upon to prevent the growth of horns. Accordingly, on November 5, 1891, five calves were selected from the university herd for experimentation in preventing the growth of horns by the application of various chemical compounds. These chemicals were compounded and either applied by or under the direction of Prof. James Law, professor of veterinary science.

One of these calves was a thoroughbred Jersey, one a thoroughbred Holstein, and the remaining three high-grade Holsteins.

The results of all the experiments made at this station lead us to believe that the use of caustic potash is by far the easiest, most humane and most certain method of securing hornless cattle. The best time to apply preventive reagents is early in the life of the animal, just as soon as the little horns can be distinguished by the touch. The manner of applying caustic potash is as follows:

The hair should be closely clipped from the skin and the little horn moistened with water to which soap or a few drops of ammonia have been added to dissolve the oily secretion of the skin, so that the potash will more readily adhere to the surface of the horn. Care must be taken not to moisten the skin except on the horn where the potash is to be applied. One end of a stick of caustic potash is dipped in water until it is slightly softened. It is then rubbed on the moistened surface of the little horn. This operation is repeated from five to eight times, until the surface of the horn becomes slightly sensitive. The whole operation need take only a few minutes and the calf is apparently insensible to it. A slight scab forms over the surface of the budding bone and drops off in the course of a month or six weeks, leaving a perfectly smooth poll. No inflammation or suppuration has taken place in any of the trials we have made. The results of these experiments warrant the following recommendations:

1. That for efficiency, cheapness, and ease of application, stick caustic potash can be safely recommended for preventing the growth of horns.
2. The earlier the application is made in the life of the calf, the better.

Caustic potash comes in the form of round sticks about the size of a lead pencil. It may be had at any drug store and should be kept from exposure to the air, as it readily absorbs moisture. Care should also be had of the skin and clothing during its use.

THE DAIRY.

The Cheese Victory of the Jerseys.

We gave last week the leading figures of the Jersey victory in the Worlds' Fair cheese contest. The following deductions and comments by the *Breeders' Gazette* will be read with interest by all dairymen:

The cows were charged with the feed they ate and credited with their yield of cheese, the value of the whey, and the gain in live weight. The difference between the total value of their products and the cost of their food is the net profit, and the award goes to the cows and the herd which show "the greatest net profit." When the net profits are equal (as occurs in several cases), the award goes to the cow which "yields the profit at the least cost."

There are five awards, based on net profit: (a) for an individual cow in each breed; (b) for an individual cow in

any breed; (c) for five cows in each breed; (d) for five cows in any breed; (e) for the herd.

The Jerseys win the best cow any breed and the best herd, but a Shorthorn stands fifth among the best five cows of any breed.

In 15 days the Jerseys ate \$98.14 worth of feed, which was a daily charge for the herd of \$6.54, or a cost for the average daily ration per cow of 26½ cents. The Guernseys ate \$76.25 worth of feed, a daily cost of \$5.08, or 20½ cents per cow. The Shorthorns ate \$99.36 worth of feed, a daily cost of \$6.62, or 26½ cents per cow. On this cost of ration the Jerseys show a profit for 15 days of \$119.82, the Guernseys of \$88.30 and the Shorthorns of \$81.36.

These figures of cost of ration are of little value for comparison with the cost of home-feeding unless the prices of the various feeds are taken into account. We therefore reproduce the prices at which the feedstuffs were charged per ton: Cornmeal, \$22; corn hearts, \$13.50; oats, \$23; cottonseed meal, \$26; bran, \$12.50; middlings, \$13; granogluten, \$14.75; oilmeal, \$22; hay, \$11.50; silage, \$4. Such of these feeds as are farm-grown rarely, if ever, cost in actual dairy work the prices charged in this test.

The test develops few if any startling results. It gives the Jersey decided rank as a cheese cow, which has not generally been claimed for her. It seems to indicate that the butter and cheese cow are all one and the same animal. The weights of milk necessary to make one pound of cured cheese are as follows: Jersey, 9.16 lbs.; Guernsey, 9.67 lbs.; Shorthorn, 11.31 lbs.

One chief lesson the test enforces is that a dairyman should use specifically-bred dairy animals. The Jerseys and Shorthorns ate practically the same value of food. The Jerseys made 1,451.76 lbs. of 13.4-cent cheese—a total value of \$193.98—and only 327 lbs. of 4½-cent beef, while the Shorthorns made only 1077.6 lbs. of 13-cent cheese and 709 lbs. of 4½-cent beef, or only 368.6 lbs. less beef than cheese. What dairyman wants to put feed into 4½-cent beef rather than into 13 to 14-cent cheese? Could any lesson be more clearly and unanswerably enforced? The man who wants to make butter or cheese exclusively should select cows specifically bred in that direction if he hopes to realize the greatest possible profit. These convincing figures need no further elucidation or emphasis.

But equally as conclusively it is demonstrated that the combination cow exists. She has been called a myth. Myths do not make 60 lbs. of cheese and 56 lbs. of beef in 15 days. The fact of her existence has passed from the realm of doubt to absolute demonstration, and the Don Quixote who runs a joust with the figures of this test will snivel his lances all in vain. The Shorthorn cows have made from 35.65 to 60.56 lbs. of cheese and as high as 66 lbs. of beef, which is a gain in weight of a little over four lbs. a day. The entire Shorthorn herd averaged a daily yield of 32.5 lbs. of milk (with 3.6 average per cent of butter fat) and made an average daily gain in weight of a fraction less than two pounds; to be exact, 3.25 of a pound less. The dual capacity of dairy performance and beef-making is demonstrated. Observant and informed men knew it existed; theorists and the hidebound denied the fact.

In seeking to break the force of this demonstration the *reductio ad absurdum* has been attempted by a feeble wit who asks: "What good is the gain in live weight in a milch cow since the cow must be killed in order to realize on it?" At the end of a cow's career she must be eaten or tanked. Her beef-making qualities give added value to her carcass, but it is a small credit when distributed over her years of usefulness. The value of the gain in live weight shown by the Shorthorn cows lies in the fact that it demonstrates the cows' ability to throw calves fit for the feed lot. It does this if like produces like; if not, then is our preaching vain. A cow that can more than pay her way at the pail and can produce profitable feeders is the combination cow. The dairyman gets all his profit from the pail. It is usually cheapest to kill his calves unless he violates the law against the sale of "bob" veals. On

thousands of farms a cow is wanted which yields a profit at the pail and annually produces a calf which, grown and fattened on the by-products of the farm, will bring a profit at the stockyards. The best dairy cow is beyond peradventure the specially-bred cow; the best beef cow is the one bred specially to beef production, but that dual profits may be reaped by those whose tastes and environments lead them to follow both lines; that "double-deckers" exist; that broad backs and big udders are profitably coordinated, no more admits of doubt than the face of the noonday sun.

WORLD'S FAIR.

California at the Fair.

NUMBER IV.

TO THE EDITOR:—In the Agricultural building California has a building of white wood. Beside the ornate structure of other States, it looks commonplace; the exhibit within has nothing striking about it and cannot be called a fully representative display. People who expect something extra from California are disappointed.

On tiers of shelves around the enclosure are globes filled with grains, garden seeds, peanuts and beans. A wigwam of cornstalks occupies the center of the floor. Amos Eddy, of Compton, shows seven samples of alfalfa as samples of the crops on his ranch during 1892, and states that the field yields about ten tons to the acre, and it fairly illustrates the cultivation of alfalfa in his section. There are specimens of peat from Orange county; soils, seeds and grain from Humboldt county; a large screen decorated with clusters of wheat from San Luis Obispo county; pampas plumes from Mrs. Strong's ranch at Whittier; a quantity of mustard seed shown by Cyrus Douglas of Santa Barbara county; sacks of grain and beans, on tables, from all parts of the State, and a few withered vegetables that but feebly indicate the possibilities of the State in that direction.

California's Mines.—In the Mining building, California looks as well as her neighbors, having an imposing structure, with marble front, well filled with mineral specimens from all parts of the State. Among them are onyx from San Luis Obispo, tin from Temescal, rubellite or red tourmaline from San Diego county, a varied collection of ores from Plumas county, borax and soda from San Bernardino county, asbestos from Fresno county, native sulphur from Lake county, salt from Salton, gold quartz from Toulumne county, Sespe stone from Ventura county, opalized wood from Sonoma county, roofing slate from El Dorado county, native salt from Inyo, gold quartz from Grass Valley, chromic iron and manganese from several counties, and a collection of the rocks of California. The great seal of the State, beautifully carved in redwood, is much admired. On the walls are inscriptions such as these:

"The U. S. yield of gold from 1848 to date, \$1,900,000,000."

"The California yield in same period, \$1,310,245,000."

"Quicksilver yield since discovery, \$63,234,000."

"U. S. gold yield, 1892, 44⅓ avoirdupois tons, value \$32,845,000."

"California gold yield, 1892, 23⅓ avoirdupois tons, value \$17,160,000." Both represented by cubes of actual size.

"Silver yield since discovery, \$47,128,000."

Other Exhibits.—Los Angeles county has 110 lemon and orange trees in the Midway Plaisance. In front of the California building there are 105 trees and plants, and more are on the roof and the north side of the building.

Another big Sequoia is in the rotunda of the Government building, and the stairway within is always crowded with people who feel that they are viewing a great curiosity.

A very creditable exhibit is made in the Fisheries build-

ng, surprising some who had thought that the Pacific coast could not show much in the fish line. I think that California has some plants and trees on the wooded island between the principal buildings. A hasty visit to the fair has led some residents of the State to think and say that the section is not well represented, but when one examines "the greatest show on earth" thoroughly, it seems as if one came across California oftener than any other locality. The exhibits are widely scattered, but taken in the aggregate they speak well for the State, though not, as I have said, as well in some respects as they might. I fully expect to find some more exhibits from California before I leave Chicago, and also to overlook some in the great spaces and bewildering masses of things useful and ornamental at Jackson Park.

Chicago, August 1, 1893.

CLARA S. BROWN.

THE FIELD.

California Tobacco.

J. D. Culp of San Felipe, the pioneer tobacco-grower of California and the most extensive producer of the weed on the Pacific coast, recently said to a reporter: "I have 50 acres planted in Havana tobacco this year, and have already sold my crop of 60,000 pounds at the rate of 50 cents a pound. I am the only man in California who has made tobacco-raising a regular business. It is a more profitable crop to-day than fruit, and there is no reason why other ranchers should not engage in the same pursuit. I did not make a success of the business at first, but while I was experimenting with Havana tobacco I grew other and cheaper grades, which I manufactured into smoking tobacco."

"I am now formulating a plan to lay before the farmers and ranchers of the State the details of my success, with a view toward making California become, in a few short years, the greatest tobacco State in the Union."

"Afterward, when I commenced to make a success in growing pure Havana tobacco, the wholesale dealers antagonized the industry. I was growing large quantities of tobacco in Santa Clara county, and as a result 50 or 60 cigar factories sprang into existence. The large dealers realized that the State would soon be overwhelmed with small manufactories, and the growers were compelled to sell their crops in the Eastern markets. Now, at this late day, the wholesale dealers acknowledge that for years we have been growing right here in California the finest Havana tobacco in America."

"During the last ten years nearly all of the tobacco product of the State has been shipped to New York, for there has been no general market here. What tobacco we have sold in San Francisco has had to be purchased by manufacturers on the quiet, so strong has been the opposition to the home-grown product."

"Tobacco can be grown in California for less than one-half the expense of any other State in the Union. In Connecticut the planters pay \$100 an acre for fertilizing, while here none is required. Recently the tobacco section of the Southern States has been visited by a most destructive hailstorm, something which we do not have here. In the matter of profit to the rancher, there is nothing like it growing in California soil. Tobacco in this State will produce 1500 pounds to the acre at a cost of only \$50 an acre, and the product will readily sell for 25 to 50 cents a pound. There is no reason why the entire State should not go into the business."

A CORPS of surveyors is on the headwaters of the North Tule river figuring on the probabilities and costs of fluming the water down to the plains for irrigation purposes. A number of capitalists are behind the scheme.

THE CALIFORNIA STATE FAIR

Of 1893 will be held at SACRAMENTO,
SEPTEMBER 4th to 16th :: :: :: TWO WEEKS.

\$20,000 IN CASH PREMIUMS \$20,000
FOR CALIFORNIA PRODUCTIONS.

FARMERS AND HORTICULTURISTS!
As well as **MECHANICS AND ARTISANS!**

Should make preparation to exhibit at THE ANNUAL FAIR as the opportunity is specially given to show CALIFORNIA'S CAPABILITIES.

INVITE INVESTMENT of capital by showing the products of your section. INQUIRIES AS TO LOCALITIES are being constantly made. We reply by sending reports of exhibits, which speak for themselves.

OBJECT LESSONS are valuable, and when written upon and their description heralded, they become a standing advertisement.

SHOW WHAT YOUR COUNTY can produce, and capital will flow in the direction thereof.

LANDS HAVE BEEN IMPROVED by the hundreds of acres in tree and vine planting through capital attracted by exhibits made at the State Fair.

MECHANICAL PLANTS HAVE BEEN ENLARGED by means of extra capital attracted by exhibits made at the State Fairs.

THE STATE FAIR is the stimulating agent of progression.

THE STATE FAIR is the medium that brings the two electrical currents—labor and capital—together each year.

THE STATE FAIR aids all classes. It is the recreation ground of the farmer, the school of information for the breeder, the point of observation for the mechanic, and the period of investigation for capital.

FAILURE TO EXHIBIT is an acknowledgment of weakness.

KEEP YOUR PRODUCTIONS before the people, and the people will always keep your locality in view.

THE USUAL EXTRA ATTRACTIONS for entertainment of visitors at the State Fair of 1893 will be furnished in keeping with the occasion, that exhibitors may benefit thereby.

Information furnished upon application to the Secretary, at Sacramento. Send at once for premium lists.

JOHN BOGGS, President.

EDWIN F. SMITH, Secretary.

THE HOME CIRCLE.

Old-Fashioned Flowers.

Where are the sweet old-fashioned posies,
Quaint in form and bright in hue,
Such as grandma gave her lovers,
When she walked the garden through?

Lavender, with spikes of azure
Pointing to the dome on high,
Telling thus whence came its color,
Thanking with its breath the sky.

Four o'clock, with heart upfolding,
When the loving sun had gone,
Sreak and stain of cunning crimson
Like the light of early dawn.

Regal lilies, many-petaled,
Like the curling drifts of snow,
With their crown of golden anthers
Poised on malachite below.

Morning glories, tents of purple,
Stretched on tents of creamy white,
Folding up their satin curtains
Inward through the dewy night.

Marigold, with coat of velvet
Streaked with gold and yellow lace,
With its love for summer sunlight
Written on its honest face.

Dainty pink, with feathered petals,
Tinted, curled and deeply frayed,
With its calyx heart half broken,
On its leaves uplifted laid.

Can't you see them in the garden
Now, where grandma takes her nap,
And cherry blooms shake sofly over
Silver hair and snowy cap?

Will the modern florist's triumph
Look so fair or smell so sweet
As those dear old-fashioned posies,
Blooming round our grandam's feet?

—Eihei Lynn.

My Philosophy.

I allus argy that a man
Who does about the best he can
Is plenty good enough to suit
This lower mundane institute;
No matter of his daily walk
Is subject for his neighbor's talk,
And critic minds of ev'ry whim
Jest all get up and go fer him.

It's natchural enough, I guess,
When some gets more and some gets less
Fer them that's on the slimmest side
To claim it ain't a fair divide;
And I've knowed some to lay in wait
And get up soon and set up late
To keetch some fellow they would hare
Fer goin' at a faster gait.

The signs is bad when folks commence
A-findin' fault with Providence
And balkin' cause the world don't shake
At ev'ry prancin' step they take,
No man is great till he can see
How less than little he would be
Ef stripped to self, and stark and hare
He hung his sign out everywhere.

My docterin is to lay aside
Contentions and be satisfied,
Jest do your best, and praise or blame
That follers that count jest the same.
I've allus noticed great success
Is mixed with trouble, more or less,
And it's the man who does the best
That gits more kicks than all the rest.

—James Whitcomb Riley.

How Charlie and Nellie Escaped.



HUD! crash! thud! crash!!
"Whoa, Billy, whoa!!" and
Dr. Williams cast a quick
glance from his frightened
horse to the side whence the
crash came. He was just in
time to see two wrecks, and reining his
horse around in the wide roadway, he
sprang out, tied him to a sapling and saw at
once that as he had been leisurely turning
the corner, a bicycle, at terrific speed, had
wedged between the spokes of his hind
wheel, been lifted in its revolution and
hurled a shapeless mass upon the road-bed.
But the rider? Ah, he was the other
wreck. The doctor stepped hastily to the
side of the mangled boy and saw the fright-
ful gash in the top of his head which had
been made as he was shot against the car-
riage, and from which the blood was stream-
ing. Gently lifting the insensible form, his
practiced eye discovered that the second
thud upon the ground had dislocated his
shoulder. It was easy to slip the riding
jacket enough to put his hand upon the
boy's heart, and find that it was still beat-
ing. Then, with the kindness that was
characteristic, he sprang to his buggy-case,
extracted bandages and needles, and within
two minutes had three stitches closing the
scalp wound, and was about to replace the
shoulder when he found that the arm was
broken also. Quick in thought and actions,
he cut a section from the pneumatic tire of
the cycle, and directly had the bone in place
and the arm bandaged. Then placing his

knee under the arm, snap went the shoulder
back into the socket.

"Hillo there, 'pears to be suthin' the mat-
ter!" called out farmer Jones, pulling up on
the further side. "By Jimminy, if that ain't
Charley Badgers! Say, Mister" (to the
doctor), "that's the best boy in this 'ere
town, and what I want to know is how came
it?"

"Well, friend, I'm glad you have hap-
pened along. I've patched him up as well
as I can here, but now he must be cared for.
He run into me, wheel caught in mine, and
this is the result. Now where is his home?
I am a stranger, just passing through."

A tear dimmed the eye of the farmer.
"Poor Nellie, it'll a'most kill her! She's
his sister, and they ain't got no folks. No,
nor hum. But cum right along o' me.
There ain't no room to spare in my house,
but Tom Jones never went back on a suffer-
ing feller critter yet."

"Hoid a moment, Mr. Jones. Help me
to pour a little of this stimulant down his
throat. There, now, you take his feet and I
will lift his head, and we'll lay him right in
your wagon. Now drive on slowly, and I
will come on after. But first let me get my
lap-robe and horse-blanket and wrap up his
naked arms and limbs. Now go ahead."

Nellie, from a neighbors, saw them drive
up and take out the limp form and bear it
within, and in an agony of anxiety rushed
over, and was met at the gate by Mr. Jones,
who just opened his long arms and took her
in as he said, "Be quiet as ye kin, Nellie.
He'll be round all right by'n by!"

"So this is Nellie, is it?" thought the
doctor, gazing with undisguised admiration
at the lovely girl. "Well, Nellie, Charley
has been badly shaken up, but he'll pull
himself together in a couple of weeks. And
now you must be nurse."

Then motioning Mr. Jones aside, he drew
from him the fact that Charlie's father and
mother, universally beloved, had both been
carried off by consumption, within the same
year, and had left the seeds of the terrible
disease in the make-up of both the children.
Charlie's heroic struggle to school and
clothe both himself and his sister, and the
unselfishness of both, had given them a
large place in the hearts of the community.

But the wise ones shook their heads.
Charlie's slender chest and Nellie's brilliant
precocity and unusual delicacy, foreboded
ill. Charlie had known it all, and with a
masterful resolve had determined that both
he and Nellie would harden themselves
against the disease. Hence by enormous
sacrifices he had bought a lady's wheel so
that Nellie might have her turn with it, then,
with a do-or-die determination, he had
drilled in all weathers, raced to the verge of
exhaustion, and finally crashed into the doc-
tor's vehicle in a victorious home-spurt that
caused him to look backward for an instant
just as he turned the corner to see his de-
feated rival turn back in despair.

"It is 15 miles out here, but I will be
here at this hour to-morrow," and giving
Nell some parting directions, the doctor was
gone.

Those were 15 miles of thought and
prayer as the good doctor lived over the 20
by-gone years and saw again the babes, the
prattling children, the boy and girl just
opening out into gay manhood and woman-
hood; then tossing fevered forms; then en-
coffined bodies, the solemn burial, and the
long, slow, dreadful two years of loneliness.
"May be God has given me back my
children in disguise!" he cried. So the
good wife thought, too, and when the doctor
went the next day, it was to ask the home-
less ones to his own home.

In due time Charlie and Nellie were in-
troduced to their future mother, who had
been instructed to give them both some
practical lessons in anti-hereditary hygiene.
The first lesson was on the points of weak-
ness.

"Now Charlie, a man five feet five should
blow 206 cubic inches on the spirometer;
and Nellie, a girl five feet three should blow
143 cubic inches.

"Here is a spirometer, Nellie, just fill
your lungs as full as possible and blow as
hard and as long as you can through this
tube, and that will force the index-rod up,
and just where it stops the figures will tell
how many cubic inches you have blown in.
Ninety-five, is that all? My dear child, you
have found one point of weakness already.
Now, Charlie.—One hundred and sixty!
Dear me! Well, it's a wonder you pulled
through!"

"Now let us calculate a little. Every
ounce of food that we eat requires over four
cubic inches of air to burn it up in and expel
its products from our bodies. Every grain
of food that we eat beyond that is another
source of weakness. Nellie, your 95 inches
entitle you to less than 24 ounces a day,
while you ought to have at least 36. And
Charlie can only utilize 40 ounces while he

ought to use over 50. I think that you both
have eaten your full supply, and that is an-
other source of weakness, because the sur-
plus above what the oxygen could consume
has been poisoning the blood. But, if you
have only eaten what the oxygen could dis-
pose of, that too is weakness, because it is
far short of the natural need.

"You have both, also, exercised to ex-
haustion, under the supposition that this
would preserve your strength. But it is a
law of our nature that exercise to the point
of feverish tire wastes strength. And an-
other harmful effect of it is to diminish the
disposition to use the whole of the lungs in
respiration, and by that means absorb still
less oxygen.

"In Charlie's case, too, he had adopted
the half hoop, or right-angled racing posture
on his wheel, which contracts the chest, and
strongly tends to diseases of manhood that
hasten the approach of consumption. In
Nellie's case severe exercise has been per-
sisted in at those times when nature calls for
less rather than more exercise, and thus dis-
eases of womanhood have been invited, that
otherwise hasten on the dreaded consump-
tion.

"By your own confession, too, Charlie
has stayed out late nights in order to get his
needed exercise, and Nellie has waited, and
thus both have been deprived of the sleep,
which is the first condition of the nervous
energy, and nervous energy is the only safe-
guard against consumption. In Charlie's
case, too, nervous energy has been reduced
rather than increased by the inward congest-
ions resulting from the exposure of his
limbs in the bicycle suit while riding."

"Oh, Mother!" (and at the mention of
the word tears gushed from the eyes of both
the children at the recollection of the mother
lost, and from gratitude that another had
been found), "how foolish I have been."

"If I had only known, I might have saved
Nellie so much!" exclaimed Charlie, throw-
ing his arms about his sister's neck.

"Yes, but God's ways are not as our
ways. You did the best that you knew,
and that has brought you here." And with
a sob of mournful joy she gathered both to
her great, womanly heart, and they felt that,
with her wise instructions and motherly
care, they might yet bid defiance to the
grim destroyer. And they did.—C. H.
Platt, M. D., in American Agriculturist.

Hardships of Life in the Polar Region.

The whole region is one of severe cold,
and the sea is frozen for the greater part of
the year, land and water becoming almost
indistinguishable, but for the incessant move-
ment and drift of the sea-ice. In summer
the sea-ice breaks up into floes, which may
drift away southward and melt, or be driven
by the wind against the shore of continents
or islands, leaving lanes of open water
which a shift of wind may change and close
in an hour. Icebergs launched from the
glaciers of the land also drift with tide, cur-
rent and wind through the more or less open
water. Possibly at some time the pack may
open and a clear waterway run through to
the pole, and old whalers tell of many a year
when they believed that a few days' steam-
ing would carry them to the end of the
world, if they could have seized the oppor-
tunity. At other times, routes traversed in
safety time after time may be effectively
closed for years, and all advance barred.
Food in the form of seals or walrus in the
open water, reindeer, musk-ox, polar bears
or birds on the land, may often be procured,
but these sources cannot be relied upon.
Advance northward may be made by water
in a ship, or by dog-sledge, or on foot, over
the frozen snow or ice. Each method has
grave drawbacks. Advance by sea is
stopped when the young ice forms in au-
tumn, and land advance is hampered by the
long arctic night which enforces months of
inaction, more trying to health and spirits
than the severest exertion. — McClure's
Magazine.

The Piano and Temperature.

This is the gist of what an expert has to
say regarding care of pianos, in the *Recorder*:
"The most serious injuries that befall pianos
are usually the results of temperature; either
it is too dry or too damp. The incompetent
tuner does great harm, but the extremes of
hot air and moisture do more harm than all
the tuners alive. If your house is heated by
a stove, put your instrument in a room with-
out a stove—in one that is heated from an
adjoining room. If you have steam or fur-
nace heat, your piano will do better if kept
in a room that is not quite warm enough for
comfort. You know the sounding-board—the
life of a piano—is forced into the case
when it is pressed so tightly that it bulges
up in the center. The wood is supposed to
be as dry as possible, but of course it con-

tains some moisture, and gathers a lot more
on damp days and in handling. Now, when
you put a piano in an overheated dry room,
all this moisture is dried out and the board
loses its 'belly' and gets flabby and finally
cracks. Even if it does not crack, the tone
loses its resonance and grows thin and tinny,
and the felt cloth and leather used in the ac-
tion dry up, the whole mechanism rattles,
and the piano is blamed."

Genuine Dress Reform.

As time goes on and people become more
intelligent and, as a natural consequence,
more intolerant of evils that stand merely
from the force of tradition, the subject of
dress reform for men and women will come
more decidedly to the fore, and better cos-
tumes will unquestionably be devised and
adopted. The reform idea is as yet in its
most incipient condition, but, having com-
mon sense and imperative necessity on its
side, is bound to win in due course of time.

The most serious objection to immediate
and radical reform seems to be the dread of
ridicule; the idea appears to be fully rooted
and grounded in the human mind that a cer-
tain amount of elaborateness is necessary to
what is called becomingness in dress. It
might be well to stop a moment and ask if
this is so, and if so, why it is. A standard
has been set for a perfect figure, and the
close fitting garment is becoming or ugly,
according to the shape of the individual who
wears it. As nine-tenths of the people who
dress for effect are anything but models of
perfection in figure, it stands to reason that
they should cast about for trimmings, fixings,
draperies and fripperies to modify to some
degree or entirely conceal their inartistic
outlines. The only other alternative is to
pad and puff, to use quantities of buckram,
whalebones and other accessories with which
to make up their deficiencies or constrict
their too solid flesh.

It is a rather interesting study to note the
difference in the shape of the stout man and
woman who have for any number of years
dressed after the strictest rules of fashion.
The flesh must go somewhere. No lacing
or drawing in can make way with it, and
misshapen and distorted bodies are in many
cases the legitimate result of this slavery
custom. If fashion and art could go hand
in hand and make easy-fitting clothes the
arbitrary costume of the day, health, happi-
ness and grace would be more general, and
coming generations would have less to re-
gret and fewer sins to expiate. One of the
first points in the dress of women is to raise
the waist-line. Instead of drawing in the
figure below the ribs the belt should be put
higher up. The empire dress is much the
more healthful and comfortable. The slen-
der waist is one of the most deadly posses-
sions with which a foolish and fashion-ridden
people ever found themselves handicapped.
The breath is the life, and as one is deprived
of it, so vitality becomes weak, the re-
sisting power decreases and disease and
death find ready and sometimes willing vic-
tims.

The blouse is an unmixed blessing either
for men or women. There is no reason why
a man should not wear a really handsome
blouse of good material as a dressy garment.
Take for example a blouse of black silk with
dainty sleeve and neck ruffles of fine linen,
rather wide turned-back cuffs, a prim, con-
servative collar and lapels, if one chose, and
a few plaits or folds artistically disposed.
Why should not this make a very desirable
morning dress for a gentleman? This, with
fine gossamer underwear, would be admir-
able in midsummer, and would do away
with the burdensomeness of the coat, vest
and thickly starched dress-shirt front that
can by no stretch of imagination be other-
wise than uncomfortable. Every garment
should be made sufficiently loose to give ab-
solute freedom of movement, and this may
be done without in any sense sacrificing
symmetry, beauty or grace—indeed, these
elements appear to come in for the very least
consideration in the general make-up of the
toilet. To produce articles so tight that
they wear out almost immediately is most to
the advantage of those who make a business
of designing such things. To this class of
people we have bared our necks in the most
abject servitude, and it would seem quite
time that we read to ourselves and the world
a specially emphatic and comprehensive riot
act, and followed it up with a far-reaching
and unmistakable proclamation of emanci-
pation.

Inherited Health.

It is not that people do not think enough
about the preservation of their health.
There probably never was a time when so
much attention was given to one's ailments
as the majority of people give to them now.
The great wealth of owners of proprietary

medicines attests this, and the large number of flourishing drugstores attest it, too. It would be better if we thought less about our health in this way, and instead would train ourselves and our children to observe the ordinary laws of health in such a way that to obey them would be as natural as putting on one's hat when he goes out of doors, or eating when it is meal-time.—Demorest's Family Magazine.

Sweets are Healthful.

If the English philosopher, Herbert Spencer, desired to make himself solid with the rising generation he could hardly have done it more surely than by commending sugar and candy as healthful foods, especially for the young. Children have always a strong liking for candy, and they almost always dislike fat. Older people, who have learned to eat fat meats, do not have the relish for sweets that children have. Mr. Spencer thinks that the instinctive liking for candy and sweets satisfies a need of the system. Large amounts of carbon are needed to maintain animal heat. Old people get this in starchy food. Children live largely on milk. This, except for the fat it contains, is not heat-producing. So if you want to keep children healthy give them small amounts of candy or sugar daily. The uncolored candies are least likely to be injurious.

Injury, of course, is possible from over-feeding with candy as with everything else, but if given in small amounts every day sugar and candy are aids to digestion and will promote the general health. The notion that sugar and candy are unhealthful dates from the time when everything that was healthful was deemed evil. It is a relic of asceticism, and possibly reinforced by the consideration that sweets were unnaturally dear, and it is a thrifty thought to vote them unsafe to eat.

Since sugar has become much cheaper, its use in all forms has largely increased. If children are given sweets while young they will be less likely to have lung diseases and be obliged to take cod liver oil when they pure grow older. The cod liver oil is nearly pure carbon. That is why it fattens. But so too is sugar, and the carbon in that is much pleasanter form to take.

It is important to unlearn our unfounded prejudices. That against sugar has been one of the most persistent. It does not do older people harm to do without sugar. They get carbon in other forms of food. But with children the pleasant taste of sweets increases the flow of saliva and helps digestion of everything that is eaten. The fact is well known by farmers in localities where sugar is made, that all who engage in its manufacture grow fat and sleek during the busiest season and when they are working the hardest. It is quite possible that this fact has had some relation to Herbert Spencer's theory on the subject. Mr. Spencer is one of the modern school of philosophers who find facts first and construct theories to harmonize with them. That is much better than the reversal of this process. The old cry that sugar was unhealthful has been unchallenged too long, especially as no facts were ever adduced in support.

How To Go To Sleep.

The activity of the brain is in direct proportion to the amount of blood contained in the vessels of the brain, and anything that lessens the amount of blood in these vessels will induce sleepiness, while the greater the flow of blood the greater will be the flow of ideas. This is comparatively a new discovery, for it used to be held that much blood in the brain caused sleep. Dr. William Hammond has, however, demonstrated the fallacy of this latter idea by a description of the results obtained by experiments with instruments of precision, one of which was his own invention, which showed that the flow of blood to the brain was coincident with the degree of mental activity displayed in the subject.

If a person lies down, thus allowing the blood to flow more readily to the brain, and cannot sleep, let him get up, sit in a rocking chair and throw his head back and he will probably go to sleep very quickly. Some people have found by experience that they can sleep better after eating, and the doctor explained this by saying that the blood not being able to be in two places at the same time and having to go to the stomach to digest the food has to leave the brain, and therefore sleep follows.

Some people are more active mentally when lying down than when sitting up, because of the greater flow of blood to the brain. Dr. Hammond described a machine which would produce sleep whenever desired. It is something like a pair of car-

penter's pincers with rubber balls at the end. All one has to do is to screw it to one's neck, thus stopping the flow of blood, and one can go to sleep at will, or shut off one's train of thought.

Are the Times Too Hard to Marry?

A correspondent who is poor, and yet loves as fervently as though he were rich, is much troubled by the hard times. He asks:

Do you think it would be right for a couple who love one another devotedly, but who are poor, to marry in these hard times? I earn fair wages, and so does my intended, but if we marry, our expenses will be doubled, and then there is no telling what misfortunes might happen besides.

It would certainly be safe, for a person who takes such views of life, not to marry. The gist of the difficulty is in taking it for granted that it must necessarily cost as much to support two married persons as it does to support four single ones. The rule ought to work the other way. A real, loving, sensible married couple ought to live on less than it cost them to live singly. But the trouble is that they are usually too vain and foolish to act sensibly; and so they sacrifice comfort to appearance. A poor married couple who would resolutely set to work to live for themselves, and not for their acquaintance, could get on comfortably with a small income, and consequently save something besides.

For real sensible people, who care more for substance than for show, and who are willing to make present sacrifices for their future good, the times are never too hard to marry.—Ledger.

Try, Try Again.

Darning thin places in blankets as you would stockings.

Rubbing out grease on a carpet with corn-meal.

Whiting and benzine mixed together to clean marble.

Wiping colored matting with salt water.

Chlorinated soda for ink stains.

Cleaning brass with hot water, rubbing, then, with a soft cloth and lemon juice, rinsing in hot water and polishing with a chamol.

Cleaning willow with salt water.

Shutting a boiler of boiling water in a room from which the paper is to be removed.

Weak lye, or saleratus water, for cleaning paint.

This grease eradicant: Two ounces of ammonia, one ounce of soap-shavings, one quart of soft water and one teaspoonful of saltpetre.

Having all flannel or broadcloth goods sponged before making up, to prevent spotting.—Good Housekeeping.

Pine Needles vs. Moths.

I have just been circumventing the wily moth, and as I dislike the odor of camphor and tar as much as ever they do, I seldom use either. I once packed a balsam fir pillow away among my woollens, and neglected to take any precautions against moths in that trunk. I was almost afraid to open it the next fall, expecting to find things in it ruined, but a fragrant odor of pines greeted my nostrils and not a sign of moth. I took the hint, and ever since have used pine needles in place of the odious carbolated preventives. Every one knows they won't go near cedar. I wish my lady readers would try my plan and make bags of pine needles to put among their packed-away woollens. Another delightful preventive is to make sachet bags of ground spices, cloves, cinnamon, allspice and orris root. This, of course, is quite expensive and is used only for my especially nice things.—Indiana Farmer.

Effect of Tobacco on Boys.

The boy who smokes saps his physical strength. In boat races and games of baseball, cricket, bicycling and other athletics the habitual smoker stands no chance against the young man of pure, cleanly and temperate habits. Some investigations have recently been made which convey a startling warning to smoking boys. From measurements of 187 students in Yale college it was found that those who let tobacco alone gained over those who used it during the college year 1892, 22 per cent in weight, 29½ per cent in height, 19 per cent in girth of chest, and 66 per cent in lung capacity. Measurements at Amherst college showed even greater difference in favor of those who did not use tobacco. With such evidence as this before him, no sensible boy is likely to try to cultivate the tobacco habit, or to cling to it if he has already acquired it. Give the boys more opportunities for athletics, and they will require less tobacco.—Troy Times.

YOUNG FOLKS' COLUMN.

Booh!

On afternoons, when baby boy has had a splendid nap,

And sits like any monarch on his throne, in nurse's lap,

In some such wise my handkerchief I hold before my face,

And cautiously and quietly I move about the place;

Then, with a cry, I suddenly expose my face to view,

And you should hear him laugh and crow when I say "Booh!"

Sometimes that rascal tries to make believe that he is scared,

And really, when I first began, he stared and stared and stared;

And then his under lip came out and farther out it came,

Till mamma and the nurse agreed it was a "cruel shame!"

But now what does that same wee toddling, lisping baby do,

But laugh and kick his little heels when I say "Booh!"

He laughs and kicks his little heels in rapturous glee, and then

In shrill, despotical treble bids me "do it all aden!"

And I—of course I do it; for, as his progenitor, it is such pretty, pleasant play as this that I am for!

And it is, oh, such fun! and I am sure that I shall rue

The time when we are both too old to play the game of "booh!"

—Eugene Field.

Where They Found the Baby.

IN a pleasant farmhouse not a hundred miles from Boston lived a farmer with his wife and four children, Bert, the youngest, a baby not a year old. They were very busy people, for papa had plenty to do on the farm outdoors, especially in the summer time, and mamma's hands were full indoors with so many to care for.

One morning while mamma was busy in the kitchen, papa came in from the barn and went into the front room for a few minutes until breakfast was ready. There was an old-fashioned bedpress in this room with a bed fitted into it which was let down at night, and in the day time was turned up like a mantle-bed, only it had doors in front, and when these were closed it looked like a large closet. It was hard work to turn up the old-fashioned bedstead, which was heavy, so papa used to do it generally when he came in to breakfast.

Presently mamma came into the room to call papa to breakfast, but the first thing she said was: "Where's the baby?"

Papa did not know; he had not seen him. "Why, I left him asleep in the bed!" said mamma.

She suspected at once where he was, and got papa to turn the bed down quickly. And there, sure enough, was the baby safe and sound, still asleep, and none the worse for his mishap.

Papa was in a hurry that morning, and as baby was almost hidden by the bedclothes, he did not notice little Bert, but turned up the bed as usual. It was fortunate that mamma came in as she did, for baby would soon have been smothered.

You may be sure that baby had an extra amount of petting that morning, and papa

always took care after this when he turned up the bed to know where the baby was.

Little Bert is now a papa himself, and would never have known that he was ever lost in that way if he had not heard his mother tell about it.

Japanese Children.

The Japanese are trained to civility from babyhood. Before a baby can speak, it is taught to lift the hand to the forehead on receiving a gift. Should a child fail to make this signal of respect and gratitude it would be reproved by some bystander.

Mr. Albert Tracy, who rambled through Japan without a guide, while strolling about a town, stopped to see the children coming from school.

They walked sedately and quietly with books and slates under their arms. The sight of a bearded foreigner startled the first to come, but they made a respectful bow and passed on. The next ones repeated this civility, and then as fast as the pupils came they made a profound reverence.

The innate gentleness of the people impressed the ramblor. He records that he never saw a single instance among boys of that tyrannical, bullying spirit so often observed in other countries, that delights in inflicting pain on weaker companions. Japanese children are well behaved, even toward each other.—Youth's Companion.


DOMESTIC ECONOMY.

RAISED DOUGHNUTS.—To a pint of luke-warm milk add a teacupful of melted lard, and stir into this enough sifted flour to make a thick batter; add a teacupful of yeast, and keep it in a warm place until the batter is light. The batter is usually made just before going to bed, and allowed to stand overnight. Work into the batter, when light, four beaten eggs, two cupfuls of granulated sugar, a teaspoonful of salt and one of cinnamon or grated nutmeg. When the whole is well mixed together, knead in flour until it is about as stiff as biscuit dough. Cover with a bread cloth, and put it in a warm corner near the stove. When of a spongy lightness, roll the dough out half an inch thick, and with a cake-cutter or small tumbler cut it into cakes. Once more let these remain until light, then fry in hot lard. Take them out in a drainer or colander, set in a pan to drain, and let your assistant roll them while they are hot in pulverized sugar. When properly sugared they should resemble snowballs.

GOOSEBERRY PIE.—Line a two-quart pudding dish with good pie crust rolled rather thick. Stem three pints of gooseberries; wash and put into the crust; add a good pint of sugar, cover with a top crust, pinch the edges well together, bake one hour in a moderate oven. Serve cold.

SOUP FOR AN INVALID.—Boil a chicken to a jelly and when cold skim off the fat; add to it a pint of cream, the yolk of an egg (hard boiled and mashed), a little mace, salt and pepper and 25 oysters. Boil slowly 15 minutes and when done strain.

PANCAKES.—Two cups of milk, one egg, two spoons of sugar, two teaspoons of baking powder, a little salt, flour for a stiff batter; fry in hot lard.



ROYAL

BAKING

POWDER

No acid except that from the grape is used in the Royal Baking Powder. The Royal imparts that peculiar sweetness, flavor and delicacy noticed in the finest cake, biscuit, rolls, etc., which expert pastry cooks declare is unobtainable by the use of any other leavening agent.

Absolutely Pure

PATRONS OF HUSBANDRY.

From Worthy Master Davis.

Officers of the California State Grange, please prepare your annual report for the State Grange! Let us be ready to start the wheels of our annual session promptly at the hour, on Tuesday, the 3d of October, at Petaluma. The master expects to see every officer at his or her allotted station, at the opening ceremony and during the entire session. Those who have been honored by their peers should show that they appreciate the honors thus conferred, and that they are willing, ready and competent to discharge the duties devolving upon them.

The cholera seems pretty well seated at New York City. Let us hope that it will not westward take its way. Let patrons be on their guard, and assist in enforcing and observing all laws and edicts emanating from the proper authority.

There is strong reason to believe that Newcastle Grange will soon be reorganized. Bro. Robt. Nixon has promised the worthy master to give the subject his personal attention at a very early date, and that means that something will soon be done, and done in a way to put Newcastle Grange near the head of the class.

There is a feeling of fraternity manifest among the members of the order of Patrons of Husbandry that is seldom seen in any other society. This is a most healthful and promising omen. Just so soon as the farmers of America will confide in and fraternize with each other, there will be a decided change in the political and financial affairs of the nation. Through the power and influence of fraternal organizations, this feeling is growing very fast. No better proof is needed of the good humor of these fraternal agricultural organizations than the fact that they are holding joint meetings and listening to each other's arguments and assisting in each other's battles. The conflict of the grange with the transportation companies of Delaware and New Jersey has done much to convince the farmers of those two States, it matters not to what fraternal organization they may belong, that their interests are identical and that their success and happiness depend largely on their willingness to fraternize and harmonize. The farmers are learning very rapidly, through the grange, that in union there is strength, and that a good cause often suffers for want of a mutual understanding and active co-operation.

There is no fraternity that accords more freedom to individual opinion than the grange. In all matters of a political or a religious turn, no partisan or sectarian opinions can be expressed in grange session. No member is or can be bound by attempted action of subordinate, State or National Grange. He can be held to no line of action which is not purely fraternal. To educate is the great aim of the order. To help the needy, by any honorable means at command, is another important factor in this order; hence the grange finds it proper and right to look well to the material interests of the farm and the household. To discourage the foolish fashion system is also an important part of the reform work the grange is doing, and doing well. It is more than refreshing to note what progress has been made in this direction; to know that no member of the order is measured by the fit of his suit, or by the width of her dress-skirt, or by the height or shape of her sleeves. The high moral standard of the membership is something worthy of most favorable commendation. No fraternity can lay just claim to a purer, better, or more intellectual membership than is to be found in the grange. There you will find fathers, the peers of any in their commonwealth; there, the noblest of wives and the purest of mothers, as well as the sweetest of sweethearts are to be found. Is it any wonder that an order with such a membership and declaring such noble, patriotic, philanthropic and truly American principles should have prospered? Is it strange that men who have the love of humanity in their hearts, and women who think the American home is the best spot on earth, should cling to the grange? Truly, the Order of Patrons ought to have your support and your confidence. Join it, assist it, and advertise its worth.

From Danville Grange.

TO THE EDITOR:—Those who have finished thrashing in this vicinity find the yield of grain fully as good as they expected in the spring, but much that was sown last winter was cut for hay. Fruit seems to be less troubled with codlin moth than usual and is of good size and quality.

Though the harvest claims most of the

time of its members, Danville Grange holds its regular meetings every two weeks. Last week the drying and preserving of fruits was discussed, and at our next meeting the "State Good Roads Convention" will occupy the attention and be instructive to all.

S. E. WOOD.

Danville, August 10, 1893.

From Mr. Ohleyer.

TO THE EDITOR:—This is Sunday morning, and I have just laid aside the latest papers, including the RURAL, after scanning them over for the news of the day. Of course we read the RURAL from beginning to end, including the advertisements, because there is always something new, useful and good for the agriculturists in its advertising columns. There are at least a dozen articles advertised that I would have if the banks or somebody else hadn't such a tight grip on the coin of the realm, or the hens laid more eggs or the cows gave more butter. O yes, we read the RURAL because it's our favorite family journal; but let me say to you in confidence that we haven't time to read "one side" of the great dailies. Compare these to those of our daddies and we become bewildered in thought. How many stop to think that the men 60 years of age have witnessed more advancement than was seen before in a thousand years, or even twice that length of time? What a grand opportunity to have lived in this century and to have acted a part in the progress achieved!

It is the age of combination, incorporation, co-operation and association—all closely allied—and all to bring about results impossible by isolation. It must be seen that whatever advancement the rural population has made is traceable to a union of effort through association. The latter third of this century will always be noted as the date of the uprising of the agricultural classes in the new world. The march of thought in the commercial world aroused the yeomanry to think as well as to labor, until we have him asserting his rights, his powers and his independence.

No rural organization since history was written has done more, aye as much, to unify, educate and advance the isolated farmers than the grange. Others have done their full share, and, having accomplished their purpose, returned to the masses, while the grange, being educational, does and will ever find anxious and ready pupils.

But the grange is not perfect, judging from what we see occasionally in the grange department. This we know, of course, without being told, but what creation by poor humanity is? I daresay that other secret orders have their ceremonies, their lectures and their lessons. It would be a wonderful apprentice that could step from that station in life to that of master. Indeed, most of us require a little discipline along the way; fortunate are those who do not.

There is always room for improvement to meet the ever-changing conditions, as witness, the making and unmaking of laws and constitutions in all parts of the world. It is therefore gratifying to see that San Jose Grange has a committee at work revising the ritual of our order, to be offered, I presume, to the National Grange at its next session in November.

Some years ago Yuba City Grange instructed its delegates to the State Grange to secure the passage of a resolution by that body, instructing our representatives to the National Grange to move for a shortening of the degree work. It was done, and the work was shortened one-half. Our grange never claimed the credit for the work, but if not entitled to it she does not know it.

We are admitting scores of young people. They ought to flock to the grange for education and shelter. It gives them company, society and recreation. It teaches them rules of order; shows them the importance, for their own sake, of appearing at ease in company. They are given to learn and to find the flaws in their elders. Their tastes and requirements should be consulted and supplied. The child at 14 to 20 takes little interest in the grand drama of life in which his parent dwells and delights. He feeds upon lighter victuals. His existence is as a gurgling rill over the pebbly bed. He or she may have discarded the doll or the hobby-horse, but is not ready for the weighty affairs of life. Their minds are young and unclouded; they are susceptible of learning and of absorbing knowledge. Besides, those of maturer years enjoy the harmless antics of the young, and hence should gladly supply the required sustenance.

For this purpose the grange should authorize the publication of a volume devoted to its literary uses. It should be composed of material especially suited to the grange and the farm. It should be made up of

charades, dialogues, recitations, etc., and in such a way as to reveal the pleasures of country life. This might be done in one volume to cost not to exceed 50 cents, or it might be published in small parts, semi-annually or quarterly, at a very small cost, the contents in that case being always new and attractive. The grange should, of course, compile the work, but need not print it. The market thus assured would find ready publishers, and the venture might even return a handsome profit to the compiler.

Yuba City Grange would no doubt buy a dozen of the pamphlets, for its members are ever on the alert for appropriate literature, and are often compelled to purchase volumes to secure a single suitable piece.

The above thoughts are respectfully referred to the worthy master and the next State Grange. Fraternally,

GEORGE OHLEYER.

Yuba City, Aug. 13, 1893.

Field Day at Two Rock.

At a recent celebration of Ceres' Day by Two Rock Grange, Bro. Meacham of Petaluma, and an old-timer of Sonoma county, gave an interesting history of the county 43 years ago. The hills and valleys of Two Rock swarmed with wild Spanish cattle and antelope, and the timbered portion lying between Two Rock and Petaluma was full of elk and deer. Everything then was just as nature made it. He spoke of the beautiful redwood timber, how it had been swept away by the ax. He asked, what has become of it? Why, here is some of it in this beautiful hall, in your beautiful mansions and in your fences. He cited the great improvements, and spoke of the farmers' great school—the order of Patrons of Husbandry—which was then never thought of, where neighbors and friends meet together as brothers and sisters.

Worthy Master Grover of Petaluma, upon being called upon, responded in a brief speech complimentary to Two Rock Grange.

Bro. Grover was followed by Past Master Henshaw of Two Rock Grange, who cited the improvements in the way of pride in the order; how the brothers used to come to the grange with their pants in the legs of their boots, and the sisters with calico dresses. Now the brothers come attired in their white shirts, standing collars, and shoes neatly polished, and the sisters with something better than calico dresses. All this pride, he said, had grown in the grange. Wherever he goes, he said, he goes in better attire than in the early days of the grange.

J. C. P.

From San Antonio Grange.

TO THE EDITOR:—San Antonio Grange has been rather quiet during the harvest season. The farmers are all very busy, and but few of them are able to attend our meetings; but the rush of work is nearly over now, and we hope to see the members more regularly again.

However, we have not been altogether idle, for, at our last regular meeting, we conferred the First and Second Degrees on a candidate, and we are making extensive preparations to celebrate Ceres and Pomona's Day some time next month.

The farmers are nearly through heading their grain, and anxiously waiting for the thrashing machine. There will not be so much thrashing this season as other years, as we have two harvesters in the valley; one, owned by Paulsen & Martinus of this place, which was brought in last year; the other belongs to Zoffman & Sons, also of this place. Both machines have been doing excellent work. After the grain is in the sacks comes the tedious work of hauling it to the depot. The grain from here goes either to Kings City or San Lucas, a distance of 15 to 25 miles. Generally speaking, the crops in this neighborhood are fair. In places the grain is thin, and in others it is somewhat injured by frost, but the most of it will be very good.

E. R. S.

Aug. 9, 1893.

Grange Resolutions.

The following resolutions were passed by the Santa Rosa Grange at its meeting on Saturday:

WHEREAS, It has been proposed that the Governor of the State call a special session of the Legislature for the purpose of enacting legislation in furtherance of the Midwinter exposition to be held in San Francisco during the coming winter; now, therefore be it

Resolved, That this grange believing the holding of fairs, concerts, circuses and other public entertainments and amusements are not among the proper functions of Government, hereby protest

against the convening of the Legislature for the purpose mentioned.

WHEREAS, This grange has been invited to send delegates to a convention to be held in Sacramento city in September, at which it is proposed to consider measures by which the public highways may be improved; now therefore, be it

Resolved, That while this grange is in favor of the improvements of all public highways, we wish to enter protest against any scheme proposing to improve the roads of this State by money raised by the issue and sale of bonds.

Notes.

Lockford Grange has named Mr. George A. Foster as its correspondent to the RURAL PRESS.

Etta Cornell, secretary of American River Grange, writes: "Our grange is in a most flourishing condition and has thoroughly established and proven throughout its district the educational advantages of the grange. Our financial condition is also excellent."

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

At its last meeting the Butte County Horticultural Society offered a prize of \$5 to the person who, within the month preceding the next meeting, would destroy the greatest number of English sparrows. The birds are fast becoming a nuisance, and the fruit-growers are determined to use every effort to prevent their increase.

A writer in the Oroville Register says there is a handsome profit in the White Adriatic fig. To gather them by hand, he says, is impracticable. He advises letting the figs drop on the ground the same as is done with the ordinary black figs. Then one man can pick up the fallen fruit rapidly. Bare, hard, smooth earth is the best for the fig to fall upon, and no straw or other substance should be placed beneath the trees.

Oroville Mercury: Mrs. G. W. Stevens has in her yard on Robinson street a curiosity in the shape of an orange tree which matures and ripens its fruit in August of each year. This is fully four months earlier than any other trees are known to ripen their fruit. It is a full-grown seedling and produces very sweet, thin-skinned fruit. It would perhaps be of value to bud from this tree, for an entirely new variety of early oranges might be developed.

Fresno.

Expositor: A cluster of Muscat grapes, grown on the vineyard of E. S. Van Meter, on East avenue, was brought to this office yesterday, and the weight of the single bunch was 5½ pounds.

There is a small bird in this vicinity, says the Reedley Exponent, resembling the California linnet. It was thought at first that this bird would be a great blessing, in that it would eat just enough of the fruit buds to save thinning the fruit, and its presence was therefore encouraged. But it is discovered that instead of taking its proper share, and thus become a blessing, it, like many of the unfeathered tribe, wants it all. Mr. J. Goslinger has invented a trap by which these pests may be cheaply eradicated, which leads the Exponent to wish that Mr. G. would "turn his inventive genius toward a trap that will catch some of the petty thieves that, for some mysterious reason, Providence allows to exist."

Glenn.

Orland News: Wheat is being used as a medium of exchange in Orland; the ruling price is \$1 per hundred. Some of the farmers have settled their store and other accounts by this method. It makes rather a clumsy currency, and a man don't carry enough around in his vest pocket to settle any considerable bill, but it answers the purpose better than nothing.

Kern.

Rabbits have destroyed considerable grain in the Weed Patch country this season, but, notwithstanding all that, the wheat fields have yielded from seven to eight sacks per acre.

Dufour's shearing corral at Cameron, where he expected to employ 90 men at high wages and clip many thousands of sheep, has ceased operations and the men have been discharged. Since there is no market for wool, Mr. Dufour will not shear his sheep this year. A majority of the Kern county sheep-owners will follow his example.

The Californian gives the following directions for shipping grapes: Cut the clusters and lay them carefully upon trays. Let them lie there over night and very early the following morning pack them in boxes. In this way the grapes will have cooled naturally and transport better, consequently bringing a better price. He also urges the importance of waiting until the fruit is ripe before shipping, as, unlike peaches and pears, grapes will remain as they were plucked. If unripe and sour, they will so remain, and a purchaser will not be fooled twice by sour grapes.

Lake.

Ed Leake writes to the Woodland Democrat from Bartlett Springs that on the 18th of July a young cow on Mr. Ruppert's farm dropped a calf that, as a bovine freak, has never been equaled in this country. The calf is a beautiful roan, is strong and lusty, and when a week old weighed about 80 pounds, but its front legs are missing. Otherwise it is per-

fectly formed. The shoulder-blades, shoulders, head and neck are large and strong, but the blades round at the point and the brisket is flat. It lies down continually except when its head and shoulders are supported. It can then walk on its hindlegs. It drinks milk from a pan, and when it is being fed its shoulders rest in a burlap swing rigged especially for that purpose.

Kings.

The Lucerne Valley Horticultural Society has issued a call to the raisin-growers of Kings and adjoining counties urging the necessity for various localities to call meetings for the purpose of effecting a better and more effectual organization of the fruit-growers.

Los Angeles.

The Los Nietos and Ranchito walnut-growers are not satisfied with the lay-out offered them by the commission men and will send one of their own number East to market the crop. The association now numbers 115 growers, and represents about the entire output of the walnut crop of this section. The present crop will be light, and is estimated at 55 carloads, against 82 carloads last year. The nuts are very large and the crop bids fair to be the best ever grown in California.

The Pomona Progress gives the following returns from some apricot orchards in that vicinity: H. A. Ross picked from four acres of apricot trees of the White and Royal varieties 30½ tons of fruit. The Earl Fruit Company paid him \$25 a ton for the entire crop, or \$768.75, which is over \$192 per acre. Mr. Ross has also an acre of Moorpark apricots which has yielded over six tons, and has been sold at about the same price. C. E. White picked 70 tons of fruit from eight acres of apricots. About half of it brought \$25 a ton and the balance \$20, or \$1575 for the entire crop. This is an average of over \$196 an acre. K. H. Dorsey, who lives near Spadra, picked 28 tons of apricots from five acres, so we are informed, for which he received \$21 a ton, or \$588 for the entire crop. This is an average of over \$117 an acre. A. I. Stewart gathered 25 tons of apricots of the Royal variety from four acres. It was a part of the crop of the Fruit-Growers' Union and paid the owner at least \$160 an acre delivered. A. G. Whiting gathered 54 tons of Royal apricots from six acres. He is a member of the Fruit-Growers' Union and his orchard paid him fully \$230 an acre.

Mendocino.

Hop-growers state that their hops have ripened very fast the past week. The weather, says the Ukiah Press, has been especially fine for maturing. There is not going to be a full crop in the valley, but the quality promises to be good. Buyers are ready to contract at 20 cents. Hops at 19 and 20 cents per pound ought, if the prices are maintained through the season, bring consolation to our hop-growers. These figures make hops a most profitable crop.

The Ukiah Republican-Press, in speaking of the business situation in Ukiah valley, says it is anything but flattering. There is less than half a grain crop. The Brown & Howell thrasher, which runs on an average of 45 days each season, will thrash all the grain in the valley this year in 20 days. The hay crop is also short. Baled hay is selling for \$15 a ton, and much of it is shipped in on the train. The short acreage occasioned by the continued rains during the planting season is the cause of the small crop. Ukiah valley farmers are following too closely the old rut of winter sowing. They have yet to learn the lesson that half a field of summer fallow is better than a whole field of winter sowing.

Orange.

It is estimated that Orange county has over 100,000 chickens, and that they are worth about \$20,000, while the annual egg product is estimated at 1,875,000 dozen. At 15 cents per dozen—which, by the way, is a very reasonable estimate of their value—the product represents an annual income to the county of \$28,625.

Riverside.

The red scale is disappearing from the orchards of Riverside county.

In San Jacinto, bee-keeping has developed from an "infant industry" to an occupation of no inconsiderable extent and magnitude. The bee-keepers proper—that is, those who depend entirely on the bee for their incomes—have apiaries of from 50 to 300 stands.

Riverside Press: The threshing on the San Joaquin ranch will not be completed for a month yet, notwithstanding 10,000 sacks of barley are being thrashed daily. Much of the barley will be used for brewing purposes, a large part of the crop being sent to Europe.

Sacramento.

Galt Gazette: Ten years ago it used to take some five or six thrashing machines to handle the grain crop in the section of country contiguous to Galt, but this year one machine is doing the work. The change has been brought about by the introduction of combined harvesters and partly by a shortage of crops in this section this year.

San Bernardino.

In 1891 a total of 3000 fruit trees were planted in San Bernardino county; in 1892 the total planting was 4800 and in 1893 the planting has been 5400.

Times-Index: One hundred and forty carloads of oranges were shipped out of Redlands last winter by the Haight Fruit Company, 83 carloads by the Earl Fruit Company, and 48 by Cook & Langley, or 276 in all. A total of 24 carloads of green apricots have been shipped, besides several carloads of honey by A. Gregory. Most of the dried fruit is being held for a more favorable market.

Ontario Record: The following contract is

being circulated by a committee from the Ontario Exchange, and it should be signed by every grower in the place, for in union is our strength: "We, the undersigned orange-growers of Ontario, California, being desirous of having our oranges handled in a manner substantially as set forth in the by-laws, do, for such purpose, hereby severally constitute and appoint the Ontario Fruit Exchange (a corporation organized under the laws of the State of California) our sole agent, and convey to said corporation the entire crop of oranges that may be grown upon our respective orchards for the season 1893-4. We, and each of us, further agree that all expenses incurred by said corporation in marketing said fruit, shall be paid out of the proceeds of the sale of said fruit, pro rata, according to the amount furnished by each of us respectively; and we, each of us, agree to accept for the crop our pro rata share of the net proceeds of the sale of said fruit furnished by us, after deducting cost of packing, selling and other necessary expenses. Nothing herein contained shall be construed to interfere with bona fide sales of orchard property."

San Diego.

Los Angeles Express: Word comes from India that George W. Durbrow has obtained a lot of coffee trees from Guatemala, which he will plant on irrigated land that has been reclaimed from the Colorado desert. There seems to be no doubt that coffee of good quality may be produced in the India region, but it is a question whether coffee culture could be made to pay in this country. The cost of labor is the great obstacle. The world's supply of coffee comes from the tropical countries where labor is cheap. An agent from Brazil is now on the way to China and Japan to obtain 100,000 coolies for work in the coffee plantations of the republic. It appears that since the negroes in Brazil were set free by proclamation of Don Pedro they have become unfit for steady work and pass most of their time in idleness. As a result of their unwillingness to work 600,000 sacks of coffee were lost to the planters last year; hence the effort to obtain cheap contract labor from Japan and China.

Santa Clara.

Gilroy Gazette: Mr. Erhorn, the horticultural inspector of this county, reports that he finds the orchards and vineyards about Gilroy singularly free from disease and pests as compared with other portions of the county.

Santa Barbara.

Lompoc Journal: Lompoc has decided to postpone the building of a \$12,000 creamery until after the extra session of Congress.

Shasta.

Shasta Reporter: Fruit-growers on Churn creek and in Happy valley claim that deer jump the fences surrounding their orchards and browse upon young fruit trees, doing much damage. They say even jackrabbits have at last learned the trick of jumping rabbit-tight fences to feed upon the bark of fruit trees.

Sonoma.

Bennett Valley letter in Sonoma Farmer: The dry, hot weather is beginning to tell on the grape crop through this valley, and if it continues without any more dewy nights than there has been, there will not be the crop of grapes that was anticipated a short time ago.

Cloverdale Reville: The grasshoppers have been playing havoc with the young prune orchard of our townsman, Capt. John Field, across the river. He has lost already over 500 trees. Wednesday he put a large band of turkeys in the orchard, which are said to be a sure destroyer of the pest.

Reville: The warm weather the forepart of the week did great damage to the prune crop. We had a talk with John Turner and he says out of an estimated crop of 60 tons a few weeks ago, he will be perfectly satisfied if he now gets 40. The warm days of Sunday, Monday and Tuesday he says did the work.

Santa Rosa Farmer: In an interview with a prominent fruit-grower of Healdsburg we learn that prunes are dropping badly in that locality, and they appear to be affected differently from anything ever seen before. A dark-colored spot appears on one side of the prune extending to the pit. It looks like sunburn, but is not, as the specimens affected appear on the north side, the lower shaded branches and indeed all over the tree, amounting in many instances to one-third the amount of fruit per tree. Every tree is more or less affected. The crop will be rather light, perhaps not half.

At a meeting of fruit-growers at Sebastopol last week, says the Santa Rosa Democrat, a proposition was made to pledge growers not to sell Crawford peaches to canneries for less than \$20 per ton, two-inch grades, and orange clings, \$23 per ton, two and one-fourth-inch grades. About three-fourths of the growers present seemed willing to enter into the agreement; the majority of the remainder said they were unwilling to sell for less, but would not pledge themselves, and no agreement could be had. The prevailing opinion seemed to be in favor of shipping the larger grades of fruit and drying the smaller. It is thought that both canneries will run before the season is over.

Tulare.

The various packing-houses at Fresno, with one exception, have discharged their Chinese and Japanese hands and employed white women and men, boys and girls, instead.

Visalia Times: A Turlock merchant has advertised that he will take wheat from his creditors for a month in payment of their bills and will allow them one dollar more on the ton than the market price.

Yuba.

There are 2100 people employed in the hop fields of Wheatland.

FARMERS!

Now is the time when you should protect your families.

Take a policy in the only company which loans its money to the farmers of California—

THE PACIFIC MUTUAL LIFE INS. CO.,

KILGARIF & BEAVER, General Agents,
PACIFIC MUTUAL BUILDING, - - SAN FRANCISCO, CAL.

INSURE YOUR GROWING CROPS

Farmers SHOULD INSURE! AND Farmers Should KNOW THAT

In the dry climate of California there is great danger from Fire: that the loss of a crop or of a barn and contents, or a dwelling and contents, without Insurance, will seriously embarrass you.

INSURE IN THE OLD PHENIX OF BROOKLYN



ASSETS - - - \$6,250,000
LOSSES PAID - \$41,900,000

BROWN, CRAIG & CO.
General Agents Pacific Coast.
407-409 Montgomery St.,
SAN FRANCISCO, CAL.

THIS leading "time tried and fire tested" company makes a specialty of farm insurance on favorable and satisfactory terms to the farmers. Specially trained farm solicitors in every county.

SOLID COMFORT

Uses wheel landside, which resists pressure of four furrows. No bottom or side friction. Weight of furrows, frame and plowman carried on three greased spindles. Draft reduced to lowest possible limit. Foot brake prevents Gang running on team. Levers and turning device within easy reach. Drying, Straighter Furrows, and Adjustable LIGHTER DRAFT than any Gang in America. Easier able frames—can be narrowed or widened at will. Made with stubble, sod and stubble, or breaker bottoms. Ten or twelve inch out.

ECONOMIST PLOW CO., So. Bend, Ind., or Stanton, Thomson & Co., Sacramento.
Special prices and time for trial given on first orders from points where we have no agents. Our book, "FUN ON THE FARM," sent Free to all.

THE "WONDER ON WHEELS"

TONGUELESS, Self Guiding.
SIX OR EIGHT HORSES,
depending on size of plows and kind of work.



12 ACRES A DAY
instead of three.

ONE MAN
instead of four.

Especially adapted to Traction Engine.

A SUBSTITUTE

Advantages of this Paper for a Drying Surface.

ABSOLUTELY ODORLESS

WATER, ACID AND ALKALI PROOF.

WILL IMPART NO TASTE NOR ODOR TO FRUIT.

CHEAP AND DURABLE.

ITS BRILLIANT BLACK SURFACE, which absorbs the heat, drying both sides of fruit at the same time, and rendering the labor of turning unnecessary.

E. G. JUDAH, Agent, 221 South Broadway St., Los Angeles.

FOR TRAYS!

Unequaled for **DRYING GRAPES.**

Write for **SAMPLES AND CIRCULAR.**



Paraffine Paint Co.
116 Battery St.
SAN FRANCISCO.
SAN FRANCISCO. E. G. JUDAH, Agent, 221 South Broadway St., Los Angeles.

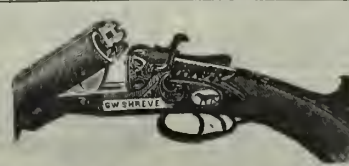
Send for Price Lists OF GUNS

And all Articles used by Hunters and Anglers.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.

GUNS SENT ON TRIAL.

OLD GUNS TAKEN IN EXCHANGE.



Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

JOHN LYNCH, Petaluma. Breeder of Thoroughbred Shorthorns. Young Stock for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER SAGE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

R. H. ORANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

SWINE.

H. J. PHILPOTT, Niles, Cal., Importer and breeder of Tecumseh and other choice strains of Registered Poland-China Hogs.

J. E. ALSFORD, Woodside, San Mateo Co. Breeder of Berkshire Hogs and Toulouse Geese.

P. H. MURPHY, Perkins, Sac Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, Low Prices.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.



OXFORD DOWN SHEEP FOR THE PACIFIC COAST.

W. A. SHAFOR, Middletown, Ohio,
Largest American Importer of
O. D. Sheep,

Is prepared to quote prices on the best stock of Oxford Down Sheep to be had in England. Parties wanting first-class stock should write for particulars and induce their neighbors to join them. Import will arrive about August 1st. Write at once.

Short-Horn BULLS

Calves, Yearlings and 2-year-olds

FOR SALE.

ROBERT ASHBURNER,

Baden Station, San Mateo County, Cal.

Only three-fourths mile from the terminus of the S. F. and San Mateo Electric Road.



A BARGAIN:
Two 3-year-old Imported Shire Mares in foal. Also Imported English Coach Stallion. Address W. W. RUSHMORE, Importer and Breeder of Draft and Coach Stallions. P. O. Box 86. Stable, Broadway and 32d St., Oakland, Cal.

AT AUCTION AT STATE FAIR.



GILT EDGE BROOD MARES

STINTED TO FAMOUS STALLIONS.

Being a Draft from the World-renowned

PALO ALTO STOCK FARM.

It having been determined to reduce the breeding plant at this famous stock farm, the undersigned have been authorized to dispose of at

SACRAMENTO,

WEDNESDAY, SEPT. 13, 1893, at 10 A. M.

FORTY HEAD CHOICE BROOD MARES,

Daughters of Electoueer, Ansel, Fallis, Wholsey, Antevolo, Nephew, Wild Boy, Piedmont, Etc.

STINTED TO THE NOTED STALLIONS

TRUMAN, 2:12; WHIPS, 2:27; MONACO, 2:19; AZMOOR, 2:20; NORRIS, 2:22; ELECTRICITY, 2:17; PAOLA, 2:28; HUGO, 2:29; PIEDMONT, 2:17, etc.

Catalogues, giving description and pedigrees, will be ready Aug. 20th. Apply to

EDWIN F. SMITH, Agricultural Pavilion, Sacramento, Cal.,

OR

KILLIP & CO., Live Stock Auctioneers, 22 Montgomery St., S. F.



ONLY 25 YEARS OLD AND A GIANT!

THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.

MANHATTAN STOCK FOOD.

RED BALL BRAND.

Genuine only with RED BALL BRAND.

Recommended by Goldsmith, Marvin, Gamble, Wells, Fargo & Co., etc., etc. It keeps Horses and Cattle healthy. For milch cows; it increases and enriches their milk.

525 Howard St., San Francisco, Cal.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular.

E. FOUGERA & CO.,

30 North William Street, New York.

Dr. A. E. BUZARD, VETERINARY SURGEON.

MEMBER OF THE ROYAL COLLEGE OF VETERINARY Surgeons, London, England. Late Veterinary Surgeon in the United States Army. Veterinary Contributor to the "Pacific Rural Press." The Diseases of all Domestic Animals treated on Scientific Principles. Special attention given to Chronic Lameness and Surgical Operations. 405 BRODERICK ST., SAN FRANCISCO. Calls to the country promptly attended to. Telephone No. 4867.

FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank.)

Wants you all to write to him for prices on Young Stock.

MINORAS: White and Black.

LEGHORNS: White, Brown, Black, Buff.

B. P. ROCKS.

Mention the age desired and when shipped. Circular Free.

THE American Bee Journal,

(Established 1861.)

Is Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample.

\$1.00 BEE-BOOK FREE



GEO. W. YORK & CO., 56 Fifth Ave., Chicago, Ill.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STOCKTON, CAL., Dec. 19th, '92.

DR. R. J. KENDALL Co. Gentlemen:—Having read one of your Treatise on the Horse and seeing the Spavin Cure advertised, I thought I would try it. I had one horse with a prominent Spavin of 12 months standing. I removed it with 1/2 bottle. I tied up one fore foot on same side the spavin was and compelling the horse to rest on lame leg while I took a surcingle and drew it across the hock or spavin until the hock or spavin got very warm with the friction, then putting on Spavin Cure. I had a mare that had a running from her nose for 12 or 14 months. I rubbed the Spavin Cure from her eyes down to nostrils, then from back of jaw bone down under the throat for a week. I have not seen any discharge for two months.

Yours truly, HUGH McDADE.

Price \$1.00 per bottle.

DR. R. J. KENDALL CO.,

Ennsburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

STOCK SCALES

4 TON \$45.

U.S. STANDARD. FULLY WARRANTED.

Delivered at your R. R. Station and ample time for building and testing allowed before acceptance.

OSGOOD & THOMPSON, Binghamton, N. Y.

PORTABLE PLATFORM SCALES, TRUCKS, ETC.

Twenty-five per cent cheaper than any other on the market. Send for Catalogue.

C. H. LINDEMANN, Agent,

126 KEARNY STREET, SAN FRANCISCO.

MEOHAM & FRITSON,

Importers & Breeders of Red Polled Cattle.

We have 200 head of Full Bloods and Crossbreds on Devons. Bulls and Heifers for sale. Address communications regarding Cattle to **MEOHAM & FRITSON**, Petaluma, Cal.



MEOHAM & HINKLE,

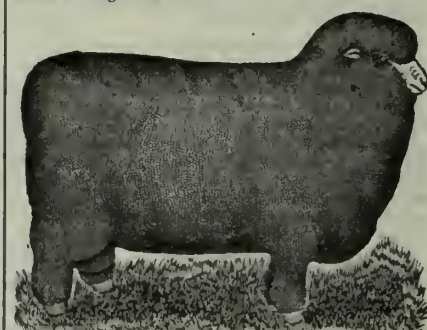
Importers & Breeders of Shropshire Sheep.

The flock was imported or bred direct from imported stock. The Shropshire excels all mutton breeds for a cross on the merino—giving more wool and mutton than that from any other breed. Pure and Crossbred Rams and Ewes for sale. Direct inquiries regarding Shropshires to **MEOHAM & HINKLE**, Petaluma, Cal.



H. MEOHAM,

Breeder of American Merino Sheep (Without Horns). The only flock in the United States. When we bought our sheep East 24 years ago, among them was a ram without horns. He grew to be a fine large sheep, shearing at 2 years old, a 12-month's fleece, 35 lbs. of long white wool.



I have bred from him and his get ever since and have never made an out-cross and never used the same ram but one year on the same flock. My rams at two years old weigh from 160 to 180 lbs., have a strong constitution, without wrinkles, and will shear on an average about 25 lbs., a 12-month's fleece, of long white wool. Rams and Ewes for sale. P. O. Address Stony Point, Sonoma Co., Cal. R. R. Station, Petaluma.



REGULATE THE STOMACH, LIVER AND BOWELS, AND PURIFY THE BLOOD.

A RELIABLE REMEDY FOR

Indigestion, Bloating, Headache, Constipation, Dyspepsia, Chronic Liver Troubles, Biliousness, Bad Complexion, Dysentery, Offensive Breath, and all disorders of the Stomach, Liver and Bowels.

Ripans Tablets contain nothing injurious to the most delicate constitution. Pleasant to take, safe, effective. Give immediate relief.

Sold by druggists. A trial bottle sent by mail on receipt of 15 cents. Address

THE RIPANS CHEMICAL CO.

10 SPRUCE STREET, NEW YORK CITY.

BEE-KEEPERS' SUPPLIES.

Doveetailed Bives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boxes, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.



THE HALSTED INCUBATOR COMPANY.

1312 Myrtle Street, Oakland, Cal.
Send Stamp for Circular.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos. A. Carey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address **DRWEY PUBLISHING CO.**, Publishers "Pacific Rural Press," 220 Market St., San Francisco.



Patent.
and for.

COMMON
SENSE
BIT.

THIS BIT combines the BEST
QUALITIES of other patent bits
and will easily control the most
vicious horse at all times. It is the

COMMON SENSE BIT
because it can also be used as a mild bit.

X Sample mailed \$1.00.
Nickel " " 2.00.

RACINE MALLEABLE IRON CO.,
J. F. DAVIES, Mgr. **RACINE, WIS.**

(Continued from preceding page.)

The following are to-day's recorded sales on Call:
Wheat—Morning—Informal Session—December, 200 tons, \$1.20; 100, \$1.21 1/2 cts. Regular Session—December, 100

MAKE YOUR OWN GAS!
BADLAM BROS.,
519 Market St., San Francisco,
SOLE MANUFACTURERS OF THE CELEBRATED
PEERLESS GAS WORKS. New process,
safe and inexpensive, from \$100 upward. Light cheaper
than coal oil. Send for catalogue and prices.

CALIFORNIA If you want to know about California and the Pacific States, send for the **PACIFIC RURAL PRESS**, the best illustrated and leading Farming and Horticultural Weekly of the Far West. Trial, 50c for 3 mos. Two sample copies, 10 cents. Established 1870. DEWEY PUBLISHING CO., 220 Market St., San Francisco.

BACK FILES of the PACIFIC RURAL PRESS (unbound can be had for \$2.50 per volume of six months. Per year (two volumes) \$4. Inserted in Dewey's patent binder 50 cents additional per volume.

California Crops.

Summary of Report of Observer James A. Barwick, for Week Ending August 12, 1893.]

The average temperature during the week ending August 14th was for San Francisco, 56; Eureka, 54; Red Bluff, 80; Sacramento, 75; Fresno, 84; and Los Angeles, 76. As compared with the normal temperature, there was a deficiency of heat at San Francisco of 4°; Eureka, 2°; Red Bluff, 3°; Sacramento, normal. Fresno shows an excess of heat over the normal of 2° and Los Angeles 4°, which has had a tendency to rapidly ripen all kinds of fruit in the two great valleys and along the foothills.

Lake County (Upper Lake)—Hot weather drying up vegetation and wilted vines somewhat. It helped corn and hops. Prunes are reported to be falling off the trees in all sections.

Butte County (Gridley)—Peach-drying going on and the pack will be a large one. Pears are just beginning and a great deal of this fruit will also be packed, there being little market for either fruit.

Sutter County (Yuba City)—Harvesting is nearly over. Mr. G. W. Wood of Meridian harvested 20 acres of barley, averaging a little over 35 sacks to the acre, weighing 114½ pounds to the sack.

El Dorado County (Coon Hollow)—Ranchers are busy cutting, drying and shipping fruit and will be for some time.

Mono County (Bridgeport)—Harvesting in Antelope valley is in full blast. The hay crop—both alfalfa and other grasses—is as good as usual. Frost and cold weather have killed the apples. A few plums will be raised, but only about enough for the home supply.

Placer County (Newcastle)—Weather favorable for the orchardists, and several carloads of fruit are being shipped daily to the East. (Lincoln)—Harvesting about over in this section; the crop is generally short, the winter-sown grain being much below the average, though the summer-fallow is in some places remarkably good.

Sacramento County (Folsom)—Peaches and plums are plentiful, and it is impossible to do anything with them. Trees are loaded, and the owners are giving them away. (Galt)—Splendid crops of potatoes and beans are looked for on the mellow soil of our bottom lands; the present outlook for a large crop was never better.

Yolo County (Knights Landing)—The river ranchers are busy turning the virgin soil preparatory to sowing and planting their late crops, which are their sole dependence this year. Fruit shipments continue. (Blacks)—Harvesting about completed and most of the grain stored, awaiting a rise in the market. (Winters)—Fruit drying begun. The fruit shipments East now are principally pears, prunes, grapes and peaches. (Davisville)—The warm weather is hastening the grape crop which will be an unusually large one.

Solano County (Dixon)—The grape crop in the northern end of the county will be unusually heavy. (Denver)—Harvesting completed and yield much better than was at first anticipated. (Fremont)—Peach cutting and drying in full swing. Large shipments of grain have been made.

Sonoma County (Santa Rosa)—E. W. Davis says his prune crop has suffered a loss of about 15 per cent, but the balance of the crop is improved by the thinning. The grape-growers are jubilant over the prospects for good crops and fair prices. (Sebastopol)—The damage the hot spell has done our berry crop can scarcely be estimated. (Bennett Valley)—The dry, hot weather is telling on the grape crop through this valley, and if it continues without any more dewy nights than there has been there will not be the crop of grapes that was anticipated a short time ago. The corn crop is very light, and in most fields there will not be half a yield. (Occidental)—Prospects are brightening, for growers are sending in their orders for boxes rapidly. Canneries and driers are starting up, thereby greatly facilitating sales. (Cloverdale)—The grasshoppers have been playing havoc with the young prune orchard across the river. Capt. Field has lost over 500 trees. He is thinning out the grasshoppers by increasing the turkey crop. The indications are good for a large grape yield, the hot weather having done but little, if any, damage.

San Luis Obispo County (San Luis Obispo)—Southerly fogs prevailing all the week with moderately warm days, which is not what is required just now for our bean and corn crops. Beans are doing well and a good yield reported. (El Paso de Robles)—Grain is being stored in large quantities awaiting better prices.

Monterey County (Pajaro)—Canners are buying blackberries at their own figures. The depressed state of the market is going

to cause quite an increase in the amount of dried fruit that will be sent out from this valley. Raspberries have reached such a low price that it does not pay to pick and ship them. (San Ardo)—The hot wave is rapidly ripening fruits of all kinds. Grain thrashing about half through. A large yield of excellent grain is reported.

Santa Barbara County (Santa Maria)—Weather cool, with fogs morning and evening. Beans doing well. Grain thrashing continues and is yielding quite well. Barley and oats are not as heavy in acreage as at first estimated. Apricots are about all gone and very light. Prunes will also be light.

San Bernardino County (Chino)—The weather during the past week has been extremely favorable to ripening the beets. It is especially noticeable that beets from many fields of very heavy tonnage are bringing from \$4.30 to \$5.10 per ton.

San Diego County (Escondido)—Ripe grapes are beginning to come into market. The ranchers of San Pasqual have not yet disposed of their dried apricots. Dried fruit, in common with every other product, still goes begging for a market.

WE GUARANTEE

That one tablespoonful of

GOMBAULT'S CAUSTIC BALSAM

will produce more actual results than a whole bottle of any liniment or ointment ever made. It is therefore the cheapest (as well as easiest and best) external applicant known for man or beast.

THE LAWRENCE WILLIAMS CO., CLEVELAND, OHIO.

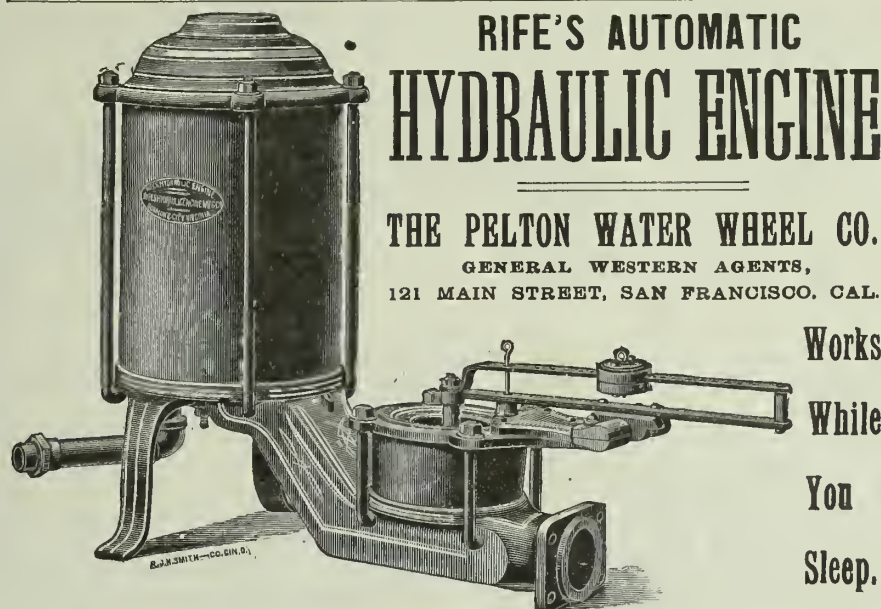
TREE WASH.

"Greenbank" Powdered Caustic Soda and Insecticide.

T. W. JACKSON & CO..

Sole Agents,

No. 5 Market Street, San Francisco, Cal.



RIFE'S AUTOMATIC HYDRAULIC ENGINE

THE PELTON WATER WHEEL CO. GENERAL WESTERN AGENTS, 121 MAIN STREET, SAN FRANCISCO, CAL.

Works While You Sleep.

THE RIFE HYDRAULIC ENGINE is the most simple and efficient machine yet devised for elevating water for irrigation, filling railroad tanks, supplying mills, factories, dairies, stock yards, country residences, small towns, and for various other purposes. This ram is self-operating, constant in action, and is not only much more efficient than anything of the kind ever put upon the market, but from absence of wearing parts, more durable and every way reliable. Many may be referred to that have run for years, elevating water in some cases from 100 to 300 feet without any attention or expense in the way of repairs.

These machines have already come largely into use in all parts of the country, and are rapidly superceding every other device for the purpose. They will work effectively under a head as low as two feet and for every foot of fall will elevate 20 feet. By means of an adjusting lever the capacity of any of the various sizes can be reduced 50 per cent or more, as may be desired, to provide for a variation in water supply, without disadvantage or loss in efficiency.

WATER RAISED AND WASTE.—The fall from the spring, stream or other source of supply to the engine determines the height of which the water can be elevated, as well as the relative proportion between the water raised and wasted, the quantity raised varying according to the height it is carried and the distance conveyed. For ordinary purposes it is sufficient to say that with a discharge pipe 1000 feet in length, one-sixth of the water can be raised and discharged at an elevation five times the height of fall or one-twelfth ten times the height of fall.

Parties writing for information should give the quantity of water that can be supplied to the engine, either in gallons, cubic feet or miners' inches; the head or fall from source of supply to point where the engine is to be located, length of drive pipe, height to which the water is to be raised, distance from engine to place of discharge and the quantity of water it is desired to elevate. No reliable information can be afforded without an explicit answer to these inquiries.

PROTECT YOUR TREES

— WITH —

Gilman's Patent Tule Tree Protector

Patented Aug. 1, 1893.



Cheapest, Best and Only One to Protect Trees and Vines from Frost, Sunburn, Rabbits, Squirrels, Borers and Other Tree Pests.

For Testimonials from Parties who are using them send for Descriptive Circulars.

B. F. GILMAN,

Sole Manufacturer of Patent Tule Covers, 420 NINTH ST., SAN FRANCISCO, CAL.

DEWEY & CO. AMERICAN AND FOREIGN PATENT SOLICITORS ESTABLISHED 1860. OFFICE OF THE "Mining and Scientific Press" Pacific Rural Press. No. 220 Market St. TAKE ELEVATOR No. 12 FRONT ST. SAN FRANCISCO, CAL.

Commission Merchants.

DALTON BROS., Commission - Merchants, AND DEALERS IN

CALIFORNIA AND OREGON PRODUCE, Green and Dried Fruits, Grain, Wool, Hides, Beans and Potatoes. Advances made on Consignments. 308 & 310 Davis Street, San Francisco. [P. O. Box 1936.] Consignments Solicited.

P. STEINHAGEN & CO.



404 & 406 DAVIS ST. S.F.

ALLISON, GRAY & CO.,

501, 503, 505, 507 & 509 Front St., And 300 Washington Street, SAN FRANCISCO.

— GENERAL —

Commission - Merchants, GREEN and DRIED FRUITS, Poultry, Eggs, Game, Grain, Produce and Wool.

MOORE, FERGUSON & CO. WOOL, GRAIN, FLOUR

— AND —

General Commission Merchants,

310 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

[ESTABLISHED 1854.]

GEORGE MORROW & CO., HAY and GRAIN

COMMISSION MERCHANTS,

39 Clay Street and 28 Commercial Street, SAN FRANCISCO, CAL.

SHIPPING ORDERS A SPECIALTY.

LINDSAY & CRAIG,

Crocker Building.....San Francisco.

Mortgages Bought, Loans Negotiated.

Several buyers on hand for desirable Fruit and Grain Ranches.

GRANGERS' BANK OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874



Authorized Capital.....\$1,000,000 Capital paid up and Reserve Fund 800,000 Dividends paid to Stockholders.... 720,000

OFFICERS.

A. D. LOGAN.....President I. C. STEELE.....Vice-President ALBERT MONTPELLIER.....Cashier and Manager FRANK McMULLEN.....Secretary

General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on wheat and country produce a specialty. January 1, 1893. A. MONTPELLIER, Manager.

E. VAN EVERY, Manager.

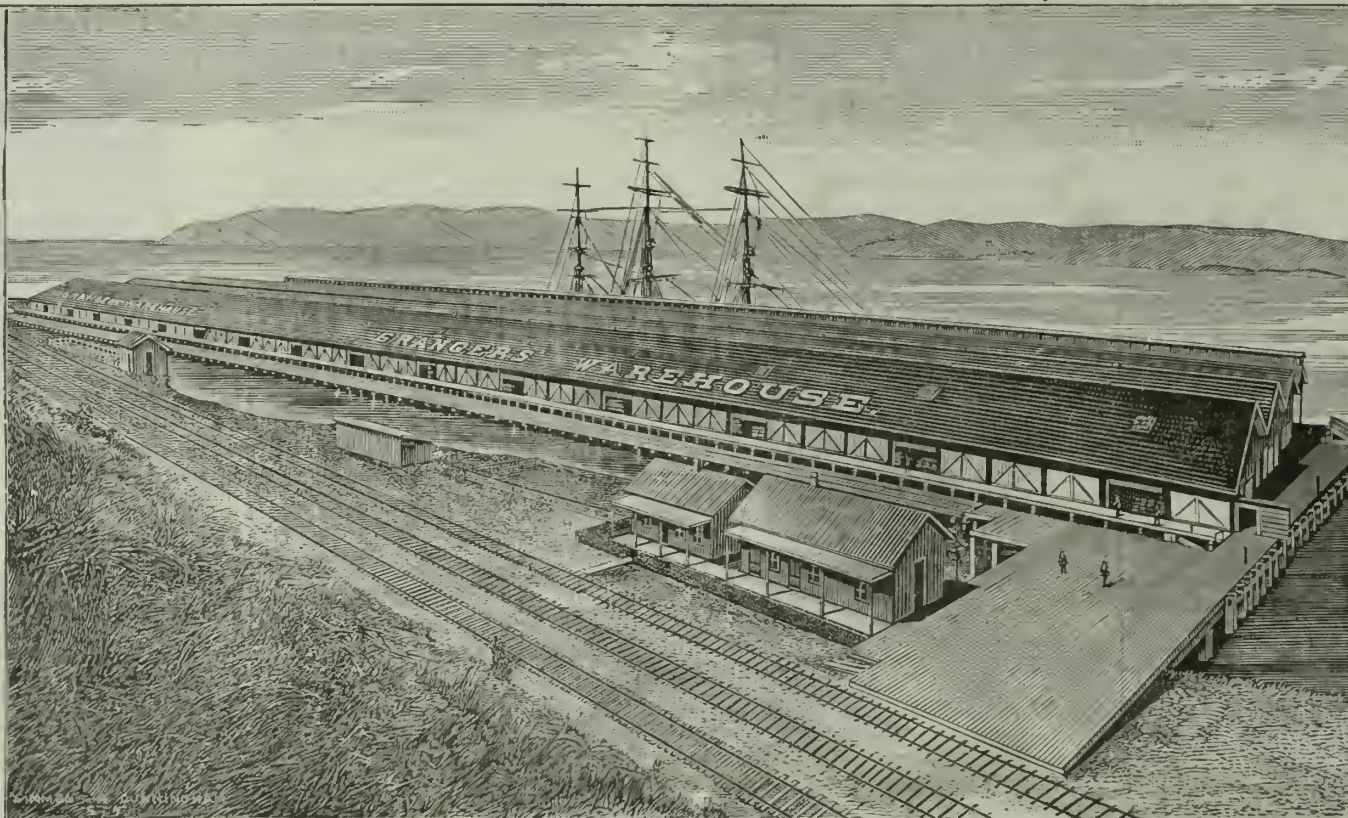
T. R. BALLINGER, Grain Salesman.

Great Reduction in Storage

SEASON OF 1893

50 CENTS TO JANUARY

1st, 1894.

75 CENTS FOR SEASON
TO JUNE 1st, 1894.

AT THE

GRANGERS' WAREHOUSE,

PORT COSTA.

Capacity of Warehouses, 50,000 Tons; Wharf Accommodations for the Largest Vessels Afloat.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT, AND FOR SALE ON CONSIGNMENT.

For Particulars and Rates, address all communications to our San Francisco office and they will be promptly attended to.

PARTIES DESIRING STORAGE WILL PLEASE APPLY EARLY.

GRANGERS' BUSINESS ASSOCIATION,

108 DAVENPORT STREET, SAN FRANCISCO, CAL.



The Anderson's Fruit Dipper

W. O. ANDERSON, Patentee and Sole Manufacturer.

THIS WELL-KNOWN DIPPER is in use in almost every plum-growing section of the State and has given perfect satisfaction wherever tried.

WE HAVE MADE SEVERAL IMPROVEMENTS THIS SEASON in additional beating capacity, facility for spreading the fruit, etc., which makes the machine indispensable both for the factory and the farm.

We also keep a full line of FIELD CARS, TURNTABLES, TRANSFER CARS, Etc.

For further information address the Manufacturer,

P. O. BOX 970, SAN JOSE, CAL.

FRUIT PAPER!

RAISIN WRAPS, SWEAT PAPER

FROM THE MANUFACTURER DIRECT AT LOWEST PRICE.

Raisin-packers are advised that we will make and carry in stock the "Azure Blue" "Top Wrap," which has been used for years by the packers of Spain.

S. P. TAYLOR PAPER CO.,

414 & 416 CLAY STREET.....SAN FRANCISCO.

ROOFING

GUM ELASTIC ROOFING FELT costs only \$2 per 100 square feet. Makes a good roof for years, and any one can put it on.

GUM ELASTIC PAINT costs only 60 cents per gal. in bbl. lots or \$1.50 for 5 gal. tubs. Color red. Will stop leaks in tin or iron roofs that will last for years. TRY IT.

Gum Elastic Roofing Co.,

39 & 41 West Broadway,

NEW YORK.

Local Agents Wanted.

HAY PRESSES.

The Monarch, Junior Monarch, and other kinds of Presses, made by the Celebrated Hay Press Manufacturer, Jacob Price, for sale by

L. C. MOREHOUSE,
San Leandro, Cal.

GEM STEEL WIND MILL

WITH GRAPHITE BOXES.

Never Requires Oiling or Climbing of Towers.

Guaranteed more durable without oil than other mills that are oiled. Practically, these mills require no attention. TRULY A GEM, and worth its weight in Gold. It combines beauty, strength, durability and simplicity. Governs itself perfectly, is easily erected and is sold on its merits; in fact, it is the best mill on earth. They are geared back three to one—the wheel making three revolutions to one stroke of pump—making them run in the lightest wind or breeze. The mill is made entirely of Steel and Cast Iron. Each one of our Gem Wind Mills is warranted. If not satisfactory, freight will be paid both ways and money refunded. We also carry Pumps of all kinds, Tanks, Pipe Fittings, Hose, Etc. **WOODIN & LITTLE, 312 MARKET ST., San Francisco, Cal.**SEND FOR.....
CATALOGUE...
MAILED FREE.



Vol. XLVI. No. 9.

SAN FRANCISCO, SATURDAY, AUGUST 26, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market St.

A Giant Redwood.

Our illustration should convince the distant reader that we have other forest giants than the "big trees" of the Sierra Nevada. Most of our own people know that the *Sequoia gigantea* of unapproachable immensity has a sister species in *Sequoia sempervirens* which would itself be entitled to the name "big tree" were the greater absent. Perhaps, however, many Californians even do not know how great size our priceless-redwood attains, and to them the engraving may be an object-lesson as well as to the distant reader of the RURAL.

The stump photographed measures 22 feet in diameter, and its size can be perhaps better appreciated by the fact that the forty children shown are all ranged upon its nearer side. How many could stand upon its flat surface with a periphery of 70 feet any one can determine for himself if he can find children enough in his neighborhood to fill a circle of that area.

This stump is in Humboldt county, a region of great area and resources upon the upper coast line of the State. It has nearly a million acres of what are classed as timber lands, and its lumber products of various kinds reach an annual valuation of

three and one-half million dollars. Besides this important interest, it has large stock and dairy interests and is developing in the horticultural line. It differs from the greater area of the State in a greater rainfall and a moister air, which make some crops successful which do not usually thrive in California. The county has recently shown much enterprise in making its resources better known to the outside world. It is destined to possess ultimately population and industries worthy of an empire.

SOME SOUTHERN CALIFORNIA JOURNALS are enraged at the recent pamphlet published by the State for distribution at the East, because it contains a map which is indeed a geographical chestnut and does not represent the South of the present decade. They are unquestionably right in their position so far as thus stated, but when they go farther and charge the error upon the North as such, and try to make of it a pretext for State division, etc., because it is another alleged instance of Northern desire to belittle the South, they allow themselves to be blinded by their own sectionalism. They call upon the Governor to suppress the publication, and as the Governor is a Southern resident and ostensibly the author of the publication, they might go that far, it would seem, without making a

fling at the North. And then the map is as much a disgrace to the North as the South in the very charges made against it. It conceals the recent progress of the whole State, and is, in fact, a geographical cadaver which should never have been resurrected and labeled with the figures 1893. And that is all there is of it. Why can't our Southern friends take a broad view of something?

AND NOW THE MYSTERIOUS VINE DISEASE is again on the decline. Its recent advance, seemingly, was but a spurt. Prof. Newton B. Pierce, special agent for the United States Department of Agriculture, is of the opinion that the vine disease is losing ground, even in the face of the extensive planting being done. Some young

Africa—Hypolyte Girand, vice-president of the Superior Council of Algeria and commissioner to the World's Fair, and Louis Billiard, Commissioner of the Board of Public Works of the city of Mustapha, the largest in that quaint country. While they are here, they will study the subject of vine-growing, and, incidentally, horticulture, for these are becoming important interests in Algeria also. They say that when they go back, they will have many recommendations to make in regard to American machinery and modes of planting and harvesting.

LUTHER BURBANK, of Santa Rosa, sends us a sample of what he considers the best new variety he has thus far obtained by crossing plum varieties brought from Japan.

The variety he has temporarily named "Perfection," and it is a cross of the Satsuma upon the Kelsey. We commented favorably upon it last year, and the present sample strengthens the conviction that it will be a popular variety because of its strikingly handsome appearance and high quality. Its form suggests the Kelsey, but it is more symmetrical—in fact it is almost a perfect pyramidal, inverted, of course, for the stem is attached where the eye of the pear is found. Carrying its semblance to a pear shape further,



PECULIAR GROWTH OF SPROUTS UPON A REDWOOD STUMP IN HUMBOLDT COUNTY.

vineyards that showed the disease quite extensively last year are almost free from it this year, and it has made its appearance in some places this year where there was no sign of it last year. Plenty of water and cultivation, he thinks, are preventives.

PERHAPS WE ARE GOING to catch on again where we dropped off nearly 20 years ago and again enter the world's market as silkworm-egg producers. It is reported from San Diego that Mrs. Carrie Williams, the pioneer silk culturist, received a letter from a Syrian merchant in Midway Plaisance at the World's Fair, who speaks of the superior cocoons on exhibit in the State building, and asks for eggs to test, and, if they prove to be without disease, his countrymen would hereafter import from California instead of France, where they now get them, and where a disease is common in the silk eggs. Does not this item awaken memories of early anticipations which faded from the view. But perhaps the present generation can do better.

AND NOW ALGERIA comes to take a look at California agriculture. We have had in the city, during the last week, two of the most noted men of distant Algeria,

we can say that it is almost identical with an inverted Doyenne du Comice. The color develops from a deep cherry red down to a rich claret as the fruit becomes ripe. The coloring is uniform, and the fruit, from its firm shipping condition to its full ripeness, is even and handsome. In this respect it will be a great improvement upon the Kelsey. The flesh is of amber tint, very juicy and translucent; the pit small and shapely; the flavor is striking and agreeable. From all the points of the variety, we anticipate its popularity as a desert fruit for sale to distant purchasers, as it seems to have notable keeping qualities.

TWO CARLOADS OF SOUVENIRS from Los Angeles county have been sent to the World's Fair for distribution. There were 10,000 souvenir pebbles from the island of Catalina, Los Angeles county, and 10,000 sea shells of various kinds, to be distributed as souvenirs from the Pacific coast, also 10,000 pieces of yucca wood souvenirs.

THE CITRUS FRUIT-GROWERS of the Pomona region of Los Angeles county have organized in accordance with the general plan for marketing the citrus crops of southern California.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING Co.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half Inch (1 square).....	1.00	2.50	6.50	22.00
One Inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, August 26, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—Peculiar Growth of Sprouts Upon a Redwood Stump in Humboldt County, 149.
EDITORIALS.—A Giant Redwood; Miscellaneous, 149. The Week; Our Animal Industries, Agricultural Depression; Miscellaneous, 150.
FROM AN INDEPENDENT STANDPOINT, 151.
CORRESPONDENCE.—Preserving Fruit Specimens for Exhibition; The Prison Bag Problem; That Perverse Cream; California Crops, 152.
MISCELLANEOUS.—The Coming Irrigation Convention, 151. Rats in a Silver Mine; The "Agriculturist" Makes Out a Favorable Showing; For the Black Scale; Dried-Fruit Freight Rates Not Yet Settled; The Delaware Peach Crop, 152.
HORTICULTURE.—An Australian in Our Orchards; Myrabalan and Mariana, 153. Elberta and Wonderful, 154.
THE FIELD.—Diminished Wheat Supply, 154.
THE APIARY.—From a Pasadena Bee-keeper; A Great Honey Show, 154.
SWINE YARD.—Feeding Wheat to Hogs, 154.
THE STOCK YARD.—Live-Stock Judging at the World's Fair, 154.
TRAITS OF THE MINE MULE, 155.
WORLD'S FAIR.—Mr. Halliday at the Chicago Fair, 155.
THE HOME CIRCLE.—Miscellaneous, 156-157.
YOUNG FOLKS' COLUMN.—Miscellaneous, 157.
DOMESTIC ECONOMY.—Peaches, 157.
PATRONS OF HUSBANDRY.—From Worthy Master Davis; Grass Valley and Magnolia Granges; Stockton Grange Endorses the Fair, 158.
AGRICULTURAL NOTES.—158.
MARKET REPORTS.—161-162.

BUSINESS ANNOUNCEMENTS.

(NEW THIS ISSUE.)

	PAGE.
Raisin Machinery—Fresno Agricultural Works.....	163
Almond Hullers—A. O. Rix, Irvington, Cal.....	162
Seeders—Deere Implement Co.....	164
Nursery Stock—James T. Bogue, Marysville, Cal.....	163
Situation Wanted—Mrs. Joseph James, Buckeye, Shasta Co., Cal.....	162
Real Estate for Sale—John F. Byxbee, S. F.....	162
Fruit-Dryer's Machinery—D. D. Wass.....	164
Hogs and Cattle, etc.—Chas. A. Stowe, Stockton, Cal.....	160
Thrashing Machines—Belle City Manufacturing Co., Racine, Wis.....	162

See Advertising Columns.

The Week.

The week brings a return of the usual summer temperature and hurries the fruit along. Last week's low temperature was rather an advantage on the whole. Were it not for the labor trouble the raisin season would open briskly, with no clouds except the menace of low values, which it is hoped will not be so bad as feared. It is a curious fact that the labor embarrassment is not of the kind which used to be fretted about. There was formerly the greatest apprehension lest there could not possibly be hands enough to gather the crop from the vastly increased orchard and vineyard area. Now there seems to be more idle hands than work can be found for, and values so low that the producer is obliged to seek the cheapest help or lose on his harvesting operations. California fruit men, as a rule, are quite willing to pay as well as they can for good service, but as they are governed by dealers and transportation men on the principle of "all the traffic will bear," they have to do to others as others do to them, and pay their labor no more than the traffic will bear. This is not exactly a golden rule, but it has about the same parity with it that other things do in these peculiar times. All are looking and hoping for a little brightening in the dried-fruit centers. It would be very acceptable.

Agricultural Depression.

We sometimes think we have a hard time as producers with labor exactions and commission extortions and transportation robbery, and we grieve ourselves nearly to death about low prices and the unyielding grip of the money-lender. It is true all these things are real hardships, and there should be no weakening of the effort to relieve producers from them as far as possible, and yet some comfort can be had from the contemplation of sufferings beside which ours are light afflictions enduring but a moment. Read a paragraph from the London *Farmer* of Aug. 7th:

England is this year the sufferer. Three parts of her area have languished from lack of rain. Crops of every description are short and fruitless. The hay crop was not worth cutting in most of the southern counties. Cereals are only a trifle better. The year must necessarily be a very disappointing one in these parts. Scotland expects a good harvest. Crops are more uniform in Scotland generally than they usually are. The Norseman, it is true, needs a good year, for he has had a long, ruinous succession of bad years. Who has not, indeed? This applies, more or less directly, to British agriculturists as a whole,

and there still hangs a heavy cloud overhead. Their pluck and stability have been severely tried. Many have succumbed to the terrible ordeal, yet there are thousands as courageous, if not as buoyant, to-day as when the depression began some 15 years ago.

Beside such a diet of hardship, our short-lived ills, sandwiched between thick slices of prosperity and progress, should hardly give a flavor of distress. Depression in the midst of abundance, lack surrounded by plenty, surely our discomfort must lie in the thinking or in the wrong adjustment of things rather than in the things themselves. And this being the case, our wrongs should yield to proper treatment.

Our Animal Industries.

The time is opportune for a few comments upon the animal industries of the United States. On Monday of this week there was opened, with appropriate formality, the greatest live-stock exhibition ever held on this continent, and possibly the greatest in the history of the world. It is telegraphed that 20,000 people were in attendance at the opening, and one can perhaps imagine something of the life and spirit of the occasion. A great show ring had been constructed and around it a frame structure with high ranges of seats for spectators. The dimensions of the oval figure are 280x450 feet, and it has a paved area of 60,000 square feet, or in the neighborhood of 1½ acres in the interior figure or ring proper. The seating capacity of the great oval stand is 12,000, so that the 20,000 mentioned in the dispatches could easily have been disposed in the numerous approaches and the outer rim of the ring proper. With a mere statement of this mass of humanity intent upon the opening scene of the great "battle of the breeds," which will continue for three weeks, the experienced fair-goer can build up some sort of a conception of the scene. Imagine the grand stand at Sacramento continued around an oval of the dimensions given and the mass in the quarter-stretch also continued around, until from all points people look across into the faces of other people, and you can understand something of the throng which gathered at the great opening of the Columbian colosseum.

We allude to this subject not merely to emphasize one of the many sensations at the World's Fair; that is its least and most fleeting aspect. We look upon it as more significant in that it reflects in one way the vast animal industries of this country. It betokens the keen and widespread interest in improved live stock of all kinds and breeds, and appreciation of this inestimable force of pure blood which has enabled us to take a foremost rank among the animal-growers of the world. In California our work and thoughts run so fully in the line of horticultural achievements that we are apt to forget other important lines which are in the foundations of prosperity and progress in other parts of the country. With us they are subsidiary and are not looked upon with the importance they merit. We hold that ere long they will also rise to greater importance than they at present possess, and it is for the common good that they should thus attain development and progress. When, then, we count our millions of fruit produce and shipment, and greater millions to come, let us not forget that there are even greater figures in other branches of the country's agriculture.

As pertinent to this suggestion we have compiled from the last Government publications statistics which are worthy of preservation. The following are the numbers and values of farm animals in the United States in January, 1892:

	Number.	Average Value.	Total Value.
Horses.....	15,498,140	\$ 65.01	\$1,007,593,636
Mules.....	2,314,699	75 55	174,882,070
Milch Cows.....	16,416,351	21.40	351,378,132
Oxen, etc.....	37,651,239	15.16	570,749,155
Sheep.....	44,938,365	2.58	116,121,270
Totals.....	116,818,794		\$2,220,724,263

Here is a value of nearly two and a quarter billions as the equivalent of the leading classes of domestic animals in this country. It is interesting also that of this value, or with this amount of investment of the past earnings of our people, we are able to supply our own vast needs and export a value equal to about seven per cent of the amount invested in what may be called the dead animal products. For, excluding dairy products which are themselves exported in great volume, we have the following as the valuation of exports of live stock and meat products in 1891:

Beef, salted or cured.....	\$ 5,195,306
Beef, fresh.....	15,322,054
Beef, canned.....	9,068,906
Tallow.....	5,501,049
Cattle, live.....	30,445,249
Sheep, live.....	261,109
Hogs, live.....	1,146,630
Bacon and hams.....	45,650,674
Pork, salted.....	4,787,343
Pork, fresh.....	56,358
Lard.....	34,414,323
Total.....	\$151,850,001

These are the interests which are to have their innings

at the World's Fair during the next two weeks. On another page there is a statement of the judging which will be done on specified dates, but since that was printed we learn that there may be a change which will bring the sweepstakes judging nearer to the judging in classes, less the animals lose form by their confinement in strange stables. The display will continue until September 9th and should be studied by all who can plan their itinerary to reach Chicago before that date.

THE REGENTS OF THE STATE UNIVERSITY, at a meeting on Tuesday, decided upon the erection of new green-houses for the use of the agricultural department of the university. The plans call for a building to cost about \$20,000. The structure will be erected on the north side of the canyon, at the north end of North Hall, facing the botanical garden. The secretary was instructed to advertise at once for bids on construction. The building will be of modern-style iron and glass, with the latest improvements in heating arrangements, benches, etc. In the center will be a palm-house of considerable height, and ranges of low houses on each side. This improvement has been sadly needed, as hitherto the university has only had some small wooden houses built nearly 20 years ago.

THE TELEGRAPH SAYS that the opening of the stock show at the World's Fair on Monday of this week was witnessed by 20,000 people. On another page of this issue the numbers of the different animals are given, and the days on which each breed is to be judged are specified. The stock is housed in forty stables, each 200 feet long and 42 feet wide, at the south end of the grounds. The display is said to be the largest, most complete exhibition on the American continent, and it includes famous animals from abroad. The Czar of Russia has twenty-one Orloff horses on exhibition, some with pedigrees running back 125 years. Two stallions of this group are valued at over \$100,000 each. The imperial stables of Germany are also represented.

THE AUSTRALIANS seem to be continually pushing their fruit into higher degrees of north latitude. We read that the Paramatta Steamship Co. of Sydney, N. S. W., has shipped some sample boxes of lemons to Nova Scotia. This company claims it can land lemons at that place as cheap as those from the Mediterranean and in as good condition. We suppose these experiments naturally follow free-trade lines first and thus strike open ports. If our free-traders succeed in lifting the duty from such fruits we shall see Australian fruits contesting our Eastern market, and with the transportation advantage on their side—at least until we get the Nicaragua canal. The course of things is suggestive.

ALREADY the sound of the auctioneer's hammer is feared in Chicago. A Chicago telegram announces that the beautiful white buildings of the exposition are to be sold as junk. They will soon be advertised and knocked down to the highest bidder. About the only thing of any future use in them are the iron and steel arches and timbers. It is thought not more than \$1,000,000 will be realized from the auction. The Manufacture and Liberal Arts building which cost \$1,600,000, will, of necessity, it is believed, owing to the magnitude of the undertaking, be given to the man who will tear it down and carry the debris away. Each arch of this building contains 20 carloads of steel, all firmly riveted together.

UNDER the auspices of the Academy of Sciences an important expedition has been organized to explore the flora and fauna of Lower California, and, later, of Mexico. Professor Gustav Eisen will make a collection of vertebrates and other zoological specimens, and pay special attention to the practical agricultural and horticultural possibilities of the field explored, and Mr. and Mrs. T. S. Brandegee will devote their attention to botany and a collection of the flora of the country.

JAMES MORTON claims \$75,000 as commission for the sale of the Buena Vista ranch, situated in Tulare, Kern and San Luis Obispo counties, embracing some 150,000 acres. The claim is in the form of an action brought in the Superior Court against Henry Miller individually and as surviving partner of the wealthy cattle firm of Miller & Lux, the executor and heirs of the latter.

J. W. BRUMAGIM, well known to all old Californians, died at Palermo, Butte county, Aug. 20th. Recently, Mr. Brumagim has been connected with land development in the Butte colony. He was the president of the Palermo Company, and was interested in several other enterprises in the county.

SIX HUNDRED ACRES of fine grain on the Crocker-Huffman property at Merced burned on Sunday, entailing a loss of \$12,000 to \$15,000, which is covered by insurance.

From an Independent Standpoint.

Congress is now in its third week but the prospect of definite action on the financial question seems as remote as on the first day of the session. As time goes by it becomes more and more doubtful if repeal of the Silver Purchase law can be accomplished excepting in conjunction with some sort of legislation binding the Government to the bimetallic policy. This is the natural result of Mr. Cleveland's gold message, for by that utterance he committed the Administration to the Wall street plan and practically gave Congress and the country to understand that no bill providing for bimetalism need apply at the White House. It was natural that the bimetalists should take alarm for it is as clear as daylight that the only chance of getting the Presidential assent to any bimetalist legislation will be to connect it with the repeal of the Silver Purchase law. These considerations explain why many members of Congress who went to Washington with the purpose of voting first to repeal the Purchase law leaving the future to provide something in the way of bimetalist legislation in its place, have changed their plans. They see that it is intended by the Administration to repeal the Silver Purchase law and to stop at that—in other words to put the country squarely on the gold basis in utter disregard of the interests which rest upon bimetalism—and to this project they will not assent. Each day the party of bimetalism—which now includes all shades of sentiment opposed to the gold standard—grows stronger; and while it has not been able to agree upon any definite measure, it serves as a solid bulwark against the gold plans of the Administration.

It is a very interesting situation at Washington. The President is supposed to be determined in his stand for unconditional repeal of the Sherman law. On the other hand, it is declared by the protesting congressmen that there shall be no repeal of that law unless repeal is accompanied by assurances favorable to bimetalism. The President is backed by the New York bankers and bondholders; the protesting congressmen, on the other hand, are supported by the almost universal judgment of the country. It is the most gigantic set-to between political elements of great strength that the country has seen since the sixties. It is impossible to foretell the outcome, but it is certain that if Mr. Cleveland shall win, it will be a dearly bought victory. If at his dictation, backed by the capitalistic interest of New York, the gold standard shall be forced upon the country, the country will have its revenge when the next elections come round.

Strangely enough the weaker end of the opposition to the President is the House of Representatives. The Cleveland men claim, and probably with truth, a majority of thirty for unconditional repeal. The real fight is to be in the Senate, where the forces of bimetalism are very strong, including not only the Silver-State Senators but such conservative men as Morrill, Washburn, Vest, et al. How our California members will stand is not known, but they are counted on to stand in opposition to the Cleveland scheme.

In the meantime the financial conditions of the country are said to be a little easier. The manifest willingness of Congress to repeal the Sherman law, under proper conditions, has served to reassure many who were afraid that the country was going to a silver basis: but of still great effect has been the steady westward stream of specie. Money for the purchase of American products is coming across the Atlantic at the rate of one million dollars per day, serving the two-fold purpose of paying for corn and pork and of showing the country that it still has the means of doing business. The movement toward better times, slight as it is, has special significance from the fact that it occurs in the face of delay and uncertainty in the matter of the Sherman law. It gives color to the charge that the financial stress through which we are passing, is a condition largely if not wholly artificial and that it was brought about by a systematic pressure on the part of the New York bankers with a view to its effect upon legislation. The impression prevails very generally, that this was the origin of the movement and that its development into something like a panic was because it got "beyond the control" of the forces by which it was started.

Of course, the better look of things in the financial world greatly strengthens the hands of the men at Washington who are standing out for the principle of bimetalism. Congress was called together on the plea that the country was going headlong to the dogs, and that repeal of the Sherman law, and that alone, would save it. Now, if in spite of the fact that the Sherman law is not repealed, times persist in getting better, then some very pretty theories must go to the wall.

But, as a matter of fact, the general money movement is always more active in the late summer and fall when crops are being marketed; and the times would have to be

desperate indeed to wholly change this law of trade. It is not to clearing-house statements that we must look to see if a country is prosperous, but to the condition of the people; and by that test it may be seen that, in spite of all talk about money imports and freer movements, times are still hard. The industry of the country has not slackened; production has been good; but prices are abnormally low. Wheat is down to a point where there is no profit in its production. Wool can scarcely be given away. Fruit is a little better, but still very low. And so it is all along the list of our domestic productions. Because there is, in the general channels of trade, a little money movement, it does not imply that the country is getting in good shape; rather it goes to show how poor the country is, since, to get a little ready money, it must sell its products not for what they are worth, but for whatever they will bring.

Within the past ten days there has been a revival of the anti-Chinese agitation in the San Joaquin valley, and it has broken out into riot and violence at Tulare, Visalia, Fresno and at several smaller places. No Chinamen have been killed, but a good many have been driven from their houses and prevented by threats from appearing at their usual places of labor. In every case there have been the usual accompaniments of lawlessness, including personal assault, robbery and wanton destruction of property. At Fresno the authorities have asserted and maintained the reign of law, but in Tulare the sheriff has apparently been in sympathy with the rioters and has allowed them to follow their own courses. The plan of proceeding is for a mob of hoodlums to go at night to a Chinese camp, rout the Chinamen out, terrify them with blows and pistol shots, and drive them to the nearest railway station and load them into the first departing train. The rioters assume to be workingmen, but they are, in fact, a set of low tramps and bummers who, if offered work, will not accept it, or persist in it. They pretend that they are driving out the Chinamen because there is no effort made to carry out the provisions of the Geary law; but, as a matter of fact, they are simply gratifying a beastly taste for violence and plunder. At Vacaville in Solano county, and at Stockton, efforts have been made to get up mobs, but the decent, law-abiding spirit has been too strong for the hoodlums.

It is unquestionably the duty of orchardists and others who have work to give out, to employ white in preference to Chinese labor; and there are, we believe, few, or none at all, who fail to do it. But it should not be surprising that those who need help prefer any sort of workmen over hoodlums and bullies capable of the outrages enacted last week in Tulare county. Self-respecting men of sober and industrious habits never find difficulty in securing work in preference to Chinamen.

There seems to be no doubt that the projected Midwinter Fair will come off according to programme. The full amount of advance subscriptions (\$500,000) has not been pledged, but enough has been secured (\$365,000) to warrant the managers in going ahead; and on Thursday of this week (we write on Wednesday) the work of actual preparation will begin at Golden Gate Park. It is to be made an impressive event and to that end the exercises will include a procession, addresses, music, etc., etc. A silver spade, made especially for the purpose, will be used to "break ground," and for the first spade-full of earth there is lively competition, the bids already reaching two hundred and fifty dollars. The promoters of the Fair have wisely given up the plan of getting direct help through a special legislative session; and the appeal to the several counties for direct appropriations has turned out a flat failure. Neither of these plans were wisely conceived and it is beyond question that their only effect has been to cool the interest of the interior in the general project. All that should have been asked of the counties was to help in making the exhibits; and it is certain that this is all that they will do. Every county, so far as heard from, will make a display representative of its productions, resources and industrial conditions, and the strictly Californian section of the Fair will unquestionably be the most complete and striking exposition of our State interests ever yet made. From what we can learn from many sources we feel it safe to say that it will astonish and delight even those who fancy that they have nothing to learn about the Golden State.

There is an almost unanimous eagerness on the part of exhibitors at Chicago to reproduce their displays here, and it is certain that the cream of the great show, including all that is broadly interesting or instructive, will be set up in Golden Gate Park. The difficulty will be, not to secure exhibits, but to provide room for them. The plan includes four general buildings with no end of side buildings, and beginning with next Thursday the work of erecting them will be pushed with the utmost energy. Not least among the immediate advantages of the fair is the fact that it will make work for many hundreds of workmen,

who, through the stress of the times, are now unwillingly idle.

The Chicago Fair is now far enough along to make it clearly evident that it is a financial failure. Receipts from admissions from the beginning have been not much more than double the expenses, and they are not increasing. From May 1st to August 1st, paid admissions were about 6,600,000, making receipts about \$1,100,000 per month. Expenses are estimated at \$600,000 per month, making a profit of only \$500,000, or \$3,000,000 for the six months. There is small hope that attendance will increase. That for July was only 100,000 more than that for June, and it included nearly 200,000 extra on July 4th. The financial stress has been growing greater since July 1st. It will probably reduce the August, September and October receipts still lower. It is practically certain that the money spent in creating the immense plant—not far from \$20,000,000—will not be returned. It will mostly fall upon the capitalists of Chicago, who have, perhaps, gained indirectly enough to make up for this vast direct loss.

The Coming Irrigation Convention.

The following circular issued to foreign representatives of the United States by Hon W. Q. Gresham, Secretary of State, will give a good idea of the scope and dignity of the body about to convene in Los Angeles:

At the fourth annual session of the Trans-Mississippi Congress, which met at Ogden, Territory of Utah, April 24, 1893, at which all the States of the United States and Territories west of the Mississippi river were represented by regularly appointed delegates, the following resolution, addressed to the President of the United States, was unanimously passed on April 26:

WHEREAS, The greater part of the Trans-Mississippi section represented in this Congress is actively interested in the irrigation industry and in a large measure dependent upon irrigation for the development of its agricultural resources; and

Whereas, An International Irrigation Congress is to meet at Los Angeles, California, October 10, 1893, at which the leading irrigationists of the United States, Europe, Asia and Australia will be present, and where a number of important questions relating to irrigation law, irrigation securities and irrigation methods will receive discussion and action; therefore, be it

Resolved, That this Congress of the Trans-Mississippi States hereby requests the President of the United States to issue an invitation to foreign governments of countries where irrigation is practiced, asking them to send delegates to the International Irrigation Congress at Los Angeles; and be it furthermore

Resolved, That the Trans-Mississippi States be urged to send representatives to the Congress, and that their respective governments be requested to exert themselves to make the undertaking the success which the dignity and importance of the subject to be considered merits.

The subject of irrigation is one that is assuming vast proportions in the United States, particularly as concerns our large extent of arid lands, and the success which has attended its practice therein has naturally caused its spread throughout the rainy regions of our territory as well.

The congress which it is proposed to convoke at Los Angeles will probably be attended by a thousand delegates coming from all the States of this Union where irrigation is practiced and from foreign countries more or less interested in the subject. It promises, moreover, to be an important convention of persons actively interested in the development of the western half of the United States by means of irrigation. The matters to be discussed are of immediate practical interest to the nation and to officers of the government having to do with the public lands and with scientific researches pertaining to the soils and waters of the arid regions. Hence the exchange of ideas of writers on irrigation and others having practical experience with reference to irrigation problems cannot but prove highly beneficial to this most important interest, not only to our own country, but to all others where irrigation is practiced even to a limited extent.

The interest evinced by the Chamber of Commerce of Los Angeles, California, in behalf of the International Irrigation Congress and by the chairmen of the Committee on Irrigation and Reclamation of Arid Lands of the United States Senate, speaking for the people of all that part of the United States which depends upon irrigation to a greater or less extent, leads the Department to hope for favorable responses from abroad, in order to obtain the fullest possible expressions of opinion on the subject.

The Department of the Interior will be represented at the proposed meeting by an officer to be detailed by the Secretary of that Department, for the purpose of giving such information as may be desired concerning the results obtained by the surveys which have been carried on for several years under the auspices of the General Government.

You are accordingly instructed to informally notify the Government to which you are accredited of this meeting of the International Irrigation Congress, which is to convene at Los Angeles, California, October 10, 1893, and request its co-operation through duly accredited delegates.

W. Q. GRESHAM.

The Prison Bag Problem

TO THE EDITOR:—I see an article in your paper of August 19th headed "Jute Bags Tied Up." In the *Daily Call* of August 13th was another article on the same subject, in which Senator Ostrom was censured and misrepresented by my friend Mr. Sontag, who stated that he feared the jute mill will have to be shut down on account of the "magnificent and intelligent bill introduced by Senator Ostrom of Yuba City." Again he says: "I want to ex-

press my contempt for this man Ostrom; instead of being a friend to the farmers he has proven a very expensive enemy," etc.

I would infer from this that Ostrom ran the last Legislature and the Governor. The majority of the last Legislature viewed the matter in the same light as the Senator from Yuha; and let me say right here, that if there was a member in the last Legislature who was a farmers' friend it was Senator Ostrom. You will always find him advocating the interests of the farmers. He is a safe man to rely upon. He has never been found in the library, nor in the interest of hoodle, or corporate influence.

Now, a few words about the bill alluded to. I would recommend no change except the provision for filing of an affidavit with each order. That might be changed and save some little expense to the purchaser, but that is all. Before this bill was passed, many times before the plant was increased at San Quentin the bags were all sold to middlemen and speculators, and small farmers could not get any bags.

As to giving the farmers credit for 60 or 90 days, I am surprised to find Mr. Sontag, as a very shrewd business man, advocating the State Prison factory going into the credit business.

I do not think Mr. Sontag would advocate such a proposition after more mature deliberation. If he does, then we had best shut up the institution at once. The whole secret of this matter is that it so happened that the operation of this bill alluded to at first came into effect in this time of financial stringency, and the short crops and extremely low prices have had their effect on the output of hags from San Quentin. But the same causes are affecting other dealers in hags whom the Ostrom bill does not restrict. Heretofore the farmers were given credit at the banks for enough money to buy their sacks with, and this year they refused to loan any money to the farmers; hence they, many of them, had no money to buy sacks at San Quentin or anywhere else, and if Mr. Sontag had said that it was the banks that were the cause of the jute mill having to shut down, then he would have made a correct solution of the difficulty.

Why does not the Prison Board pass a resolution condemning the action of the men who have run up the price of tonnage beyond all reason? If tonnage was at a fair figure, wheat would be worth \$1.20 and \$1.25 to-day. They should then pass another resolution condemning the action of the banks in refusing to accommodate the farmers, and when they have done that there will be no cause to close the jute mill.

J. D. HUFFMAN.

Lodi, Cal., Aug. 20, 1893.

Preserving Fruit Specimens for Exhibition.

TO THE EDITOR:—I have received so many letters requesting information respecting the proper mode of preserving fruit for exhibition at the coming Midwinter International Exposition, to be held at San Francisco, that it seems that the mode adopted at the rooms of the California State Board of Trade should be made public.

Prof. Hilgard of the University, B. M. Lelong, secretary of the State Horticultural Society, and myself have for several years been experimenting to find a preservative fluid which should both preserve the fruit and color. So far we have not found any agent which will preserve the color, so we must be content to use such as will preserve the fruit. Two are sufficient for our purpose. First, sulphurous acid gas; second, bisulphite of soda.

To prepare the first, fill a barrel, with one head out, two-thirds full of water; upon the surface float a pan containing a handful of sulphur, light the sulphur and cover the barrel with sacking to exclude the air, and allow it to remain for an hour. Repeat the operation several times until the water is quite sour. Use about a pound of sulphur to 20 gallons of water; or use a sulphur match such as winemakers use, which is a cotton cloth eight inches long and two inches wide, dipped in melted sulphur. Fill the barrel two-thirds full of water, attach a match to a wire and insert in through the bung hole, closing it up. After the match has burned out withdraw it and agitate the water for several minutes. Blow in, with a bellows, fresh air, and repeat (say ten times) the process until the water has absorbed enough gas.

Another mode, equally as efficacious, is to use bi-sulphite of soda. Dissolve the soda first in hot water, and add in the proportion of 1 to 1½ ounces of soda to one gallon of water, according to the ripeness of the fruit. Set aside for a day until the water is clear.

Failure is sometimes due to mineral matter in the water, which forms a chemical union with the sulphur or soda. To be sure of results distilled water should be used. Vegetable matter in solution can be destroyed by boiling the water.

The fruit should be under-ripe and gathered so as not to be in the least bruised. Before putting it in the fluid it should be thoroughly rinsed in clean water.

It is necessary that the density of the fruit juice and the preservative fluid should be the same, otherwise an exchange of the fluids takes place and the skin is broken. Glycerine is the only substance that can be satisfactorily used to increase the density of the fluid. Use three-quarters of an ounce, by measure, for each one per cent of soluble matter in the fruit juice. Ripe fruit, according to Professor Hilgard, has of such soluble matter as follows: Apples and pears, 12 per cent; plums, prunes, apricots and peaches, 10 per cent; cherries, 12 per cent; berries, 8 per cent; grapes average 24 per cent.

Put the fruit in the jars and pour the water on it, crossing the top fruit with a couple of pieces of wood to keep it under the water, and then put on the stopper. Wait a few days until the fruit has absorbed the water, and then replenish the water. Put a few drops of kerosene oil on top of the water; burn a little sulphur in the space above. If you use the museum jars, put a little glycerine on the rubber; screw down the top tightly. If you use a jar with

a stopper, put a little varnish on the stopper and seal with wax or paraffine.

E. W. MASLIN,

Sec. Cal. State Board of Trade.

San Francisco, Aug. 23, 1893.

That Perverse Cream.

TO THE EDITOR:—Possibly the non-coming of the butter, as mentioned by K. C. in RURAL PRESS of August 5th, was partially due to the salt or other ingredient of the sea air, as the cow had previously been accustomed to inland air. I lived at Santa Barbara, half a mile from the sea, 15 years, and none of my stock would touch salt. When I came to Sespe, 30 miles from the sea, cows and horses were eager for it, although we are in sight of the sea—no hills intervening. I have just churned over an hour, and put the churn aside till to-morrow, when I expect to get butter in 15 minutes. Perhaps K. C.'s cream is not sufficiently soured or ripened, as the lady got butter from it in five minutes after letting it stand three days. There is very much in having the cream of just the right temperature, to have it come soon. But we sometimes have cream the behavior of which is accountable only on the theory of the witches. I think it best not to stop churning until through, lest the cream goes back on me; still there may be nothing in this. If any more light can be shed upon this important subject by all means let us have it. I let my perverse cream stand 10 hours, and in 15 minutes got butter.

A visitor to-day said, in canning she dipped the rubber and the edge of the cover in the boiling fruit, screwed tight, and never lost a single jar. She wraps the jar in cloth dipped in cold water and never cracks the jar in filling.

We are having good crops of almost all kinds in Ventura county. Even apricots are not an entire failure. If every one would stop saying "hard times," we would actually be in a fairly flourishing condition.

S. P. SNOW.

Sespe, August 28th.

The "Agriculturist" Makes Out a Favorable Showing.

NEW YORK, Aug. 20.—The following is a summary of the *American Agriculturist's* annual review of the crop situation of the year:

The harvest of 1893 in the United States is in many respects similar to that of three years ago, but with every prospect that the home consumption and the increased foreign demand will so advance values as to yield as large net return to farmers as on average recent years. Indeed the review makes a distinctly encouraging exhibit in spite of the prevalent drouth, though admitting that the financial stringency may interfere with the early movement of crops and have a temporary restrictive influence on prices.

The *Agriculturist* notes an increased domestic crop of sugar, but a shortage in the world's production of 300,000 long tons of sugar. It says, however, that prices are more likely to be affected by changes in legislation than by changes in production.

Hops will make a fair average yield in the United States, but as there are only half to two-thirds of the full crop in Germany and a light yield in England the export demand will take at good prices every bale of American hops that can be spared.

Dried-Fruit Freight Rates Not Yet Settled.

The dried-fruit rate which has been under discussion for some time past, says the *Call* of Aug. 22d, is finally in a fair way for settlement, and the following proposition has been made to the members of the transcontinental freight rate committee. The rates have been agreed upon by the Southern Pacific and Santa Fe lines, and are said to be favorably considered by all other members, and the probability is now that the rates will be in force inside of two weeks.

The plan as agreed upon is to charge \$1 for wooden packages and \$1.20 for sacks, per 100 pounds, in car lots of a minimum weight of 24,000 pounds. Mixed carloads, consisting of part wooden packages and part sacks, will come under a \$1.20 rate. The Santa Fe thus, as the originator of the proposition, carried its point. The last proposition submitted which met with defeat was to make a \$1 rate on boxes in carloads of 30,000 pounds and \$1.20 on carloads of 20,000 pounds minimum weight. The trade is said to view the proposed change with satisfaction.

The Delaware Peach Crop.

A New York fruit-buyer, who had been out in the peninsula peach region, writes on August 9th to the *N. Y. Fruit Trade Journal* as follows:

After a canvass covering the whole, or nearly so, of the peach section, the writer ventures the opinion that the crop is much overestimated, being nearer three than six million baskets. The carrying quality, however, is better than the large crop of 1891, which was three million baskets, and larger than the railroad companies' estimates.

Some banks here refuse to credit checks to account of customers, no matter how strong financially, taking them only for collection. They notify shippers to inform their commission merchants to forward currency, not even accepting New York exchange.

For the Black Scale.

Alexander Crow, Quarantine Officer and Entomologist of the State Board of Horticulture, was recently at Los Angeles investigating parasitical insects, and has filed a report with the State Board, in which he says that he and Albert Koehele inspected the Ellwood Cooper olive orchard at

Santa Barbara, where various colonies of *Rhizobius ventralis*—a small black ladybird—had been placed. He says that portions of the orchard where the colonies were liberated, and which were originally badly infested with black scale, are now practically free from the scale and ladybirds are fast spreading through the infested trees. Of the insect, he says: "I am satisfied that we have a very effective enemy of the black scale, as this species has probably not less than four generations each year." Mr. Cooper proposes to send out next month colonies of this valuable insect throughout the State to orchardists having trees infested with black scale.

California Crops.

[Summary of Report of Observer James A. Barwick, for Week Ending August 19, 1893.]

The average temperatures during the week ending August 21st were for San Francisco, 60°; Eureka, 60°; Red Bluff, 76°; Sacramento, 70°; Fresno, 78°; and Los Angeles, 70°. As compared with the normal temperature, there was a heat deficiency over the State from Red Bluff to Los Angeles, Eureka being the only place showing an excess, which amounted to 4°.

The deficiencies at other Weather Bureau Stations were as follows: San Francisco, normal; Red Bluff, 5°; Sacramento, 4°; Fresno and Los Angeles, 3°. These deficiencies in the fruit-growing districts of the State have had a tendency to retard the rapid ripening of fruit, making it easier for the canneries to keep up with the pickers. Grape and hop-picking have begun, and raisin-making will soon be in full blast.

The observer at Red Bluff telegraphs as follows: "Cooler than usual. Grape crop promises well and prunes a fair average."

The observer at Fresno telegraphs as follows: "Raisin crop doing well. Picking will begin as soon as the labor question is settled."

The observer at Los Angeles telegraphs as follows: "Cooler weather prevented too quick ripening of fruit. Prunes and walnuts promise well."

The highest and lowest temperatures were 106° at Gridley, Butte county, and 41° at San Ardo, Monterey county.

Modoc County (Adin)—No rain in Modoc county since May. Crops are good, though, without it, but would have been much better if we had had a June rain. The drawback of most consequence was the cold, late and wet spring. Haying season, except in the swamps, is about over.

Shasta County (Burney Valley)—Farmers complain of a short grain crop, but the quality will more than make up for the loss in quantity.

Mono County (Bridgeport)—Haying is progressing favorably throughout the county. In this vicinity the crop will be fair, but not as heavy as last year.

Sierra County—There will be more than 1000 tons of hay left uncut in Sierra valley this season, on account of there being no waste ditches to turn the water into.

Yolo County (Davisville)—Captain Hillman, of the Briggs vineyard, says the grape yield will be larger than for several years past. The grape-picking season will be in operation in a few days. (Knight's Landing)—The pumpkin crop will soon be ready to pick and will be a large one. (Winters)—The pear crop is the largest ever known in this vicinity. Fruit shipments East are on the increase.

Sonoma County—The prune crop of the county is lighter this year than usual, but the fruit is of larger size and better quality.

Mendocino County (Ukiah)—The hop crop is now sufficiently matured that reliable estimates can be made. Many of the yards will yield a full average while there is a marked shortage in others and no increase in any. Taken as a whole the crop in Ukiah valley will be about ten per cent under that of last year.

San Joaquin County (Lodi)—The wheat harvest is over and most of it hauled from the fields, placed in warehouses or sold. Peach crop good, but no market. A few have been shipped to canneries. Growers are now drying as a last resort to save the fruit from waste.

San Luis Obispo County (San Luis Obispo)—There have been heavy southerly and northwesterly fogs which are helping the bean, corn and potato crops. Some cattle are dying in the eastern part of our county, but on the coast they are healthy.

Santa Barbara County (Santa Maria)—Weather continues cool and damp, which is favorable to the bean crop, but makes fruit late. Grain thrashing out well, but price low.

Tulare County (Porterville)—The crop of citrus fruit will be large and fine. (Selma)—Late varieties of fruit are now ripening, and drying has commenced. The first crop of grapes will soon be ripe. (Visalia)—1,500,000 pounds of prunes will be the crop on the Paige & Morton ranch this season.

Kern County (Bakersfield)—There are 5000 acres or so in the Poso country, put under culture for the first time this season, that are now nearly covered with a splendid growth of Egyptian corn.

Ventura County (New Jerusalem)—In this valley this year a large crop of beans will be produced. The acreage planted to beans this year is near 26,000 against 2000 acres last year. Buyers from Boston and San Francisco are negotiating for the crop soon to be harvested.

San Bernardino County (Chino)—Four to five carloads of sugar are being sent out every day. The daily output of sugar is about 176,000 pounds, or 88 tons. The present sugar campaign promises to be one of unparalleled success to all concerned.

Riverside County—Yucaipa valley is raising fine peaches, apples, pears and other fruits without irrigation. The grain crop is also excellent, but the yield is much better on summer-fallow ground than on fall plowing.

San Diego County (Valley Center)—The peach crop of the valley will be large and extra good this year.

HORTICULTURE.

An Australian In Our Orchards.

[Observations by Mr. Fred C. Smith, Horticultural Agent of the South Australian Government in California.]

The last three weeks I have spent in company with Mr. P. J. Cillie, Horticultural Commissioner of Cape Colony, in visiting southern California. The great fruit industry there is in oranges and lemons; deciduous fruits are grown to a considerable extent. Olives and walnuts also are cultivated largely in certain places.

Planting is proceeding faster than ever, and the area needing water constantly enlarging. Consequently the older irrigation companies are developing and increasing their water supply by tunnels into the mountains, by artesian wells, etc., and new schemes are brought forward and others are progressing rapidly. From the head or pressure of water to be obtained from the streams flowing down the canyons electricity is produced by the use of Pelton or turbine water-wheels, and the same water that is used for the irrigation of orchards produces electricity enough to light the houses and streets of many towns and provide power for running electric cars and machinery of all sorts.

When it is remembered that this State has mountain ranges for 900 miles from north to south and scores of canyons with fine streams running from them, and what the possibilities of electricity are, one is simply afraid to prophesy. It seems to me that the country is destined to be not simply dotted with orchards, but one vast continuous orchard, fertile, populous and wealthy, intersected in all directions by electric lines and light electric freight and passenger cars running at 30 miles an hour easily; electric lights everywhere and no necessity for coal even to cook meals, and all this by the intelligent use of water. When I saw in San Antonio canyon, at the back of Ontario, a stream some five or six feet across and a foot deep, and knew that that stream, with its fall in 4 or 5 miles of 300 or 400 feet, was rushing along with the force of 200 or 300 horse power, I could not help realizing what a future there is before many parts of Australia where water can be developed.

In regard to the orange culture, one of the first things that we noticed was the very long standards of nine-tenths of the trees. Many thousands of acres being from three feet up to five feet high, three feet is about the average. The opinion seems to be held that the orange, contrary to all my notions, is not impatient of heat, but, with plenty of water, welcomes it. Stakes are a necessity with these young trees.

It is certainly a great deal easier to plow and cultivate round a tree of that sort. Some of the trees first planted at Riverside, and 20 years old, stand with fully five or six feet butts and look remarkably well, being from 20 to 30 feet high and bearing 10 to 15 boxes of fruit each. At Ontario, the Chaffey Bros.' old colony, we were assured that the low-standard or bush-shaped citrus tree was superseding the high.

It is everywhere found necessary after, say seven or eight years, to fertilize the land for citrus fruits. Mr. E. W. Holmes, an old citrus-grower and editor of the *Riverside Daily Press*, is in favor of fertilizing from the very first, earlier and larger results being so obtained.

Sheep dung is used to make wood and leaf growth, and potash for fruit production. Dr. Jarvis of Riverside estimates that it costs about \$30 per acre per annum for fertilizers and the same for labor and water, or \$60 total. Sheep manure is used at the rate of about $4\frac{1}{2}$ tons per acre, and from one to two pounds of potash per tree.

The rule is, no fertilizer, no crop. Too much manure, however, will produce collar rot (*mal di goma*), as the tree will try to take up more than it can use.

With regard to stocks for working the orange upon, there is quite a difference of opinion between authorities as to the relative value of sweet and sour orange seedlings. Strong arguments are used on both sides for both stocks, but little seems to be said against either.

Editor Holmes, in a letter to me, states that, after 20 years' experience of the sweet stock, he sees no reason whatever for discarding it in favor of the newer and less known sour stock. From all I have heard and read, I should say that both are good stocks. Both, however, will resent abuse, and too much water or manure, or both, will cause *mal-de-goma*. Nursery orange stock is sold from three to five years old from the seed, and at from 25 cents or 1 shilling to 85 cents or 3 shillings 6 pence each.

With regard to lemon stock for working either orange or lemon upon, I must say that it is everywhere unqualifiedly condemned. The fight on this point was years ago fought out, and there are none so hardy now as to defend it—so Australian nurserymen please take note.

VARIETIES OF ORANGES.

The Tahiti seedling is the kind of which most was planted until recently, and the bulk of the crop marketed is of this variety. This orange when grown from seed brought from Tahiti, "comes true from seed," but how those grown at Riverside, and inoculated from the several varieties planted there would turn out, I cannot say, but I would not care to risk planting an orchard of them unless, of course, budded.

The Washington Navel orange is undoubtedly the prime favorite to-day all through the orange sections. The Australian Navel, which at one time was planted to some extent, is now entirely superseded by the Washington. The latter is a remarkably fine, large orange, rich and sweet juice, very little waste in the pulp, and practically no seeds. Another variety that will be planted here to some extent is the Hart's Tardive or Valencia Late. It comes into the

market in good condition when most other oranges are flavorless and of no use. It has a fine, rich flavor, and, I should say, ought to be at its prime from November to March or April in Australia. Mr. Cutter, nurseryman and grower at Riverside, says it will keep its flavor and quality for 12 months after reaching maturity. However, as it comes into market when all the deciduous fruits are in, only a comparatively small area will be sufficient to overstock the market.

The Paper-Rind St. Michael is a very thin-skinned fruit, very dense in texture of pulp and richly flavored; it, however, does not part readily from the skin, and is seedy. But for these last two facts, Mr. Scipio Craig of the Redlands *Citrograph* told me, he would place it at the head of the list.

The above three varieties we were fortunate enough to be able, though so late in the season, to sample specimens of.

The Joppa, which has had a good deal of notice in the California papers, I found was hardly known. Very few had seen or tasted the fruit, and none seemed to regard it as fit to be placed alongside the Washington Navel.

The Mediterranean Sweet is in some quarters planted, but not extensively.

The Homasassa, Satsuma, Mandarin and Tangerine are also grown, but none of them to any appreciable extent, and they are evidently not regarded as of great commercial value.

The trees are, as a rule, for three to four or five years old when planted out. Planting is done here all through the summer, and very successfully. One newly-planted orchard of lemon trees looked little better than a lot of bare stakes, three or four feet high. There were about 15 or 20 acres of them and hardly a leaf or sign of growth, but I was assured it would be all right and nearly every tree would grow.

In many nurseries a transplanting tool is used; it is about the size of a two-gallon bucket, but not tapering, open at both ends, bottom end sharp, and finger holes near the rim at the top. This is placed round the plant to be lifted, the plant being in the center, and it is driven down into the sandy soil until it is flush with the ground, a sharp spade is used then to sever the roots near the bottom and the whole affair is lifted and in some places is dropped into a canvas tube about the size of the transplanter. In that way the earth is not very much disturbed round the roots and success in planting out in summer is much surer. The canvas tubes enable the plants to be carried considerable distances without damage and they can easily be returned.

"The cost of haulage for 2000 miles, from Riverside to Chicago, for a box of oranges—they go from 65 to 70 pounds per box—is 87½ to 90 cents. This is the rate per carload of 20,000 pounds or 10 tons—the ton here is 2000 pounds.

LEMONS.

Most of what I have said about oranges applies to lemons also. The four kinds grown here in quantity are Villa Franca, Eureka, Lisbon and Genoa. Many other varieties are grown in small quantity, among them being one, viz., the Royal Messina, which, if the chemical analysis made of it at the Berkeley University be borne out in the future quality of those grown, will possibly take the lead.

Mr. Freeman, of Ontario, prefers the Eureka to the other three standard varieties, because it is thornless and he can pick the fruit at all seasons the year round. He uses a ring 2½ inches in inside diameter to measure and grade the fruit, and picks all that fit the ring. His system of curing, and he gets good prices, is to sweat them in boxes of about 200 pounds each, for six weeks in a dark room; he then removes the good ones to another shed, puts them into trays one layer thick, stacks the trays seven or eight feet high, for from two and a half to six or eight months in a cool, dark room. For those kept till July or August he gets \$4 or 17 shillings per case, but of course loses something in shrinkage and culls.

Mr. Blanchard of Santa Paula, one of the most successful lemon growers and curers in the State, proceeds much in the same way, but sweats his fruit in trays 2 ft. x 3 ft. x 3 in. deep in single layers of lemons. These are packed up solid, 5 or 6 feet deep, and left for a fortnight, then removed, culls taken out and replaced by good fruit, trays restacked for from 30 days to 2 months before selling, and, of course, they are always wrapped in tissue paper when packed up for transport.

Winter-picked fruit will take months to cure where that picked in the summer will cure in a few weeks.

The culls are, as a rule, just as good in quality as the others, being only a little withery or dry in the skin, suffering consequently in appearance only. Mr. Craig, of the *Citrograph*, told me that until recently so little was really known about citrus culture here that it is hard to get an authority on the subject which will not contain much matter which a little later experience has proved, in some localities and under some conditions, to be obsolete or incorrect, but he reckons Garey's book on citrus culture the best and most reliable yet published.

The Riverside section has just had a very bad time; two succeeding bad years have rather upset things. Last season there was an immense crop there and the Riverside growers attempted, by local co-operation, to fix the prices for the then coming season, without reckoning the crop of the outside districts, such as Redlands, Ontario, Highlands, Pasadena, Alhambra, Orange, Pomona, Duarte, Tustin, etc., and they found that the fruit from these sections poured into the market at prices lower than theirs and in greater quantities than they had expected. Consequently the bottom soon fell out of the Riverside co-operation and the prices realized did not average more than 75 cents or 3 shillings per case. I have been told that 30 cents would be nearer the mark. Some growers, after shipping thousands of cases of fruit East, actually had no profit, but bills for expenses over and above the returns. The season before last proved disastrous, owing to a very severe frost, and the fact that many hundreds of carloads of frost-bitten fruit were shipped East and of course sold for next to nothing

and only landed the growers in debt. These things have forced upon the Riverside people the necessity of co-operating with the other sections, and a very active spirit is now being shown by the whole people, public meetings will shortly be held in every orange district through the south, and practically it will control the whole orange crop of the State.

OLIVES.

The culture of this fruit is rapidly extending over the southern portion of the State. In some sections a greater immunity is claimed from black scale than in others, and the olive nurserymen of course do not lose sight of this fact in advertising.

The Hon. Elwood Cooper of Santa Barbara is the largest and oldest producer of olive oil in the State; he has a well-deserved national reputation for the purity of his product. His chief variety is the Mission olive.

Mr. Cooper hospitably entertained Mr. Cillie and myself for the two days that we spent at Santa Barbara, driving us round his extensive ranch and explaining his methods. I must say that what Mr. Cooper calls a good crop on some of his immense Mission trees, we in South Australia would consider very small. He has for years had to fight the black scale upon his trees, and he has used coal oil or kerosene emulsion for the purpose. His experience has been like that of Prof. Newton B. Pierce of Santa Ana and mine in South Australia with regard to the kerosene emulsion, viz.: That unless made with scrupulous care and from the best oil, it is more likely to do harm than good. However, by keeping always to one brand and grade of kerosene, he has managed to succeed measurably with it on his groves. It costs Mr. Cooper \$5000 or £1000 per year to spray for the black scale.

While driving through his orchard, we noticed his spraying wagon and team at work carting water. The wagon has a long wooden tank capable of holding 500 gallons upon it. Six mules draw it, one man pumps, and two others direct the nozzles of the sprayer.

Since Prof. Koebele's return from Australia, where he had been sent to study the parasites of the different scales, Mr. Cooper has had two ladybirds—the *Orcus Australasia* and the *Rhizobius*—placed upon his trees, and we had an opportunity of seeing the splendid work being performed by the *Rhizobius* in eating the black scale. It has multiplied enormously, and we found it on trees very many rows away from the trees where originally placed, and the scale upon the trees harboring the *Rhizobius* was undoubtedly decreasing rapidly compared with those trees where the ladybird has not yet reached.

It is, I firmly believe, only a question of time when the *Rhizobius* will do for the black scale what the vedalia did for the cottony cushion scale. The little blue ladybird, *Orcus chalybeus*, is not increasing very rapidly yet, but time must be given it, and it will probably clean out the red scale. Mr. Cooper will be prepared to distribute the *Rhizobius* to applicants in a few weeks.

Mr. Cooper pays one-half cent, or one farthing, per pound for picking, but provides all appliances, ladders, aprons, bags, etc. An average day's work is 300 pounds picked, while a smart man can pick or strip from 400 to 500 pounds. The fruit is picked in bags, and each picker has his or her number plainly marked upon the bag, and in this way no confusion is caused when, at the end of the day, each picker's weight is credited to him. Two hundred pounds of Mission olives produce 15 bottles of oil; the bottles run 5¼ to the gallon and sell for \$1.25, or 5 shillings per bottle retail.

Mr. Cooper has found that a simple and effective test for olive oil is to place it in an ice chest for about two days. If it is pure no change will take place; if it contains cottonseed oil it will look like lard; if there is mustard seed in it, it turns red. Immense quantities of cottonseed oil are consumed in this country under the name of salad oil or olive oil. People do not understand the dangers of using cottonseed oil or they would not use it.

Everything about Mr. Cooper's oil cellars was scrupulously clean and double doors used to keep out dust and light.

Mr. J. L. Howland, of Pomona, showed us through his oil cellars and nurseries, and we there tasted two samples of oil; one we both liked very much better than the other. The sample we preferred was made from the Pendulina olive and the other from the Mission. Mr. Howland prefers the Pendulina above all others because of its constant bearing qualities and its very superior flavor.

If I were at liberty to say what per cent of profit Mr. Howland makes out of his olives you would be apt to discredit it, I am afraid; but if Sir Samuel Davenport, of South Australia, could get \$6 per gallon, or even half, for all his olive oil, I know he would realize a very handsome profit. Mr. Howland says that the Pendulina, Rubra and Uvaria have never failed him a crop since they came into bearing.

Myrabalan and Mariana.

TO THE EDITOR:—In reference to an article in the *RURAL* of 5th inst. headed "The cause of Root Knot," I desire (by your indulgence) to ask a question. If any of the causes therein set forth are correct, why is it that this disease was not known in California until the last eight years, and attracted but little if any attention until within the last five years, the conditions of culture prior to the time mentioned being the same as now? I invite Mr. E. A. Bonine or anybody else to answer this question.

In the same article I find the statement that trees on Myrabalan roots are "no good" on high, dry lands, from which it is very evident the writer has confounded Mariana with true Myrabalan. Mariana is the "hog plum" or "swamp plum" of the South, on which French prune dwarfs and knots badly; yet its resemblance to true Myrabalan is so close that dishonest nurserymen have imposed it upon the public under the latter name. The true imported French Myrabalan succeeds in any soil, sending its

roots down like an oak, and will—when better known—supersede all other stocks for prune, plum or apricot.
San Jose. A. KAMP.

COMMENTS BY MR. BONINE.

TO THE EDITOR:—In reply to above, will say that in January, 1883, I bought some trees of either an ignorant or unscrupulous nurseryman. There being a lot of knots on the roots, I called his attention to them. He replied, "Oh! they won't hurt; they won't amount to anything." It seemed to me they should not be there. I cut them off before planting. After growing a year, a number of them looked scrubby. I began digging them and examining the roots; found they had developed knots, some on the body of the root and others at intervals on the rootlets. I dug all the scrubs up, and used some profane language about that nurseryman.

I planted my first trees in March, 1882, and I found an occasional knot on them. I tried Myrabalan as stocks twice on my ranch. Their growth was not satisfactory, and one I dug up had knots. Prunes on peach stock, which I planted same time, are twice the size—no irrigation and conditions the same.

Last spring I planted 40 French prunes on Mariana, and they have made a very satisfactory growth. The tree inspector examined the Mariana roots for knots, but not as carefully as I did. After he was gone I put them into a barrel of water and washed them clean, for if there was knots I was the one to suffer. I found no knots. Leonard Coates, of Napa, wrote me last year to try Mariana, he thinking they would grow as well as peach in our dry soil. We are well satisfied with peach, excepting many of them will grow knots. I bought my Mariana roots from Mr. R. H. Wilson of Monrovia, who propagates trees on Myrabalan, Mariana and peach. "You pays your money and you takes your choice."

I have some immense Late Crawford peach trees. I propose planting the pits from the peaches and watching results.
E. A. BONINE.

Lamanda Park, Los Angeles Co.

[With reference to the first point made by Mr. Kamp, we have to remark that the trouble has existed much longer in the State than he thinks. It was examined and reported upon by the State Horticultural Society more than 12 years ago, and was even before that so prevalent in some nurseries in the interior of the State that it caused apprehension, and a host of theories had been invented to account for it. The report to the Horticultural Society disproved these theories, but did not clear up the mystery of its causes, which are not yet fully known. The reason why it has been so much heard of during the last few years is simply because within that time tree-planting has been so notably extended.

It is also quite widely known that the Myrabalan root, under some conditions at least, has a dwarfing effect. Mr. Bonine's experience is interesting. We should like to hear from all readers on these subjects.—ED.]

Elberta and Wonderful.

TO THE EDITOR:—I have as yet seen no reply to Mr. Moyer's request for the experience of others as to the Elberta peach, especially as to "leaf curl." I have not yet fruited it, but here it is not nearly so bad to curl as Late Crawford or Alexander. I got my first stock from a large nursery in Alabama and have no reason to doubt their genuineness.

I would like to have the experience of others with regard to the productiveness of the Wonderful peach. It is a fine late peach and a wonderful keeper, but with me it is so shy a bearer that I have about determined to propagate no more, as I cannot recommend it as a good bearer.

Santa Rosa.

R. W. BELL.

[Mr. J. T. Bogue of Marysville told us the other day that the Elberta did not curl in his region. His experience with the Late Crawford is notably bad in this respect. It will curl wherever any peach will curl. But curling propensity does not seem to be such a serious evil as formerly. The winter use of lime, salt and sulphur seems to check it, as has already been described in these columns.—ED.]

THE FIELD.

Diminished Wheat Supply.

Whatever the effect upon the market, says the London *Farmer*, it is certain that the supply of marketable wheat will be materially less this year than it was in 1892. This applies to the total contributions—home and foreign—to British as well as other markets. We notice that *Beer-bohm* ventures upon a quantitative comparison of the production of wheat this year and last in the United Kingdom, France, Germany, Hungary, Roumania, Bulgaria, Spain, Italy, the United States, and India, making the total for 1893 something under 187,000,000 qrs., or 19,000,000 qrs. below the return of 1892.

It will be noticed that several important wheat-growing countries are omitted from this estimate, notably Russia, the Argentine Republic, and Canada. The Russian crop is as yet too uncertain to permit of a fair estimate. In the Argentine Republic a substantial increase is expected, but this again will probably be fully counterbalanced by the anticipated falling-off in the Canadian crop. It has to be noted, however, that the stock of old wheat in the United States is about 6,000,000 qrs. in excess of that held last year, which makes up for about a third of the deficit in this year's crop. Russia may alter this estimate to some ex-

tent, of course, but the chances of the deficiency being fully made up are very remote.

If this seven per cent estimated reduction in the wheat produce of the year has any effect in raising the price of wheat to something like the figure of former times, it will be a welcome state of things to the British wheat-grower. It is a very natural conclusion to expect that a diminished supply should influence prices for the better.

The United States' crop is now believed to be even less in bulk than was expected a month ago. The latest report issued from the United States Department of Agriculture returns the winter and spring crops taken together at only 76.7 per cent of a full crop, as compared with 78.8 for June and with 90 for July last year. As the area of the crop is several millions of acres less than it was last year, it may now be regarded as almost certain that the total produce will be under 400,000,000 bushels. Last year the crop was returned at 516,000,000 bushels, and in 1891 at 612,000,000 bushels. To say the least, then, America will this year harvest 116,000,000 bushels less than the produce of 1892, and 212,000,000 bushels less than that of 1891. The home requirements for the cereal year are at least 370,000,000 bushels, so that America will have a surplus of less than four million quarters from the crop now being harvested. Allowing for the great stores of old wheat, the total surplus for export can hardly exceed thirteen million quarters, against more than twenty-three millions for the cereal year just ended in the United States, and over twenty-eight millions in 1891-92. Such a great reduction in the supply of wheat must tell sooner or later, even if the combined surplus of Russia, India and the Argentine Republic will make up for the deficiency in nearly all European countries except Russia.

India, on the other hand, has a good crop. In that country there are 26,238,000 acres under wheat this year, compared with 24,482,000 last year, which give an estimated product of 7,149,000 tons, or 32,548,300 qrs. of wheat, as against 5,535,000 tons, or 25,200,300 qrs. in 1892. These figures show India to have some 7,348,000 qrs. more to dispose of this season than last. If all this increased surplus should come into the market during the approaching season it would in some measure atone for the American falling-off. But as the condition of other crops largely influences the volume of Indian trade, the estimates really afford little criterion of what the extent of the shipment from that country may be. It may, however, be rightly contended that if prices remain at their present low standard during the coming season it will be from some other cause than an excessive supply.

THE APIARY.

From a Pasadena Bee-keeper.

C. W. Dayton of Pasadena writes to the *American Bee Journal* as follows:

My bees began to swarm this year on March 25th, and there were about 40 swarms in the following 35 days. They were headed for the honey harvest about May 5th, after which date only two swarms issued. The honey harvest began on May 18th to 20th and ended June 25th. The bees are still gathering a little honey, but it appears to be impossible to make them swarm. My crop is about 80 pounds of extracted honey to the colony, or about one-third of what it should have been. One-third is dark and unsalable. My increase is 130 per cent.

All my colonies were transferred last fall and spring, and had only four to five combs to the colony to begin the season, and by dividing the number of new combs built by the number of old colonies, it is found that they have built 25 new combs each from one-half inch foundation starters; but I think they gathered just as much surplus as they would with plenty of surplus combs, built as the new combs were built before the opening of the harvest.

California bee-keepers are great for "keeping in their shell," and it is hard to find out by them what the crop has been, but I am able to keep my honey until they come out without coaxing.

The dealers say there has been a great crop, but it is almost all in some other locality or county, and I don't put much confidence in that kind of "taffy."

A Great Honey Show.

The New York honey exhibit at the World's Fair is one of the great attractions in the Agricultural Building. It occupies a floor space approximately 30x50 feet. The display, according to the *Bee Journal*, is in two exhibition cases, each 25 feet long, 11 feet high and 5 feet wide; two cases each 10 feet long, 11 feet high and 5 feet wide; and one case 18 feet long, 11 feet high and 5 feet wide. The last case is devoted to the exhibition of bees. The aggregate length of the exhibition cases is therefore 88 feet.

The floor of the cases is 2½ feet from the floor of the gallery upon which the cases rest, and the ornamentation around the top of the cases is 1½ feet high. The inside dimensions of the cases are, therefore, 7 feet high by 4½ feet wide, and the lengths as before given.

The exhibit consists of about 5000 pounds of comb honey and about 3000 pounds of extracted. The bulk is linden and clover, and smaller exhibits of honey from buckwheat, fruit-bloom, golden-rod, aster, sumac, heart's-ease, raspberry, mustard, sweet clover and bonaset.

This enormous exhibit of beautiful honey occupies 3½ times the space taken by the display of any other State or foreign exhibit, and New York has on exhibition more than ten times as much comb honey of the finest quality as any other State or foreign exhibit, and three times as much comb honey as is contained in all the other exhibits combined. The comb honey was kept over winter with great care in a steam-heated room where the mercury never went below 50 degrees.

SWINE YARD.

Feeding Wheat to Hogs.

Possibly some of our people may desire to turn cheap wheat into good-priced pork and find some points as to the swine-feeding value of wheat from an answer which Prof. W. A. Henry makes to a Kansas enquirer in the *Live Stock Gazette*. The enquirer writes:

In common with many others similarly situated, I would like to ask Prof. Henry if he would advise feeding young shoats ground wheat, following with soaked corn? Our millers are getting a large quantity of what is called "rejected wheat," owing to a comparatively small amount of cheat or chaff it carries. We can purchase this for \$12 per ton or even somewhat less. It makes a very rich-looking feed. We have the opportunity to buy a large quantity cheap. Do you advise the purchase?

Comments by Prof. Henry.—Reports in the daily papers state that the Ohio farmers are feeding wheat and making 20 pounds of pork from a bushel; that is, three pounds of feed makes a pound of gain, live weight. While such gains may be had for a week or two, the feeder must not expect more than a pound with lean shoats from about four pounds of wheat, or say fifteen pounds of pork from a bushel of wheat, when fed to shoats that have been running on pasture and are not too fat, nor the fattening period too long continued; for the last two weeks of the fattening period show a very marked increase in the amount of feed for a pound of pork. Allowing fifteen pounds of pork for a bushel of wheat, it will be seen that at present prices farmers can well afford to feed even merchantable wheat. This true, there is evidently more profit still in feeding wheat that is rejected because of some slight fault which injures its flouring qualities but not necessarily its feeding value. Our correspondent has opportunity to buy the best of feed at a very low price, and having the means at hand I should certainly purchase a good supply.

But I should not feed the wheat by itself. It will pay much better to dilute it with soaked corn or corn-meal and a little shorts. Wheat flour by itself makes a pasty mass in the mouth of the animal, which can be remedied by using corn-meal and shorts or even a little bran. Two parts wheat with two parts corn and one part shorts by weight will prove the very best feed for young pigs and shoats. For fattening hogs use half corn-meal and half wheat. The wheat may be ground into a coarse meal and then not be so sticky. This feed given to thrifty shoats that have grown a good frame on pasture, with a large, healthy digestive tract, should give splendid hogs carrying the best of pork.

Doubtless just at this time there are a good many farmers who are waiting for the corn crop to ripen in order to fatten their hogs. Some of these same farmers may have wheat in bins which is not of the best quality, waiting for a rise in the market. Personally I believe wheat will go higher, but will it not pay to feed poor, and in some cases even good, wheat to hogs in order to hurry them off, save time, feed, and get ready money, which is quite an object just now with many? It may seem a little strange to feed wheat to hogs, but there has been more wheat offered the last few years than the markets of the world would buy, and why take second thought on that side so long as there is more money in feeding than in selling? Where a farmer has a little wheat that he does not care to sell, and does not wish to take it to the mill for grinding, it can be boiled in a large kettle, and a little of this boiled wheat given to shoats or young pigs will pay double, I believe, what the miller will give for the wheat, in the way of helping the animals on in growth or flesh.

THE STOCK YARD.

Live-Stock Judging at the World's Fair.

The time is now at hand for our live-stock growers to take up their gripsacks for Chicago. The great stock show of the world is now on, and the judging approaches. Entries in cattle, horses, sheep, and swine have now closed, and approximate figures are available as follows: Cattle, 1237; horses, 1136; sheep, 1755; swine, 1347.

The judging of the cattle classes will follow this programme so far as possible:

Tuesday, Aug. 22d and Wednesday, Aug. 23d, Shorthorns; Thursday, Aug. 24th, Herefords; Friday, Aug. 25th, Aberdeen-Angus; Saturday, Aug. 26th, Galloways; Monday, Aug. 28th and Tuesday, Aug. 29th, Jerseys; Wednesday, Aug. 30th, Holstein-Friesians; Thursday, Aug. 31st, Guernseys; Friday, Sept. 1st, Devons; Saturday, Sept. 2d, Ayrshires; Monday, Sept. 4th, Red Polls; Tuesday, Sept. 5th, Polled Durhams and Dutch Belted; Wednesday, Sept. 6th, Brown Swiss; Thursday, Sept. 7th, sweepstakes by ages, beef and general-purpose breeds; Friday, Sept. 8th, grand sweepstakes herds, beef and general purpose breeds.

By breeds, the numbers to be shown are as follows: Shorthorns, 233; Herefords, 140; Aberdeen Angus, 72; Galloways, 78; Jerseys, 243; Holstein-Friesians, 67; Guernseys, 49; Devons, 71; Ayrshires, 129; Red Polls, 70; Polled Durhams, 30; Dutch Belted, 16.

The judging of the horse classes will be as follows: Monday, Aug. 21st, preparation day; Tuesday, Aug. 22d, Suffolks, 21 head; Wednesday, Aug. 23d, Percherons, 155 head; Thursday, Aug. 24th, Clydesdales, 187 head; Friday, Aug. 25th, Shires, 49 head, and French Draft, 45 head; Saturday, Aug. 26th, Belgians, 67 head; Monday, Aug. 28th, Arabs and Americo-Arabs, 25 head, and Thoroughbreds, 25 head; Tuesday, Aug. 29th, Cleveland Bays, 48 head, and French Coaches, 63 head; Wednesday, Aug. 30th, German Coaches, 92 head; Thursday, Aug. 31st, Hackneys, 32 head; Friday, Sept. 1st, Morgans, 77 head; Saturday, Sept. 2d, Jacks, Jennets and mules, 46 head; Monday, Sept. 4th, Saddle Horses, 45 head; Tues-

day, Sept. 5th, Standard-bred Trotters, 35 head; Wednesday, Sept. 6th, Russian Trotters, 21 head; Thursday, Sept. 7th, French Trotters, 23 head; Friday, Sept. 8th, Shetland Ponies, 85 head.

It will be noticed that the first week is given over to draft breeds, the second week takes up the light-legged horses—especially the coaching breeds—and the third week brings out the American, Russian and French trotters, and closes with the Shetlands.

Traits of the Mine Mule.

"Even when a mule is an ordinary open-air mule he is full of surprises, as every one knows," said the Hon. James A. Sweeney, the Hazleton philosopher and ex-statesman, "but it is not until he gets to be a mine mule that his genius buds and blossoms and makes itself apparent in ways that are really startling. A life spent underground hauling coal cars seems to develop in a mule sense and traits that no one ever knew to be in evidence in a mule doomed to an inglorious career as the motive power of a canal boat or a tannery-bark wagon. Strange as it may seem, there is something in the perpetual darkness and uncertain atmosphere of a coal mine that is elevating to the character of a mule, and makes him superior, mentally and physically, to his brother who brays and kicks in the broad sunlight half a mile or so above him. A mine mule is always sleek and fat from his earliest days underground until he is killed by a fall of coal or an explosion of gas, or is drowned in a flooded mine. He never dies a natural death. Ask any coal miner and he will tell you so. That is, he never dies as long as he is in the mines. I have known many mules that had been in the colliery depths for 35 and 40 years without once seeing the daylight, and they would probably be there now if fate hadn't at last overtaken them in a fall of roof or sudden explosion. The oldest mine mule on record, though, was Pioneer Dan, the first mule ever sent below by the Delaware and Hudson Canal Co. He went to work in the original coal mine of that company at Carbondale in 1829, I think it was, but it might have been a year or two earlier. Dan was anything but a colt, they say, when he went into the mining business, having worked on a farm near Carbondale for some years before. Hundreds of mules were killed in that old mine during the 67 years the company worked it, but Pioneer Dan seemed to have been born under a lucky star, for he escaped all the accidents that beset mine-toilers, and when the company abandoned the mine, because it was worked out, it brought Old Dan up from the depths looking as youthful and glossy as he was the first year he went in.

"In all his life beneath the ground, Dan had only been on the surface once before. That was when the miners struck for some reason during the war. The company refused to comply with the demands of the men, and shut down the mine. It brought all its mules to the surface and turned them out to pasture. But the mules refused to eat anything, although they were in rich green pasture. Matter-of-fact folks said it was because the animals were blind from long confinement in the darkness a thousand feet or so in the bowels of the earth, and couldn't see the tempting food that was all round them knee deep. But the fact of the matter was that the mules were in sympathy with the strikers, and they had deliberately resolved to starve rather than aid the company by eating, and thus saving it the large amount of money they were collectively worth. Mules were scarce and very high then, the demands of the Government for those animals having cleaned out the market. Day after day those mine mules fasted in the midst of plenty, until the company, fearing that they would all die on its hands and inflict a loss of several thousands of dollars on the corporation, and knowing besides that it would have great difficulty in replacing them, acceded to the demands of the strikers.

"Well, as I said, when old Dan came out of his mine

the last time, and for good, he was as youthful looking, fat and glossy as he was in his first year in the mine. He was a bright bay, and his eyes were bright, although he couldn't see in the daylight. But mark the change that came over him. In less than 24 hours after he came out of the mine he turned as gray as gray could be. His face wrinkled up like a piece of tripe, and his eyes lost all their luster. In short, in that brief time he passed from the apparent heyday of youth to the last tottering stages of decrepit old age, and died at sunrise of his second day above ground. As near as any one could calculate, this pioneer mine mule was 63 years old.

"Then there was the mule Barney of the Old Hickory colliery at Coalbrook. He went below in 1853. He never saw daylight again until 1888. Then the coal company thought Barney had done his duty, and he was taken out of the mine and turned loose to do as he pleased for the rest of his days. The company might have known from the mournful and wistful way he hung about the mine and brayed when he saw his old companions, the miners, going down to their work, that it was doing him a mistaken kindness, but the company didn't see it. Old Barney was simply breaking his heart pining to get back into the black depths where he had been happy for more than a generation, and at last, seeing that they wouldn't put him back, he went one day to where some men were blasting out rocks, not far from the mine, and, watching his chance, placed himself in the way of a heavy blast and was killed by the flying rocks.—New York Sun.

WORLD'S FAIR.

Mr. Hallidie at the Chicago Fair.

Mr. A. S. Hallidie, the well-known inventor and manufacturer of this city, has been making a visit to the World's Fair, and he furnishes to the *Bulletin* a very entertaining and instructive letter. He was in constant attendance at the great show for four weeks and he pursued his sight-seeing in so systematic a manner that he was able to "take in" all its important features. After having visited all the great modern expositions, at home and abroad, Mr. Hallidie unhesitatingly pronounces the Chicago fair the chief of all. Naturally, we might expect that the mechanical features of the great show would impress themselves particularly upon Mr. Hallidie, and we are not surprised to find him giving dimensions and distances. This is how he describes the immensity of the show:

"Of the 533 acres of ground occupied by the fair grounds proper, about 150 acres are under cover, one building—the Manufactures—alone covering 32 acres, or say a space equal to 11½ blocks north of Market street, San Francisco, or 70½ 50-varas! The remaining 383 acres are laid out in excellent walks and drives, kept in good order and well-sprinkled, and with canals and basins, with pretty bridges, jetties and landings, the waters being enlivened with electric and steam launches and gondolas.

"The immensity of the exhibition is not at first realized, and it is only after walking from one building to another at the extremes of the grounds that one becomes aware of the great distances. For instance, from the Fisheries Building to the Agricultural Building Annex is over a mile; from the Government Building to the Administration Building is nearly three-fourths of a mile; from Fine Arts to Forestry is one mile and one-third."

The writer offers good advice about study of maps to familiarize oneself with the relative position of buildings and suggests a trip on the intramural (electric) road, which touches nearly all the main buildings. He continues:

"I took in the Manufactures and Liberal Arts Building first and did it rapidly. It occupied 3½ days of about

6 hours each. The longitudinal and transverse avenues on the main floor aggregate 6 miles and in the galleries 3½ miles, or 9½ miles in all. The small passages in and across the exhibits will probably aggregate 12 miles more. It will thus be seen that in 21 hours actual time about 21 miles was walked over, looking at and examining the articles on exhibition. In the Transportation building there are four miles of principal avenues on the main floor. The rapid inspection of this floor required two days, and so with the other buildings—Electricity, Machinery, Agriculture, Horticulture, Mining, etc. There are 13 principal buildings, including the Government Building, equal in number to the original States, while 41 States and 3 Territories and 17 foreign nations have buildings of their own on the grounds."

The trouble with the fair is that it is too big. There seldom appears to be a crowd. Exhibitors and commissioners are disappointed at the attendance, which is largely from towns within 200 or 300 miles of Chicago. Mr. Hallidie urges all who can possibly spare the time and money to see the fair and says:

"The facilities for getting from Chicago to the fair are excellent in every way—cable and electric cars, elevated and surface steam roads and steamboats carry all the passengers who offer. The Chicago City Cable Railway Co. collected nearly 500,000 fares on the Fourth of July, and on returning from the Auditorium on the evening of that day, on the elevated road, I met, in going from Congress street to Forty-eighth street, 20 trains, each train consisting of six cars, filled by 150 passengers each, or a total of 18,000.

"It is a pity with all this that the patronage is so small. It is not expected that such exhibitions will show a credit balance at the close. Of the finances of this great fair I gather from Auditor Ackerman's report to July, and from the admission from the opening to July 14th, the following results:

EXPENDITURES.	
Construction expenditures.....	\$16,229,905 74
Obligations under contracts.....	1,286,675 26
General and operating expenses.....	4,299,579 73
Preliminary organization.....	90,674 97
Accounts payable.....	710,553 46
Operating expenses from July 1st to October 26th..	1,500,000 00
Interest on bonds, \$4,444,500.....	444,450 00
Total expenditure to Oct. 26th.....	\$24,561,839 16
RECEIPTS.	
From city of Chicago.....	\$5,000,000 00
From stockholders.....	5,589,067 60
From bonds.....	4,444,500 00
From souvenir coins.....	2,428,040 70
From interest.....	95,513 46
Miscellaneous items.....	437,027 57
Concessions to July 1st.....	580,006 36
Concessions to Oct. 26th, estimated.....	1,500,000 00
Gate receipts before May 1st.....	282,449 00
Estimated gate receipts during fair.....	7,900,000 00
Estimated salvage.....	500,000 00
Total receipts.....	\$28,756,660 46
Total disbursements.....	24,561,839 16
Balance.....	\$4,194,821 30

"Which will leave a deficit to pay bonds of \$249,678.70 and prove a total loss to amounts advanced by the city of Chicago and the stockholders—\$10,589,067.60 in addition. In the above calculation the average daily attendance is placed at 100,000 per day.

"This should not be, and it is unfortunate it is so. Instead of an average daily attendance of less than 80,000 up to this time, it was reasonable to expect, in view of the enormous outlay and efforts made to insure success, that the attendance would average certainly 150,000 daily, which would have made a difference of about \$5,000,000 in the receipts for admissions and probably \$1,000,000 in the receipts from concessions."

THE CALIFORNIA STATE FAIR

Of 1893 will be held at SACRAMENTO,

SEPTEMBER 4th to 16th :: :: :: TWO WEEKS.

\$20,000 IN CASH PREMIUMS \$20,000
FOR CALIFORNIA PRODUCTIONS.

FARMERS AND HORTICULTURISTS!
As well as MECHANICS AND ARTISANS!

Should make preparation to exhibit at THE ANNUAL FAIR as the opportunity is specially given to show CALIFORNIA'S CAPABILITIES.

INVITE INVESTMENT of capital by showing the products of your section.
INQUIRIES AS TO LOCALITIES are being constantly made. We reply by sending reports of exhibits, which speak for themselves.
OBJECT LESSONS are valuable, and when written upon and their description heralded, they become a standing advertisement.
SHOW WHAT YOUR COUNTY can produce, and capital will flow in the direction thereof.
LANDS HAVE BEEN IMPROVED by the hundreds of acres in tree and vine planting through capital attracted by exhibits made at the State Fair.
MECHANICAL PLANTS HAVE BEEN ENLARGED by means of extra capital attracted by exhibits made at the State Fairs.
THE STATE FAIR is the stimulating agent of progression.
THE STATE FAIR is the medium that brings the two electrical currents—labor and capital—together each year.

THE STATE FAIR aids all classes. It is the recreation ground of the farmer, the school of information for the breeder, the point of observation for the mechanic, and the period of investigation for capital.
FAILURE TO EXHIBIT is an acknowledgment of weakness.
KEEP YOUR PRODUCTIONS before the people, and the people will always keep your locality in view.
THE USUAL EXTRA ATTRACTIONS for entertainment of visitors at the State Fair of 1893 will be furnished in keeping with the occasion, that exhibitors may benefit thereby.
Information furnished upon application to the Secretary, at Sacramento. Send at once for premium lists.

JOHN BOGGS, President.
EDWIN F. SMITH, Secretary.

THE HOME CIRCLE.

Buttercups.

Jennie was watching the cows home,
Down by the meadow bars alone,
And her eyes were as blue as her bonnet—
Jennie was only a farmer's lass,
And she let down the bars so the cows could pass
Out of the waving, blue-eyed grass,
With buttercups sprinkled upon it.

Jennie was watching young Farmer Payne
Picking a buttercup out of the lane;
Stephen was strong and merry.
"Jennie!" she heard her mother call,
But there at her side stood the farmer tall,
And her cheeks grew as red as a cherry.

"I'm coming, mother!" she turned to go,
But Stephen stood at the path below,
And there went Daisy and Bess and Flo over into
clover.

His arms were strong as her waist was slim,
"I'll keep you till every cow gets in,
Or tell me the name of your lover."

"Jennie, Jennie!" 'tis getting late,
Came mother's voice from the farmhouse gate,
But Jennie was slender and could not mate
With the tender strength of a lover.
And who could do a single thing
With a yellow buttercup under their chin,
But nestle the great strong arms within
And grow as red as the clover.

"Maybe 'tis Ben," then she blushed again,
"And maybe 'tis only Stephen Payne"—
Then the dark crept over the meadow lane
And buttercups a-sprinkle.
Not a single sound in the dusky dell
Save the tinkle of Daisy's silver bell,
"Tink-a-link-a-tinkle!"

For mother's voice and the bars forgot
The cows are into the meadow lot
Knee deep in the dewy clover.
Jennie and Steve came slowly up
Her soft chin yellow with buttercup,
His handsome face flushed over.

"Where are you, Jennie? 'tis late and cold."
"We're comin', mother," said Stephen bold,
"The cows got into the meadow,
We stopped to drive them slowly up."
Then he slyly hid the buttercup
And kissed her again in the shadow."

The Long Ago.

What was it made the Long Ago?
Not summer sunshine nor autumn rain;
Not sweet spring budding, nor winter snow;
Nor still blithe pleasure, nor yet keen pain.

For sure as the years roll round they bring
Their seasons, fair as the ones of yore,
But only robbed of that nameless thing
That Long Ago in its blossom bore.

I know not why I should mourn it so;
My love of to-day is more strong and true,
And the love of the distant Long Ago
Had died ere ever it fullness knew.

But still I yearn, as one yearns who lost
A new-born babe in an earlier time,
Before these lads, with their locks upst, were
Were strong to clamber, and brave to climb.

It comes too oft when I sit apart,
This tender want for—I do not know;
It has no place in the Present's heart,
It only lives in the Long Ago.

—From the Century.

The Demorest Rubies.

SHE was dead at last—Margaret Demorest of Stony Lodge—and the shock of her demise had shaken Bellevue from center to circumference. For years her numerous relatives, each with an eye to the estate, had watched her moments from a respectful distance, which she herself had interposed between, and their hearts had grown sick with hope deferred. But the grim looks of the old maid had not power to repulse the King of Terrors when his hand knocked at her gloomy door.

Heart disease, the doctors said, when she was found one morning with a smile of peace frozen on her stern, withered features. The relatives accepted the verdict with due resignation, following the remains of the "dear departed" to their final resting-place amid an ostentatious display of crape and black-bordered handkerchiefs. But when the will was read, the excitement of the heirs-at-law rapidly ascended to fever-heat. Always eccentric in life, Miss Demorest had retained that eccentricity to the end, and woven it into her last will and testament.

With the exception of a few bequests to her servants, the whole of her property, landed and personal, to wit: Stony Lodge, her present residence, with its beautiful park, which was a very Eden of loveliness, Rose Villa, her winter resort on Lake Helen, Florida, together with a splendid house in town, and money to the amount of five hundred thousand dollars, was to pass into the sole possession of that one among her kins-

folk who should discover the hiding-place of the twelve Demorest rubies.

Should the gems remain undiscovered after the lapse of one year from the date of her death, the estate was to be sold, and a home for old maids founded with the proceeds.

"The old cat!" muttered fashionable Mrs. Meredith, viciously. "She hid those rubies herself, the spiteful thing!"

"It is too provoking!" pouted her pretty daughter Maude.

"I shall contest the will," said thin-lipped Reuben Gray. "I cannot stand it."

Mrs. Meredith was Miss Demorest's niece and Reuben Gray her nephew. The two were both brother and sister and the nearest akin to the dead woman.

Next came Margie Vane, child of a favorite nephew who was to have been the heir had he not displeased his aunt by marrying, against her will, a girl of obscure parentage—"a pauper," Miss Demorest termed her.

Harold Vane had died some years back, closely followed by his wife, and the one daughter, Margaret, was left alone in the world and utterly penniless.

Mrs. Meredith had taken her—for the old aunt remained obdurate—and she was now serving in the capacity of maid to her beautiful cousin Maude.

Margie Vane was not present at the reading of the will. Mrs. Meredith considered it unnecessary, and Margie herself had not the faintest hope of being remembered kindly by her father's stern old relative. When, therefore, they returned in anger and disappointment and gave an account of the wording of the will, Margie's hazel eyes opened wide in wonder.

"Whoever finds the rubies will inherit everything?" she asked, half breathlessly.

"By the terms of the will," answered Mrs. Meredith. "But I very much doubt if anyone will find them. Aunt Margaret was such a spiteful old cat!"

"Oh, aunt, hush!" cried Margie, in pained tones. "She is dead now."

"So much better for the community," said Mrs. Meredith, vindictively.

"Are you going to search for the gems?" Margie asked.

"Of course. There is just one chance in a thousand that I may unearth them."

"In which event you would find no further fault with poor Aunt Demorest's will," said the girl, shrewdly. "Oh, Aunt Jennie, may I go with you to the great house? I was never inside of it."

"I suppose you may if you choose," replied her aunt, ungraciously. "In fact, Lawyer Fay insists that you shall take your chance with the rest of us. But it is extremely impossible that you will find the gems."

So that afternoon, and many ensuing afternoons, Mrs. Meredith, Maude and Margie walked over to Stony Lodge and wandered fruitlessly about amid the treasures of bric-a-brac, statuary, books and rare old china.

On one of those occasions Margie met Will Demorest, a cousin several times removed of her father's. He was a frank, handsome young fellow, with dark blue eyes and close-curling, fair hair. His was the genuine Demorest face, the index of a strong, noble character.

By occupation he was an artist in glass-blowing, having learned the art in Venice. He had done considerable work for Miss Demorest, with whom he was a prime favorite. Indeed, there had been times when Mrs. Meredith and her brother Reuben had feared lest a will should eventually be drawn up in favor of this bright, winsome youth. But death had settled all that, and their fears were a thing of the past.

"So you thought you would have a look for the rubies with the rest of us," said Mrs. Meredith, with a sneer, as she found the young glass-blower examining the books in the library one morning. "Yet I thought you abhorred mercenary considerations."

"I am not in quest of the gems," Will replied, as his blue eyes rested in unmistakable admiration on Maggie's fair, sweet face.

"Humph! I hope you don't take me for a lunatic or a fool, Will Demorest," was the scathing rejoinder.

"For neither, I assure you," said Will, with a bow. "Only at present I am more interested in pearls than rubies. Cousin Margie, may I show you the house? I believe I know it more thoroughly than most people."

Margie shyly acquiesced and the two went off together, leaving Mrs. Meredith and Maude to continue their search.

"Are you anxious to find the rubies also?" asked Will, as they paused in the china closet to admire the cut-glass.

"I have not even looked for them," answered Margie, with a bright smile.

"Yet you have an equal right with the rest," persisted the young man, watching her face keenly.

"Oh, no, I have not, indeed," she said simply. Papa displeased Aunt Demorest, as you know, and she had never taken the slightest notice of me. This being the case, I should not feel entitled to join in the search for the rubies, even if I desired to do so."

"They are magnificent gems," said Will, "and were never set. I saw them just once and they nearly took my breath away."

"I should like to see them," Margie said, musingly, "but oh, Will, were they more beautiful than those exquisite cups? Surely that is impossible."

The cups in question were indeed exquisite. Blown of the costliest Venetian glass, lily-shaped, with curled leaves for saucers and glowing with rainbow tints, they resembled nothing so much as a bed of gorgeous, tropical flowers.

Margie's eyes sparkled as she looked at them.

"How lovely! How dainty! How fairy-like!" she exclaimed breathlessly. See, Will, this is exactly like an opal with a touch of fire! and here is an amethyst, and here a glowing emerald. Oh, Will, do look! See how that strange glow as of hidden flashes from each! This one is jacinth, this beryl, and Will Demorest, here is a ruby! Oh, the beauty! The real gems cannot be more superb."

As she spoke she took the ruby cup into her hand. Will half started forward as if to prevent her, but drew back again with a pale, startled face.

"But how fragile it is, Will!" commented Margie, turning it round and round. "Surely Aunt Demorest never drank tea out of them! And where did she find the beautiful things?"

Before he could frame a reply Mrs. Meredith and Maude appeared upon the scene.

"Margie," cried the former, "put down that cup and come along. I should think you would have more pride than to dawdle here all day with Will Demorest."

Margie's soft hazel eyes filled with tears as Lawyer Fay entered the room, and from under his bushy brows glanced sharply at each of the group.

"Hunting for rubies, eh?" he said, sarcastically. "But Miss Margie seems to be the only successful one of the party. That is a rare bit of glass, Margie, and was blown by our friend here," with a motion of his hand toward Will.

Margie's hand tightened on the cup in her surprise; her rosy finger pressed a raised stamen in the calyx of the lily-bell, when presto! change! it sank beneath her touch, and her startled eyes gazed straight into a small cavity where glowed a ruby of estimable value like a drop of rosy fire.

"Solved!" shouted Lawyer Fay, as his eyes also beheld the gems.

"Will, very white, shrank back against the wall, while Mrs. Meredith and her daughter pressed closer to Margie and the lawyer.

"The rubies!" gasped the avaricious woman, making a dive for the other cup.

But the lawyer placed himself in her way.

"I beg your pardon," he said. "The discovery is Miss Margie's, and, in accordance with the terms of the will of my deceased client, she is sole heiress to the Demorest estate."

Mrs. Meredith grew pale with chagrin, Maude burst into tears, and Reuben Gray, who had heard all from the door, announced his intention of breaking such an unjust will.

"You may try it," was all Lawyer Fay said to the threat.

Will came slowly forward and congratulated Margie on her good fortune.

"And my congratulations are none the less sincere that with them I resign the sweetest hope of my life," he said.

"Resign a fiddlestick!" muttered the old lawyer. "Margie, that boy refused to be made Miss Demorest's heir, insisting that it would be an injustice to those nearer of kin. Then she made him blow these cups of tinted glass, with the central cavity and spring. She inserted a ruby in each cup, which, combined with the different tints, gave them their rich coloring. He watched her hide the rubies, and he has kept the secret. Does he not merit some reward?"

Margie flushed and glanced timidly at Will; then she looked round for her aunt and cousin. Both had disappeared.

"Take her, Will," said the old lawyer, with twinkling eyes, "and bless ye, my children."

With a melodramatic gesture he too vanished, and I think the young people were not long in coming to an understanding, for cards are now out for their wedding.

The disappointed relatives maliciously declared that the whole thing was neither

more nor less than an infamous conspiracy between Will Demorest and Lawyer Fay. But Margie says the property is rightly Will's, as he was the old maid's favorite, and in wedding him she is but giving him back his own.

Gladstone's Personality.

Personally, Mr. Gladstone is an example of the most winning, the most delicate and the most minute courtesy. He is a gentleman of the elder English school, and his manners are grand and urbane, always stately, never condescending and genuinely modest. He affects even the dress of the old school, and I have seen him in the morning wearing an old black evening coat such as Professor Jowett still affects. The humblest passer-by in Piccadilly, raising his hat to Mr. Gladstone, is sure to get a sweeping salute in return. This courtesies is all the more remarkable because it accompanies and adorns a very strong temper, a will of iron, and a habit of being regarded for the greater part of his life-time as a personal force of unequalled magnitude. Yet the most foolish, and perhaps one may add the most impertinent, of Mr. Gladstone's dinner-table questioners is sure of an elaborate reply, delivered with the air of a student in deferential talk with his master. To the cloth Mr. Gladstone throws a reverence that occasionally woos the observer to a smile. The callowest curate is sure of a respectable listener in the foremost Englishman of the day. On the other hand, in private conversation, the premier does not often brook contradiction. His temper is high, and though, as George Russell has said, it is under vigilant control, there are subjects on which it is easy to arouse the old lion; then the grand eyes flash, the torrent of brilliant monologue flows with more rapid sweep, and the dinner-table is breathless at the spectacle of Mr. Gladstone's anger. As to his relations with his family, they are very charming. It is a pleasure to hear Herbert Gladstone—his youngest, and possibly his favorite son—speak of "my father." All of them, sons and daughters, are absolutely devoted to his cause, wrapped up in his personality, and enthusiastic as to every side of his character. Of children Mr. Gladstone has always been fond, and he has more than one favorite among his grandchildren.—McClure's Magazine.

Gems.

Many of our cares are but a morbid way of looking at our privileges.—Walter Scott.

Let thy will be thy friend, thy mind thy companion, thy tongue thy servant.—Beloe.

Thy friend has a friend and thy friend's friend a friend. Let thy words be few.—Talmud.

The slander of some people is as great a recommendation as the praise of others.—Fielding.

Blessed is the child that is brought up at the mother's knee, which is God's altar on earth.—Beecher.

One merit of poetry few persons will deny; it says more, and in fewer words, than prose.—Voltaire.

The sum of all that makes a just man happy consists in the well-choosing of his wife.—Massinger.

Your mother—she is a dear, noble, heroic soul; but the mother herself is but a spark that sprang out of the bosom of God.—Beecher.

The love of woman is a precious treasure. Tenderness has no deeper source than the heart of woman; devotion no purer shrine; sacrifice no more saint-like abnegation.—Sainte-Foix.

God guideth men to his own ends. Yet he guideth them according to that nature which he hath put into them; they voluntarily perform what shall certainly come to pass.—Corbett.

The way to wealth is as plain as the way to market. It depends chiefly on two words—industry and frugality—that is, waste neither time nor money, but make the best use of both.—Franklin.

Great Fairs of the World.

The first great International Exposition was held at London in 1851. It lasted 144 days. The buildings and grounds covered 21 acres; there were 17,000 exhibitors and 6,039,195 visitors, 41,933 daily. The receipts were \$2,530,000 and the expenses \$1,460,000.

In 1855 the second World's Fair was held at Paris. It continued 200 days, and covered 24½ acres. There were 21,779 exhibitors and 5,162,330 visitors, 25,811 a day. The cost is conjecturally stated at \$1,700,000; the receipts were \$1,280,000.

The third exposition was held in London

in 1862. It continued 171 days, and covered 23 1/2 acres of ground. There were 28,653 exhibitors and 6,211,103 visitors, a daily average of 36,325. It cost \$2,300,000, and the receipts were \$2,040,000.

The fourth was in Paris in 1867. It covered 37 acres and continued 217 days. The exhibitors numbered 50,236, and the visitors 10,200,000, 47,470 daily. The cost was \$4,000,000, the receipts were \$2,100,000.

The fifth great World's Fair was in Vienna in 1873. The buildings covered 40 acres, and were occupied by 42,000 exhibitors. There were 7,254,687 admissions during 186 days, an average of 39,003 per day. The cost was \$11,000,000; the receipts were \$1,030,000.

The Philadelphia Exposition of 1876 was the sixth great display. The buildings covered 60 acres; there were 60,000 exhibitors, and 9,910,996 admissions, a daily average of 62,323. The cost is stated at \$8,500,000; the receipts are said to have been \$3,800,000.

The seventh International Fair was in Paris in 1878. The buildings covered 60 acres, and the exhibitors numbered 32,000. There were 13,000,000 admissions during 194 days, a daily average of 67,010. The official report makes no mention of cost or expenses, though it is believed the enterprise did not pay.

The eighth fair was at Paris in 1889. The buildings covered 75 acres, and were occupied by 60,000 exhibitors. The exposition remained open 183 days, and was attended by the astounding number of 32,354,111, a daily average of 181,170. The cost was \$11,000,000; the receipts were \$8,380,000.

Judge Waxem's Proverbs.

A run on a bank is like slingin' mud at a candidate.

The Amerikin eagle don't ware pettycotes ner pants.

A candidate with a war reckord ain't what he used to be.

The averidge pattriut don't have to be koaxed into offis.

Finanshul pannicks don't reduse the price uv votes very much.

An Amerikin dollar ought to be as good as the Amerikin flag.

When they say money is easy, it ain't no sine you can git it ef you ain't got the col-latterle.

Toothache.

Toothache perhaps numbers as many victims as headache, and is looked upon as quite the type of severe and wearying pain. Attention to cleaning the teeth, care not to use them as universal tools for cracking nuts and biting off threads, and so chipping the enamel and inviting decay, are good preventives of toothache. It is also wise to go to the dentist betimes and have hollow teeth stopped. A good digestion and avoidance of unwholesome food are great helps to preserving the teeth.

YOUNG HOBBS' COLUMN.

Angels' Foot-Prints.

Every little kindness,
Every deed of love,
Every little action
Prompted from above:
E'en a cup of water
In His great name given—
These are angels' foot-prints
Leading up to heaven.

Every little sacrifice
Made for others' weal,
Every wounded brother
That we strive to heal,
E'en a word of kindness
To misfortune given—
All are angels' foot-prints
Leading up to heaven.

Then let angels lead us
Wheresoe'er they would;
Even let them teach us
What is for our good;
May they cross our pathway
When from heaven they roam,
Let us follow after
Foot prints leading home.

Grace and Her Pony.

THE following letter was written by Miss E. Hamess, of Texas, a young girl of thirteen years, to the *Practical Farmer*, and illustrates remarkably well what a bright, active and willing girl can do with a pony, and what country life can do by way of education for a young girl, and also how valuable a good pony may be to a family in the country:

"We have an old pony named 'Polly.' I began riding her when I was ten years of age. I often went to the postoffice, two miles away, for the mail, and would also bring home small articles from the store. I

soon began to learn to drive when riding with papa; and also to help hitch up. It was not long then until I could drive by myself; and at last have come to catching, harnessing and driving off several miles alone. I am thirteen years old now, and more than a year ago I went with papa in the buggy after some cows, I driving old Polly back, a distance of some eighteen miles, and papa drove the cows home on another horse. We live six miles from town, and I went once or twice a week this spring; have gone after seeds of different kinds, also go after family supplies during seedtime and harvest. They could hardly do without me. I save much valuable time for papa and mamma both. I have taken plants, eggs and butter to market in a small way, and sometimes find new customers. I receive a share of the profits; and this last makes it interesting. Polly is not very pretty, but she is good and gentle, too. Will you believe it? She knows when mamma wears a new dress. She knows us all. I often think she wants to talk. I believe she knows more than any animal I ever saw. She will back off, snort and act like she don't want mamma to tie her up until she looks straight in her face and is sure she is her mistress; then she is as quiet as ever. We have an old buggy on the place that I use; it is looking rather shabby, but we are going to put a new oilcloth on the top, and I think I can paint it to look very well for a 'racket bug.' Polly has also raised us two nice colts. Take it altogether, I think Polly, myself and the old vehicle could be spared least of anything."

Feast of the Dolls.

In Japan there is one day in the year that is called "The Feast of the Dolls."

On that day all the shops have finely-dressed dolls in the windows and beautiful collections of dolls are shown in all the public halls and theaters. There are big dolls, little dolls, boy-dolls, girl-dolls and baby-dolls. Thousands of them and more too. They are dressed in bright, pretty silks and are placed in such natural positions that you have to look twice to be sure they are not alive.

"The Feast of the Dolls" came a few months ago, and you cannot imagine what a pretty sight it was to see the dolls in their holiday attire, for this is a very beautiful season in Japan, and the dolls were placed in windows filled with red quince blossoms and in little wagons loaded with pink apple blossoms.

A little American girl, who lives in Boston, was in Japan this spring for the doll festival and she was delighted with it. Her mamma took her to walk so she might see the streets lined with dolls, and the little girl laughed and clapped her hands again and again, laughing and shouting aloud at some of the queer things she saw.

In one of the windows there were big Japanese girl-dolls carrying little boy-dolls in what American children call "pick-a-

back" fashion. The little boys who were being carried appeared to be having a good time, but the girls screwed up their plump faces and made eyes in a very funny fashion.—N. Y. Ledger.

Big Sun Dial.

A large promontory in the Aegean sea, known as Hayon Horoo, extends 3000 feet above the level of the water. As the sun swings around the shadow of this mountain touches one by one a circle of islands, separated by regular intervals, which act as hour marks. It is the largest sun dial in the world.

DOMESTIC ECONOMY.

Peaches.

Delightful as are the various peach conserves they only excel in "keeping power" many of the toothsome dishes which a clever pastry cook will concoct out of this delicious fruit. Directions for canning and making preserves, jelly and marmalade are always acceptable during the peach season, but an abundant yield of this delicious fruit the present season will surely make acceptable the other excellent receipts here given.

Peaches in Syrup.—Pare, halve and pit eight large ripe peaches, place them in a flat-bottomed serving dish and set on ice. Crack half the pits, cut up the kernels and stir them 15 minutes, closely covered, in half a teacupful of water. Strain the liquid, add one teacupful of granulated sugar, boil 10 minutes, and when it is cold dip it over the peaches, and serve them very cold with plain or whipped cream. If preferred, the syrup may be flavored with lemon juice or extract of vanilla.

Peach Short Cake.—Ripe, soft peaches make a delicious short cake. Pare, slice thinly around the fruit, put powdered sugar between the layers and let them stand two hours. Make the pastry as usual; spread the bottom layer with sweet butter, then generously with the prepared fruit; put on the upper layer, spread again with fruit, heap sweetened whip cream on top and serve immediately.

Peach Sponge Cake.—Make an ordinary sponge cake and bake in a long pan. Prepare the peaches as for short cake; make a generous quantity of soft icing, and when the cake is cold cut crosswise at the center, spread half with frosting, then one inch thick with peaches. Lay the other half over, spread with icing, lay a few handsome sections (quarters or eighths, according to the size of the fruit) regularly over the top, sift thickly with sugar and set on ice. Serve very cold with peach sauce.

Peach Sauce.—Pare, slice and rub through a coarse sieve enough ripe, soft peaches to

make one pint. Cream two tablespoonfuls of butter and one teacupful of sugar until very light; then add the peach pulp (and a teaspoonful of lemon juice if the fruit is very sweet) by degrees and set on ice. Serve very cold.

Peach Pie.—Pare and slice thinly six or eight ripe, soft peaches, sprinkle with powdered sugar and let them stand one hour. Line a deep pie plate with rich pastry, sift two teaspoonfuls of powdered sugar over the bottom and bake. When done fill quickly with the powdered fruit; spread a meringue made of the whites of three eggs, three tablespoonfuls of sugar and a few drops of vanilla extract over the top and brown slightly. Serve very cold. If preferred, sweetened whipped cream may be substituted for the meringue, in which case the warm shell should be filled with fruit and become cold before the cream is added.

Peach Turnovers.—Make rich pastry, roll out about one-third of an inch thick and cut out round with a saucer. Put on each piece half a teacupful of sliced peaches, a tablespoonful of sugar and a few drops of lemon juice. Moisten the edges of the paste with white of egg, fold over; press together with thumb and finger to make the edges evenly scalloped, sift powdered sugar over and bake in a long baking pan. Serve with whipped cream or peach sauce.

Peach Dumplings.—Pare, halve and pit six large, ripe peaches, and place the halves together as they were cut. Make a dough precisely the same as for short cake, roll thin and cut with a large, round cutter. Lay half a peach, cut side up in the center of each, put a small bit of butter and three drops of vanilla in the center of each peach on the forms. Then place the remaining halves of the peaches in position, fold the dough over, roll gently in the hand to make ball-shaped, lay them on a buttered plate, but not closely; set in a steamer and steam 20 minutes. Serve hot with peach or any sauce preferred.

Peach Tapioca.—Pare and slice enough ripe, soft peaches to fill a round glass serving-dish one-third full, and sprinkle them plentifully with sugar. Wash one-third of a teacupful of tapioca, and let it soak over night in a little cold water. In the morning put the tapioca in a pint of milk and boil 20 minutes. Beat half a teacupful of sugar, one tablespoonful of flour, a pinch of salt and the yolks of two eggs until very light; then stir it in the tapioca and boil five minutes longer. Butter a pudding dish that is the same size as the top of the glass serving-dish containing the peaches and pour the tapioca in it evenly. Make a meringue of the whites of eggs and two tablespoonfuls of sugar and flavor with vanilla. Spread it over the tapioca, brown slightly, then set away to cool. When ready to serve wet a knife, slip around the edge of the pudding and lay it over the peaches. Serve cold.—Katharine B. Johnson in the Country Gentleman.

FOR ECONOMY

Lightest, Sweetest, Finest
cake, biscuit, bread,
can be made only with
Royal Baking Powder.

I find one pound of the Royal
to contain 200 cubic inches
more available Carbonic
Acid gas than the best of
the others.



Henny B. Hanks
Chemist, Assayer and Geologist, State of California.

Hence a can of Royal will raise a greater quantity of
flour and make purer food than any other baking powder.

PATRONS OF HUSBANDRY.

From Worthy Master Davis.

In the San Francisco *Call* of August 14th there is a long article, reputed to have been an interview with Hon. Columbus Bartlett, one of the regents of the State University. That distinguished gentleman says, among many other things, "I challenge the wisdom of setting apart the sum of \$53,260 for the agricultural department. Of this sum \$22,040 for salaries and \$31,220 for expenses and for propagating house." This learned regent then goes on to show how much is given to the Lick Observatory, etc., and concludes by saying that the Colleges of Letters are not getting, in proportion to their number of students in attendance, their proper share of money. Does the regent understand that were it not for the fact that the Agricultural College is connected with the University the appropriations from the general Government would be given to some other institution? Does he and his colleagues desire to so cripple the Agricultural College that it shall cease to be? Do they want the agricultural department of the University withdrawn and a separate location made? Do they think best to maintain an outside institution for the farmer's sons and daughters, and are they willing to do so? There is a separate institution for those who desire to study law, another for those who pursue the study of medicine, another for the class in dentistry and pharmacy. No doubt if there were a separate institution for agricultural students, with as full a corps of professors as are now retained in each of the outside colleges above named, there would be a large class of students. Why pay so much money from the University fund for the maintenance of the Lick Observatory? How many tax payers are benefited by that? For one, we believe in all these institutions and say maintain them, but we object, in behalf of the farmers and their sons and daughters, to doing so at the expense of the College of Agriculture. We do most seriously object to the continued effort that is made to have the Agricultural College secondary to all other colleges and all other departments. Other States of this Union have found it necessary to remove the Agricultural College, entirely free, from all other colleges and to have it operated on an independent basis and by and with an absolutely independent board of regents and faculty. Do the management of our *alma mater* want the same thing done here that has been done in other States? We hope not. We earnestly hope they will not so neglect any department of our great institution that it will be necessary to cause a separation. Let them, on the other hand, try to strengthen the bands which now hold these several colleges into one grand university! Let them remember that agriculture is the foundation of all earthly happiness and prosperity, and instead of trying to weaken let them try to strengthen our Agricultural College.

The next session of the State Grange will have to take some action looking toward the organization of juvenile granges. Already two or three applications for granges for the little ones have been filed at the master's office. Grass Valley Grange is the latest to make a request under this head of Good of the Order.

Masonic Hall, in Petaluma, one of the most commodious and well arranged Masonic halls in California, has been secured for the daily sessions of the State Grange. The Order of Patrons of Husbandry is glad to know it has such true and stalwart friends in the order of Free and Accepted Masons. May the friendship thus formed be as true and pure as the fraternities themselves, and may our good works and words be as enduring as Time!

Connecticut State Grange is holding a series of grange meetings which are being addressed by the leading members of the order throughout the Union. Such men as Higgins of Delaware, Hale and Bowen of Connecticut, Draper and Howe of Massachusetts, Brigham of Ohio and Belcher of Rhode Island—these men are towers of strength in the grange cause.

Congress is in session, and, as was expected, is wrangling over the silver question. As soon as that question is solved, no doubt the more important and perplexing tariff question will receive an attack. When this question is reached, there will be more weeping and wailing and gnashing of teeth. The tariff is a matter of the most serious moment to all of our people. Farmers, laborers, mechanics, capitalists, lawyers and doctors have a direct interest at stake. And,

strange to remark, all of them are statesmen on the tariff question.

Every farm should have a good farmer, a good team and good tools, good cows, horses, hogs, sheep, chickens and buildings; fences in good repair and bridges and culverts in safe condition and proper places; it should be well fertilized, with manure, salt, lime, gypsum, bonedust, and last and best of all, with the skill, care and attention of a brainy man and nervy, loving and winsome woman. There should be a good orchard, dairy, apiary, garden and flower garden, to which add the songs and sweetness of life which come from happy children; a good library, the newspaper, the Holy Bible, and a willingness on the part of each one to "do unto others as ye would have them do unto you."

Perhaps there is no one year in the history of our nation, during times of peace, when there have been so many souvenirs offered to the people. They have come forth in the form of coins, stamps, photos, books, wheels, pins, badges, maps, cards, glass, jewelry and a hundred other common and uncommon forms. There have been all sorts of memorial, decoration, natal and local celebrations, and a special session of Congress. But the most monumental souvenir, and the one with which everybody has been presented, is the souvenir of "Hard Times." Rich and poor, high and low, black and white, male and female, will long remember the hard times of 1893. It will truly be a memorable year. With it will be a World's Fair and a small (we hope) share of cholera. Truly, this is a memorable souvenir year.

Those beautiful, glossy leaves which, a few short weeks ago, were so dazzling to the eye, and so suggestive of the new life, are now already faded. They are beginning to fade and to fall. Their work, both of use and of beauty, is about done. They have fed the trees and the fruit thereon, as well as ornamented the shrub and sheltered the birds. These quiet messengers, both of life and death, are now soon to fold their robes about them and seek the sleep which always comes to the worthy laborer. While they shall soon change their beautiful forms and attractive homes for a station less humble, who is to tell that they have not yet a useful work to do? The season of falling leaves, the autumn of the year, is always a season of the most serious reflection to the thinking man. Let us of the farm, who are constantly associated with the "leaf family," study their varied forms and functions, and let us profit by the silent, yet eloquent, sermons preached by the leaves of the forest, the orchard, the flower garden and hot-house.

Grass Valley and Magnolia Granges.

TO THE EDITOR:—Grass Valley Grange attended the anniversary of Magnolia Grange on August 11th, to the extent of a four-horse 'bus load, also several carriage loads. All had a fine time, in spite of dust and heat, and were highly entertained; a fine program, free dinner, and last, but not least by any means, a fine address by the W. M., E. W. Davis. We were somewhat disappointed in one particular, as we presumed there would be a closed meeting in the forenoon. Arriving there bright and early for that purpose, however, we prevailed on our worthy State Master to visit us in regular grange session the next night, August 12th, at which date we had a grand good time and enjoyed his talk. We took a class of three through the first two degrees, received two applications, then came refreshments.

Now, a little as to our doings since the last letter to you. The committee on "woman's work" got up a lunch on the Fourth of July, consisting of cold meats, bread and butter, cheese and pickles, pies and cake, with hot tea and coffee, also an ice cream table, all of which were well patronized, the supply hardly equaling the demand, thereby netting the committee a snug little sum to aid in replenishing their treasury, which was almost depleted owing to the expense attendant upon our "Flora's Day" entertainment. We intend bringing up the "Temple of Ceres" fund at the next meeting and see what we can spare for that. By the way, the sisters of Magnolia Grange have a unique plan for raising funds for the Grange Temple. No doubt their correspondent has written you of the particulars ere this, so I refrain. However, I claim the credit of selling the first ticket sold for a chance in their fine quilt, which will be a prize worth winning to the lucky one, all for the small sum of 50 cents. We think the sisters of that grange entitled to much praise for the happy thought and its execution. (In parenthesis, Mr. Editor, what are

all the good thoughts in the world worth, if we are content with just thinking and never carry them into effect?) I will close with this remark, that if the brothers of that grange are as ambitious for the cause as the sisters are, the required number of tickets (which is 80) will soon be disposed of, and to Magnolia Grange may be said with truth, "Well done, good and faithful servants."

MRS. R. S. TWITCHELL,
Sec. G. V. Grange.

Stockton Grange Endorses the Fair.

The following resolutions were adopted by Stockton Grange, No. 70, on the date given below:

WHEREAS, In view of the efforts of the citizens of San Francisco to raise sufficient funds to hold a midwinter fair in their city this winter, therefore be it

Resolved, That Stockton Grange indorses their efforts, fully appreciating the magnitude of their project and the benefit it will be to the entire State, and tender such aid as it can to help a final success.

Resolved, That our members will give such assistance as they are able to make the fair one to be long remembered by all who visit it, and one to which we may all be proud to refer.

Resolved, That we use our influence with the Board of Supervisors of San Joaquin county to secure an appropriation not over three hundred (\$300) dollars to defray the expenses of exhibit from our county.

N. T. ROOT, Sec'y.

Stockton, Aug. 19, 1893.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

Oroville Register: Warren Treat of Rio Bonito has at present nearly 200 people employed in picking, packing and drying fruit. Of these, 135 are white women and girls, while there are about 40 men and boys and 20 Japs. Mr. Treat is confident that he can get better service from the white help than from the Japanese. He declared to a friend lately that he believed 12 good white girls would pack as many peaches in a day as 24 Japs.

Five cuttings of alfalfa in a season is very good, remarks the *Herald*. The Ord ranch east of Gridley was partially inundated last winter, and as a result Reyman & Evans will have the largest alfalfa crop for years. The third crop is now being cut, and there will be two more crops to cut before fall. One barn contains 800 tons, two others 400 tons each, while there are still other barns and numerous stacks. The hay is being sold at \$5 a ton, but the owners have some 750 head of cattle now being pastured on Butte creek to feed this winter, so that most of the hay will be used.

Oroville Register: The immense crops of alfalfa cut this season on the Reyman & Evans, the J. S. Hutchins and the D. N. Friesleben ranches show the importance of water upon land in this hot climate. The land was thoroughly soaked last winter, and this season the crops are the largest ever known. If the owners of these farms would irrigate their lands by steam-power pumps, they could each year largely increase the quantity of their crops. We were told by a director of the Woodland bank that on his irrigated land he had cut as high as 15 tons of alfalfa per acre. Irrigation pays well, whether on dry hills or in low hot-toms.

Humboldt.

Arcata Union: The Arcata creamery is in a very prosperous condition at the present time, as shown by the following figures: Milk received in June, 647,909 pounds; in July, 658,986 pounds. Butter made in July, 28,351 pounds. This shows an increase of 11,077 pounds of milk in one month.

Kern.

Californian: A. M. Mixer, who handles fruit for Porter Bros., states that from Hanford to Bakersfield there is a belt of land in which fruits will ripen at least ten days earlier than in other parts of the State.

Kings.

Journal: John W. Lewis has invented a fruit-drier which contains some new points of excellence. In his drier no moist air remains to cook the raisins, but by a system of hot-air chambers and a blower, all the moisture is removed from the drying room.

Hanford Sentinel: The Paige ranch at Tulare pays 80 per cent of the gross proceeds of the ranch for labor, and we are informed that 80 per cent of that amount is paid for white labor. The labor account of this ranch is from \$75,000 to \$100,000 per year. Mr. Paige will employ none but white help during grape-picking if they can be secured.

Lake.

A shipment of over 7000 pounds of Yerha Santa from Lake county was made from Calistoga last week. This is the second large shipment made this season, and indicates that a new industry is developing in that county.

Mendocino.

Ukiah Dispatch: Taken as a whole, the hop crop in Ukiah this year will be about ten per cent under that of last year.

Orange.

The dairy interests of Orange county are increasing in importance every year, and it is now the leading one in the Westminister district.

Blade: The Fullerton walnut-growers have completed their organization with W. M. McFadden, B. F. Porter and S. F. Daniels for the

board of directors. Mr. Porter was chosen president, Mr. McFadden vice-president, and Mr. Daniels treasurer. The crop controlled by the association is estimated at about 75 or 80 tons.

Santa Ana Blade: The apricot crop of Orange county this season was about one-fourth of an average crop, and adding to this the discouragingly low price, the business will not be profitable this season.

Monterey.

Pajaronian: From a piece of land on the Moro Cojo ranch containing a fraction less than 27 acres, W. V. Gaffey cut 150 tons of hay. Will some person show up a bigger record for the Pajaro?

Riverside.

The Anaheim Gazette reports that a number of growers in Riverside some time ago employed a detective to go East and examine into the methods of doing business by the commission men, and the manner in which fruit has been taken care of. The information brought back is a startling revelation. One of the principal methods of doing business was for the consignee to turn over fruit upon arrival to a confederate for a nominal sum—often at much less than the expense; then they would together retail the fruit to local dealers, making from \$200 to \$500 a car.

Sacramento.

Many men, women and children have left Sacramento to work in the hopfields of the neighborhood, and a rapid picker averages \$2 per day. The worker hoards himself. In many cases the pickers put up tents and do their own cooking. On some hop ranches there are boarding places conducted by enterprising men, and workers are provided with food at reasonable rates. Among those who left for the hopfields on Sunday last were a number of unemployed printers.

San Bernardino.

The Ontario jackrabbit hunters had 2490 rabbit scalps dangling at their belts last week, and still the bangle summons to the chase and the hunt goes merrily on. The days of the jackrabbit are numbered.

San Joaquin.

The following appears as an advertisement in the Stockton papers: "All farmers indebted to the Matteson & Williamson Manufacturing Company are notified that, beginning August 17, 1893, for the period of one month, the company will accept from those unable to pay cash, good milling wheat and barley, to be delivered at the Union Milling Company's warehouse, and agree to pay for the same 5 cents per cent above the regular quoted price during the month." To a reporter Mr. Matteson said last week that "most of their customers preferred to pay in cash. They are," he said, "confident that the price of wheat will go up. The feeling that wheat's going to rise is general throughout the regions I visited, and I've taken in all the country to Tracy, Merced, Fresno, Firebaughs and Los Banos."

Santa Barbara.

Santa Maria Times: J. B. Bonetti is probably the largest bean-raiser in the county. He has 700 acres in beans this year and says that if vines, blossoms and young pods are any indication of a crop, he will have enough to glut the market. He doesn't intend to thin them, however, to prevent overproduction, and as it is "Small Whites" that he dotes most on, he don't care how thick they grow.

Santa Clara.

Los Gatos News: The prune season is on again and already the orchardist is beginning to gather and the driers are busy preparing to handle them. Large quantities will be dried by the growers themselves, although a goodly quantity has been secured by driers at reasonably good prices. The yield will be much larger than was estimated. Peach-buyers are hard to find and prices so extremely low that most of the growers will dry the fruit themselves.

Santa Cruz.

Pajaronian: The man who said there was going to be a light heat crop this year made a bad guess. Of course there will be spots where the crop will be short, but it will average up in great style when the work of digging is commenced. The Pajaro valley is going to turn out loads of sugar this year, and the Moro Cojo, Cooper and Blanco districts have heat crops that are beauties. The reliable and sure value heat crop is going to turn a lot of money loose in this district this fall. It is the one crop that is bound to be marketed at a remunerative price.

Solano.

Upwards of 5,000,000 pounds of fresh fruit have been shipped from Snisun station thus far this season. This makes a very good showing when it is taken into consideration that most of the apricot crop has been dried and has not yet been shipped.

Sutter.

The large peach-growers about Yuba City are drying extensively this year.

Yuba City Farmer: Work is rushing at the cannery. A force of 175 hands is busy, and more help is wanted. The pack at present is on orange and lemon clings and Muir peaches, Bartlett pears and Egg plums. About 10,000 cans per day are being put up. The drying department is also running in full blast. The pack will continue through this month and a part of September. None but the best of the crop is taken.

Sonoma.

Sonoma Tribune: The grape crop this year will be large, and there will be gathered in the vicinity of Healdsburg between 12,000 and 15,000 tons. The wine-makers are prepared to

put up a large vintage, but as to the quantity, they are very uncertain what they will do.

There will be a considerable shortage in the prune crop in the neighborhood of Santa Rosa. Contracts for picking have been let at \$3 per ton.

Sonoma Tribune: In the past two seasons more than \$100,000 worth of fruit was canned by Messrs. Hotchkiss & Miller, and of this amount only \$56 worth was spoiled in the cooking process.

Tulare.

Reports to the contrary notwithstanding, the Traver Fruit and Raisin Co. will operate their packing-house as usual this year.

Visalia Delta: A thrashing machine, owned by a Mr. Mitchell, exploded Monday afternoon on Deer creek. T. J. King of Plano and Chas. Helms of Porterville were severely scalded.

Yuba.

Wheatland Four Corners: The exact quota of hop-pickers in the various fields is not yet reported, but approximately the Duris are employing from 1200 to 1500; Mr. Wood from 400 to 600; and the Roddams from 400 to 600. The Jaspers will employ from 75 to 100. The general crop is very heavy, and the drying-houses (some of them said to be the largest in the world) will be taxed to their utmost capacity.

JOHN H. DAWSON, Federal Sugar Inspector, has forwarded to the Treasury Department his estimate of the yield of California beet sugar for the season of 1893-4. It is 42,000,000 pounds, distributed as follows: Chino district, 18,000,000 pounds; Watsonville district, 20,000,000, and the Alvarado district, 4,000,000. The advance estimates last year were: Chino, 11,000,000 pounds; Watsonville, 14,000,000 pounds, and Alvarado, 3,000,000 pounds, or a total of 28,000,000 pounds. The actual yield, however, was a good deal less. Watsonville produced 11,390,921 pounds, Chino 7,903,541 pounds and Alvarado 2,506,860 pounds, a total of 21,801,322 pounds. The bounty on this yield amounted to \$436,026.44. Should the yield for the present year come up to the estimates the bounty would amount to \$840,000. But if the yield is in the same ratio with the advance estimates as the yield of last year the production will only be 33,600,000 pounds, on which the bounty will be \$672,000. So, after making allowance for every possible contingency, California will produce 11,800,000 pounds of sugar more than last year and receive \$236,000 more of Federal bounty on the same.

THE S. P. Taylor Paper Company of San Francisco suspended payment Monday, carrying down with it the Pioneer Paper Mill Company of Taylorville, a collateral concern. The liabilities of both companies are \$190,000, and the assets said to be above \$400,000. Ludwig Schwabacher, general manager of the Crown Paper Company, has been chosen trustee. He says the companies are solvent and will pay dollar for dollar if given time. The paper business is just now suffering from general depression. Other mills shut down are: South Coast mill, Soquel, Santa Cruz county; Oorralitos mill, near Watsonville, Santa Cruz county; California paper mill at Stockton; Crown mill at Oregon City, Oregon; Puget Sound pulp and paper mill at Lowell, Wash. Some of these are expected to resume within a week or two.

PRELIMINARY arrangements are being made for the construction of an electric road from Nevada City to Marysville, via Grass Valley. The storage system will probably be adopted. It is urged by the promoters of the undertaking that they can land freight from San Francisco to Nevada City for \$6 per ton; that the passenger rate from Nevada City will be about \$2 less than now charged; that the time of going to San Francisco will be lessened two or three hours.

THE South Gila Canal Company, Arizona, is constructing, ten miles from Sentinel, a very large dam. It is to be 106 feet wide at the bottom, 1400 feet long, 50 feet high and 13 feet wide at the top. The wall will be almost solid masonry. The work will be finished in two years.

THE orange shipments from Southern California for the past season aggregate 6600 cases, which is about 2000 more than any previous season. Growers have realized less than in any former year. Co-operative associations are preparing to handle the crop of 1894.

It is proposed to do \$147,729 49 worth of work in reclamation district 551, Sacramento county. In district 535, plans are for the expenditure of \$50,000.

THE Butte Irrigation and Land Company will issue \$1,000,000 bonds for the purpose of building an irrigating canal and purchasing lands.

An Auburn Miracle.

AN ACT OF HEROISM FOLLOWED BY DIRE RESULTS.

Edward Donnelly Saves a Life Almost at the Cost of His Own—After Years of Suffering He is Restored to Health—His Story as Told to a Reporter of the Auburn Bulletin.

(Auburn, N. Y., Bulletin.)

It is on record that upon a chilly April day, a few years ago, an eight-year-old boy fell into the East river at the foot of East Eighth Street, New York, when all efforts to rescue him had failed, Eugene Donnelly, at risk of his own life, plunged into the water and, when himself nearly exhausted, saved the boy from drowning. It was a humane and self-sacrificing deed, and received deserved commendation in all the newspapers. Edward Donnelly was then and is now a resident of New York City, living at the East Side House, Seventy-sixth St. and E. R., but his wife was Amanda Grantman, of Auburn, and sister Mrs. Samuel D. Corry, of No. 71 Moravia St., which gave a local interest to the incident. Your correspondent in Saratoga was shown a letter to a friend from which he was permitted to make the following extract:

AUBURN, N. Y., Oct. 26th, '92.

I am taking Dr. Williams' Pink Pills. They have cured me of that terrible disease, Locomotor Ataxia. When I commenced taking them I was wholly unable to work, and nearly helpless. I am now improved so much that I have been picking apples, and wheeling them to the barn on a wheelbarrow.

Yours truly, EDWARD DONNELLY.

Immediately on reaching Auburn your correspondent called at the above address, and found Mr. Donnelly out in a barn where he was grinding apples and making cider with a hand press, and he seemed well and cheerful and happy.

Mr. Donnelly said: "I was born in Albany, N. Y., and am 42 years old. The greatest portion of my life I have lived in New York City. I was general foreman there of the F. A. Mulgrew Saw Mills, foot of Eighth Street, on the East river. It was on the 29th of April, 1889, that the boy fell into the river and I rescued him from drowning, but in saving his life I contracted a disease which nearly cost me my own."

"You see when I saved the boy I was in the water so long that I was taken with a deathly chill, and soon became so stiffened up and weak that I could neither work nor walk. For some time I was under treatment of Dr. George McDonald, who said I had Locomotor Ataxia. He finally said he could do nothing more for me, and that I had better go into the country. On the 1st of June (1892), my wife and I came up to Auburn."

"When the disease first came upon me the numbness began in my heels, and pretty soon the whole of both my feet became affected. There was a cold feeling across the small of my back and downwards, and a sense of soreness and a tight pressure on the chest. The numbness gradually extended up both legs and into the lower part of my body. I felt that death was creeping up to my vitals. I was still taking the medicine ('It was Iodide of Potassium,' said his wife), and was being rubbed and having plasters put all over my body, but with no benefit."

"I sent to the Chas. H. Sagar Company, the popular Auburn druggists and chemists, at 109 and 111 Genesee St., and got three boxes of the Pink Pills and began taking them at once. In three weeks' time I was so improved that from being helpless I was able to help myself and to get up and go to work, and to walk every day from No. 74 Walnut St., where I then lived, to Osborne's New Twine Factory, Seymour and Cottage Streets—more than a mile—where I was then employed, but all the while I was taking Pink Pills."

"Then Dr. Patchen, of Wisconsin, uncle of my wife, and who was here on a visit, began to poo-hoo at me for taking Pink Pills, and finally persuaded me to stop taking them and to let him treat me. When he returned to the West he left a prescription with Dr. Hyatt, of Auburn, who also treated me. But their treatment did me no good, and after a while the old trouble returned and I was getting bad again. Then I began to take Pink Pills; have taken them ever since; am taking them now; have taken in all nearly 20 boxes at an entire cost of less than \$10.00 (my other treatment cost me a pile of money), and again I am well and able to work."

"If I was able I would, at my own expense, publish the virtues of Dr. Williams' Pink Pills to the world and especially in New York City, where I am much better known than I am here."

Dr. Williams' Pink Pills contain in a condensed form all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are an unfailing specific for such diseases as locomotor ataxia, partial paralysis, St. Vitus' dance, neuralgia, rheumatism, nervous headache, the after effects of la grippe, palpitation of the heart, pale and sallow complexions, and that tired feeling resulting from nervous prostration; all diseases depending upon vitiated humors in the blood such as scrofula, chronic erysipelas, etc. They are also a specific for troubles peculiar to females, such as suppressions, irregularities and all forms of weakness. They build up the blood, and restore the glow of health to pale and sallow cheeks. In men they effect a radical cure in all cases arising from mental worry, overwork, or excesses of whatever nature.

These Pills are manufactured by the Dr. Williams' Medicine Company, Schenectady, N. Y., and Brookville, Ont., and are sold only in boxes bearing the firm's trade-mark and wrapper, at 50 cents a box or six boxes for \$2.50, and are never sold in bulk or by the dozen or hundred.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California street, San Francisco.

Hay Pressing.

If you are interested in pressing hay write Truman, Hooker & Co., San Francisco. They will save you money.

FARMERS!

Now is the time when you should protect your families.

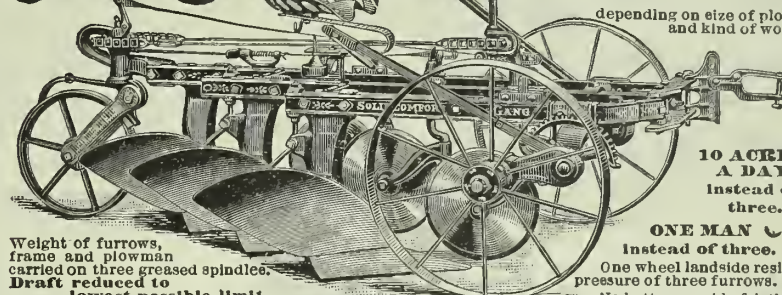
Take a policy in the only company which loans its money to the farmers of California—

THE PACIFIC MUTUAL LIFE INS. CO.,

KILGARIF & BEAVER, General Agents,

PACIFIC MUTUAL BUILDING, - - SAN FRANCISCO, CAL.

SOLID COMFORT THE "WONDER ON WHEELS"
TONGUELESS, Self Guiding.
FOUR OR SIX HORSES,
depending on size of plows
and kind of work.



Weight of furrows, frame and plowman carried on three greased spindles. Draft reduced to lowest possible limit. Foot brake prevents Gang running on team. Levers and turning device in easy reach. length of itself. Easier Driving. LIGHTER DRAFT frame—can be narrowed or widened at will. Made with stubble, sod and stubble, or breaker bottoms, in steel or chilled metal. Ten or twelve inch cut. **ECONOMIST PLOW CO., So. Bend, Ind., or Stanton, Thomson & Co., Sacramento.** Special prices and time for trial given on first orders from points where we have no agents.

A SUBSTITUTE

Advantages of this Paper for a Drying Surface.

ABSOLUTELY ODORLESS.

WATER, ACID AND ALKALI PROOF.

WILL IMPART NO TASTE NOR ODOR TO FRUIT.

CHEAP AND DURABLE.

ITS BRILLIANT BLACK SURFACE, which absorbs the heat, drying both sides of fruit at the same time, and rendering the labor of turning unnecessary.

E. G. JUDAH, Agent, 221 South Broadway St., Los Angeles.



FOR TRAYS!

Unequaled for DRYING GRAPES.

Write for SAMPLES AND CIRCULAR.

Paraffine Paint Co.

116 Battery St. SAN FRANCISCO.

PROTECT YOUR TREES

— WITH —

Gilman's Patent Tule Tree Protector

Patented Aug. 1, 1893.



Cheapest, Best and Only One to Protect Trees and Vines from Frost, Sunburn, Rabbits, Squirrels, Borers and Other Tree Pests.

For Testimonials from Parties who are using them send for Descriptive Circulars.

B. F. GILMAN,

Sole Manufacturer of Patent Tule Covers, 420 NINTH ST., SAN FRANCISCO, CAL.

The Anderson Prune Dipper

W. O. ANDERSON, Patentee and Sole Manufacturer.



THIS WELL-KNOWN DIPPER is in use in almost every plum-growing section of the State and has given perfect satisfaction wherever tried.

WE HAVE MADE SEVERAL IMPROVEMENTS THIS SEASON in additional heating capacity, facility for spreading the fruit, etc., which makes the machine indispensable both for the factory and the farm.

We also keep a full line of FIELD CARS, TURNABLES, TRANSFER CARS, Etc.

For further information address the Manufacturer,

P. O. BOX 970, SAN JOSE, CAL.

Send for Price Lists

OF GUNS

And all Articles used by Hunters and Anglers.



GUNS SENT ON TRIAL.

OLD GUNS TAKEN IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 326 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

JOHN LYNCH, Petaluma. Breeder of Thoroughbred Shorthorns. Young Stock for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER Saxe & Son, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

OHAS. A. STOWE, Stockton, Cal., (Box 283). Breeder of Berkshire and Poland-China Hogs; Milking Strain of Durham Cattle, and M. B. Turkeys. Write for Prices.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

R. H. ORANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

SWINE.

J. E. ALSFORD, Woodside, San Mateo Co. Breeder of Berkshire Hogs and Toulouse Geese.

P. H. MURPHY, Perkins, Sao. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, Low Prices.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.



OXFORD DOWN SHEEP FOR THE PACIFIC COAST.

W. A. SHAFOR, Middletown, Ohio,
Largest American Importer of
O. D. Sheep.

Is prepared to quote prices on the best stock of Oxford Down Sheep to be had in England. Parties wanting first-class stock should write for particulars and induce their neighbors to join them. Import will arrive about August 1st. Write at once.

FRANK A. BRUSH,
SANTA ROSA, CAL. (Care Santa Rosa National Bank.)
Wants you all to write to him for prices
on Young Stock.

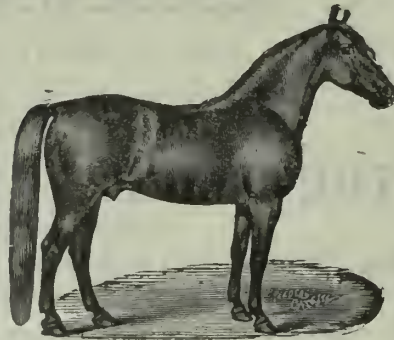
MINORCAS: White and Black.
LEGHORNS: White, Brown, Black, Buff.
B. P. ROCKS.

Mention the age desired and when shipped. Circular Free.

Dr. A. E. BUZARD,
VETERINARY SURGEON.

MEMBER OF THE ROYAL COLLEGE OF VETERINARY Surgeons, London, England. Late Veterinary Surgeon in the United States Army. Veterinary Contributor to the "Pacific Rural Press." The Diseases of all Domestic Animals treated on Scientific Principles. Special attention given to Chronic Lameness and Surgical Operations. 405 BRODERICK ST., SAN FRANCISCO. Calls to the country promptly attended to. Telephone No. 4667.

AT AUCTION AT STATE FAIR.



GILT EDGE BROOD MARES

STINTED TO FAMOUS STALLIONS.

Being a Draft from the World-renowned

PALO ALTO STOCK FARM.

It having been determined to reduce the breeding plant at this famous stock farm, the undersigned have been authorized to dispose of at

SACRAMENTO,
WEDNESDAY, SEPT. 13, 1893, at 10 A. M.

FORTY HEAD CHOICE BROOD MARES,

Daughters of Electioneer, Ansel, Falls, Woolsey, Antevolo, Nephew, Wild Boy, Piedmont, Etc.,

STINTED TO THE NOTED STALLIONS

TRUMAN, 2:12; WHIP, 2:27; MONACO, 2:19; AZMOOR, 2:20; NORRIS, 2:32; ELECTRICITY, 2:17; PAOLA, 2:28; HUGO, 2:29; PIEDMONT, 2:17, etc.

Catalogues, giving description and pedigrees, will be ready Aug. 20th. Apply to

EDWIN F. SMITH, Agricultural Pavilion, Sacramento, Cal.,

KILLIP & CO, Live Stock Auctioneers, 22 Montgomery St., S. F.



ONLY 25 YEARS OLD AND A GIANT!

THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of
CARY'S PILLS.

Send for Circular

E. FOUGERA & CO.,

30 North William Street, New York.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.
STOCKTON, CAL., Dec. 19th, '92.

DR. R. J. KENDALL CO.
Gentlemen:—Having read one of your Treatise on the Horse and seeing the Spavin Cure advertised, I thought I would try it. I had one horse with a prominent Spavin of 12 months standing. I removed it with 1/2 bottle. It tied up one fore foot on same side the spavin was and compelling the horse to rest on lame leg while I took a surgical and drew it across the hock or spavin until the hock or spavin got very warm with the friction, then putting on Spavin Cure. I had a mare that had a running from her nose for 12 or 14 months. I rubbed the Spavin Cure from her eyes down to nostrils, then from back of jaw bone down under the throat for a week. I have not seen any discharge for two months.

Yours truly, HUGH McDADE.

DR. R. J. KENDALL CO.,
Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.



THE HALSTED INCUBATOR

COMPANY,
1312 Myrtle Street, Oakland, Cal.
Send Stamp for Circular.

THE Porteous Improved Scraper

Patented April 3, 1883. Patented April 17, 1883.



Manufactured by G. LISSENDEN.

The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Levelling Land, Road Making, etc.

This Implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

This Scraper is all steel—the only one manufactured in the State.

Price, all Steel, four-horse, \$40; Steel two-horse, \$31. Address all orders to G. LISSENDEN, Stockton, California.

THE ECLIPSE WIND MILL



THE
ORIGINAL

SELF-REGULATING
WOOD WHEEL.

Will run in Lighter Wind
and do More Work
than any other.

FAIRBANKS'
GALVANIZED STEEL

Wind Mills and Towers.
Pumps, Tanks, &c.

Send for Catalogue and Prices.

FAIRBANKS, MORSE & CO., CHICAGO, ILL.

The American Bee Journal,



(Established 1861.)
IS Oldest, Largest, Best,
Cheapest and the Only
weekly Bee-Paper in all
America. 32 pages, \$1.00
a year. Send for Free Sample.
\$1.00 BEE-BOOK FREE

GEO. W. YORK & CO., 56 Fifth Ave., Chicago, Ill.

Commission Merchants.

DALTON BROS.,

Commission - Merchants,

— AND DEALERS IN —

CALIFORNIA AND OREGON PRODUCE,
Green and Dried Fruits,

Grain, Wool, Hides, Beans and Potatoes.

Advances made on Consignments.

308 & 310 Davis Street, San Francisco.

[P. O. Box 1936.]

Consignments Solicited.

P. STEINHAGEN & CO



404 & 406 DAVIS ST. S. F.

ALLISON, GRAY & CO.,

501, 503, 505, 507 & 509 Front St.,

And 300 Washington Street, SAN FRANCISCO.

— GENERAL —

Commission - Merchants,

GREEN and DRIED FRUITS,

Poultry, Eggs, Game, Grain, Produce and

Wool.

MOORE, FERGUSON & CO.

WOOL, GRAIN, FLOUR

— AND —

General Commission Merchants,

310 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

[ESTABLISHED 1854.]

GEORGE MORROW & CO., HAY and GRAIN

COMMISSION MERCHANTS.

39 Clay Street and 28 Commercial Street,

SAN FRANCISCO, CAL.

SHIPPING ORDERS A SPECIALTY.

LINDSAY & CRAIG,

Crocker Building.....San Francisco.

Mortgages Bought. Loans Negotiated.

Several buyers on hand for desirable Fruit and Grain Ranches.

GRANGERS' BANK OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund.....800,000
Dividends paid to Stockholders.....720,000

OFFICERS.

A. D. LOGAN.....President
I. O. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

General Banking. Deposits received, Gold and Silver.
Bills of Exchange bought and sold.
Loans on wheat and country produce a specialty.
January 1, 1893. A. MONTPELLIER, Manager.

S. H. MARKET REPORT

Market Review.

SAN FRANCISCO, August 23, 1893.

In the San Francisco market wheat touched a lower figure during the past week than at any former time, due chiefly to the necessities and urgency of sellers. Since holders are unable to get usual bank accommodations they are compelled to sell for whatever price they can get; thus there was active trade at rates nominally below actual values. In the country it is stated there have been large purchases of wheat at relatively lower prices than quoted in this market. Some cargoes have been loaded at Port Costa, and manifestly at the Custom House when cleared, at values only a shade above \$1 per cental. As these valuations, according to the Custom House requirements, are intended to represent the actual cost on board, or market value at the time of clearance, it will be seen that the products must have received extremely poor rates.

The freight situation operates in conjunction with the money pinch to the disadvantage of the producers. There are few ships in port, and since the visible supply of grain is vastly greater than the visible tonnage, charter rates have advanced from 25 to 40 per cent. Grain bags, too, have advanced, owing to a temporary shortness in the supply. Subject as it is to all these adverse conditions, the market is persistently against the grower as quotations below show. We have no hesitation in saying that the ruinous prices now prevailing are wholly out of reason, and that the future will afford something better. The trouble is that as financial matters now stand, many, possibly most, producers are not able to wait upon the future. An interesting estimate of the general supply of wheat this year may be found on page 154 of this number.

Barley.

Barley has ruled light during the week, with prices a little lower. There is large shipping trade in progress, and considerable barley has been sent away to New York and England. It is fortunate that relief of this character has been furnished, as stocks are largely in excess of home wants. In spite of this somewhat heavy export business, quotations have remained easy and buyers have had matters largely their own way as to prices. However, it is satisfactory to know that the crop is moving off fairly well and that stocks in warehouse are likely to be considerably lowered before the close of the year. Prices to-day: Feed, 65¢/70¢ per cental; brewing, 80¢/92½¢. For Call Board sales for the week see table below.

Other Cereals.

Oats have been dull and weak, with prices generally lower than a week ago. Corn continues quiet at unchanged prices. Beans are hard to move, and the market has been very weak. New crop have been offing. Hay has been arriving very freely, but no material change was made in quotations recently. Hops are of slow movement, but growers regard the outlook as favorable to their interests, and they are firm holders. Rye is about at a standstill.

OATS—New, red, 90¢/95¢ # ctl; black, 85¢/90¢; white, 80¢/85¢. Old crop—Common to fair, \$1.01/1.10 # ctl; good to choice, \$1.15/1.20; fancy, \$1.25/1.30; milling, \$1.20/1.30; Surprise, \$1.30/1.35; gray, \$1.10/1.15.

CORN—Large yellow, 95¢/97½¢ # ctl; small do, 97½¢/99¢; white, 90¢/95¢.

Beans—Pea, \$2.25/2.40 # ctl; Pink, \$3.30/3.10; Bayo, \$1.90/2.00; Small White, \$2.25/2.40; large do, \$2.25/2.30; Butter, nominal; Red, \$2.50/2.75; Lima, \$2.30/2.50.

SEEDS—Rape, 2¢/2½¢ # lb; Hemp, 3¢/4¢; Canary, 4¢/5¢ for imported; do California, nominal; Flaxseed, 2¢/3¢; Alfalfa, 8¢/9¢; Mustard, nominal; Caraway, 7¢.

STRAW—Quotable at 35¢/45¢ # bale. RYE—Quotable at 95¢/1.01 # ctl. DRIED PEAS—Nominal. BUCKWHEAT—Nominal.

HAY—There is enough demand to keep the market fairly in motion. Prices moderately steady. Wire-bound bay sells for \$1.02 # ton less than the figures given. Wheat, \$8.50/12.50; Wheat and oat, \$9.00/11; Wild Oat, \$8.90/9.50; Alfalfa, \$9.00/10; Clover, \$8.00/10; Barley, \$8.90/9.50; compressed, \$8.00/11.50; Stock, \$6.00/7 # ton.

Wool.

The wool market is in even a more demoralized condition than the wheat market. In the latter it is at least possible to sell at some price, while in the former there is literally nothing doing. All the wool warehouses in the city are full, and no Eastern order has been received in this market for two months past. The great buyers refuse even to receive consignments, let alone buy them. There as here there is just nothing doing at all. The figures given under another head are merely nominal since there has been no transactions upon which to base quotations. The leading buyers in this city have united in a letter of advice to sheep owners recommending that they omit the usual fall shearing. They do this, it is explained, because they don't see any way to dispose of the fall clip for enough money to pay for the shearing.

In discussing the situation early in the week, Mr. F. P. McLennan a well-known buyer, said: "It is true that we have advised our customers to defer shearing until next spring, and that is the only advice we could give them. We do not want this year's product because we cannot sell it."

"The whole trouble has been caused by the announcement made by the administration that they are going to put wool on the free list. I do not believe they will do so, for they are surely aware that it means the ruin of one of the leading industries of this country. Their threat to make such a change has caused scoured wool to drop from 53 to 35 cents a pound and ruined this year's business."

"If they place it on the free list, it cannot be much worse than it is at present, for the price on a free basis would be 30 cents a pound. I cannot understand why the administration should desire to see wool free. We are raising 360,000,000 pounds of wool each year, and only need to import 30,000,000 pounds in order to have enough to make all the clothes we want. Under a free-wool arrangement,

the raw material will have to be furnished by foreign countries.

"If it is placed on the free list, it will be the ruin of the wool industry of America. The buyers will be compelled to retire from business, manufacturers will remain idle, the sheep will be killed, and thousands of acres of land only fit for wool-growing will be useless to the owners. In the San Joaquin valley, where the farmers are now getting a fair revenue from their stubble land, under a free-wool tariff they would derive nothing."

"The manufacturers of clothing are afraid to make up goods because of the present uncertainty, and the shutting down of their mills has thrown thousands of men out of employment. The buyers have thrown hundreds of men out of work, and the growers have no need for the thousands of shears usually employed. All of this hardship has been caused by the uncertainty of what the present Congress will do."

"The factories ought to be at work now making up their light-weight goods, it being their usual rule to be ahead of the season fully six months. They are working off their old stock and will continue to do so until something is done by Congress. If wool is placed on the free list, 90 per cent of the wool industries will cease to do business."

"Whenever it is authoritatively announced that wool will be protected by the present tariff, the mills will start up and there will be a hum of machinery heard all over the land. Thousands of idle men will be given employment, and the prosperity of the entire country greatly increased."

Mill Products.

Bran was lowered \$1 # ton yesterday and middlings 50¢. Flour was weak at the previous day's decline.

BRAN—From 17¢/18¢ # ton.

MIDDINGS—From \$19.50/22.50 # ton.

GROUND BARLEY—From \$16.50/17.50 # ton.

ROLLED BARLEY—From \$16.50/17.50 # ton.

CHOPPED FEED—From \$17.50/18.50 # ton.

FEED CORNMEAL—From \$22.50/25.50 # ton.

CRACKED CORN—From \$23.50/25.50 # ton.

OILCAKE MEAL—From \$32.50/35.50 # ton.

FLOUR—Family Extras, \$3.65/3.75 # bbl; Bakers Extra, \$3.50/3.60; Shipping Superfine, \$2.60/2.90.

Fruits and Vegetables.

FRESH FRUIT—The apricot season is about over. Peaches are in heavy receipt, with prices low. Plums also make profuse display. Some choice peaches are seen in market now. Watermelons and cantaloupes are in large supply. Strawberries are selling at a wider margin, some lots being much better in quality than others. Blackberries are also irregular in price, for a like reason. Choice raspberries bring good figures. Apples, 35¢/75¢ per box; pears, 25¢/40¢ per box; Bartlett pears, 40¢/50¢ per box for No. 1 and 25¢/30¢ for No. 2; red nectarines, 40¢/50¢ per box; white nectarines, 25¢ to 30¢ per box; strawberries, 55¢/60¢ per chest for large and 55¢/70¢ per chest for Longworth; raspberries, 33¢/35¢ per chest; apricots, 10¢ to 1½¢ per pound in bulk; figs, 25¢/40¢ per box single layer and 50¢/75¢ for double; peaches, 20¢/40¢ per box, 20¢/40¢ per basket and ¼¢/1¢ per pound in bulk; blackberries, \$1.25/2.50 per chest; huckleberries, 4¢/5¢ per pound; plums, 20¢ to 35¢ per box as to variety; egg plums in bulk, \$10.00/12; green gages, \$6.00/10 per ton; cantaloupes, 25¢/50¢ per crate for Vacaville and 40¢/50¢ for River; nutmeg melons, 25¢/40¢ per box; watermelons, \$5/8 per 100; crabapples, 30¢/50¢ per box.

GRAPES—Supplies are coming to hand with freedom, being mostly of good quality. We quote: Sweetwater, 15¢/40¢; Muscat, 25¢/50¢; Malaga, 25¢/50¢; black, 15¢/50¢; Tokay, 35¢/75¢ per box.

DRIED FRUIT—Buyers are indifferent just at present, and transactions are therefore few in number and small in amount. We quote prices as follows: New apples, 3¢/3½¢ per pound for quartered, 4¢/4½¢ per pound for sliced and 6¢/7¢ for evaporated; new bleached peaches, 6¢/7¢; apricots, spot, 7¢/7½¢ for bleached and 4¢/5¢ for sun-dried; prunes, future delivery, 4½¢/5¢ per pound; new plums, 5¢/7¢ for pitted; dates, 4½¢/5¢; 1892 prunes, 5¢/7¢; grapes, 2¢ for firsts and ¼¢/1¢ for seconds; sun dried peaches, 3¢/4¢ per pound; bleached peaches, 6¢/6½¢ per pound; figs, —¢— for pressed and 2¢/3¢ per pound for unpressed.

VEGETABLES—Corn is selling pretty well. Tomatoes have further declined, under liberal receipts. Green Okra, 25¢/50¢ per box; egg plant, 35¢/50¢ per box; green corn, 50¢/75¢ per sack; Alameda corn, \$1.25/1.50 per box; Berkeley corn, 40¢/75¢ per box; green peas, 2½¢/2½¢ per pound; string beans, 1½¢/2¢ per pound; Lima beans, 2¢ to 3¢ per pound; Alameda summer squash, 20¢/30¢ per box; marrowfat squash, \$10 per ton; cucumbers, 25¢/35¢ per box for Bay; pickles, \$1.50/1.60 for No. 1 and 60¢ to 75¢ per ctl for No. 2; green peppers, 25¢/40¢ per box for Chiles and 35¢/50¢ for Bell; River tomatoes, 50¢/60¢ for large boxes; turnips, 75¢ per ctl; beets, \$1.00/1.25 per sack; carrots, 45¢/50¢; cabbage, 50¢/55¢; garlic, 1¢/1½¢ per pound; cauliflower, 60¢/70¢ per dozen; dry peppers, 5¢ per pound; dry okra, 15¢ per pound.

Dried Fruits.

[Weekly Bulletin of the Santa Clara Fruit Exchange.]
SAN JOSE, August 22, 1893.

The Exchange now has large quantities of fruit under contract from its stockholders, and is disposing of it as rapidly as the market will take it at fair prices. We desire contracts on the form which we sent out two weeks since to be sent in as fast as possible that we may fully understand what we have to do. We cannot sell fruit, of course, until we have it for sale.

The apricot market is very active for the lower grades at 7½ cents, with a more limited inquiry for the better grades up to 10 cents. The Exchange has made sales at various prices including and between those extremes, in sacks f. o. b. The market seems to desire cheap goods this year, and takes them more readily than the better grades at corresponding prices. The supply of the best apricots is limited, however, and this fruit is bound to bring fair prices within the year. We caution all against selling apricots of good quality at the prices we quote for the lower grades.

Peaches have some inquiry at low rates. Sales have been made as low as 6 cents f. o. b., in sacks,

The Judson Fruit Company,

308 and 310

WASHINGTON STREET
San Francisco, Cal.

but not for the best quality of goods; what can be bad for the better grades is as yet undetermined. The quantity of dried peaches to be put upon the market has been, we think, a good deal exaggerated, as owing to the low price offered for green fruit, there will be a great deal of waste.

Prunes continue at 5 cents f. o. b. for the four sizes, which is equivalent to about 5½¢ for most of the orchards in the valley, which are likely to average 60 to 70. Orchards of green prunes averaging 60 to 70 should bring the owner 5½¢ cents, less cost of selling, which is equivalent to about \$37.50 per green ton. Local buyers can pay 5 cents for such orchards, or \$32.50 per green ton. A few extra orchards have been bought at \$35. Outside this county the extreme price paid anywhere for green prunes is \$25, and in the southern counties \$21, and the extra price received in Santa Clara county is largely the result of the work of the Exchange and kindred organizations. If our output is 27,000,000 pounds, the gain will figure up at about a quarter of a million dollars for this valley, which pays fairly well.

DRYING PRUNES.—Don't shake your trees much. Green prunes sell poorly. If possible grade your prunes green, making three or four grades, as convenient. If not possible to do this, when the smallest are dry stack the trays as directed in Bulletin No. 8, and let them gradually cure. This requires more trays and more labor. All good work in anything is attended with more cost, which, however, is more than repaid by increased price. For further directions see Bulletin No. 8, much of which is as applicable to prunes as to other fruits.

In regard to freights, matters remain as they were—\$1.40 per 100 in sacks, \$1.00 in boxes.

Provisions.

PROVISIONS—Stocks are not large and prices of Hams and Bacon have firmer tone. We quote as follows: Eastern Hams, 14½¢/15¢; California Hams, 13½¢/14¢; Eastern, extra light, 18½¢; medium, 13½¢/14¢; do, light, 14½¢/15¢; do, light, clear, 17¢/17½¢; light medium boneless, 15½¢/16½¢; Pork, extra prime, \$16.50/16.50; do, prime mess, \$17.00/18; do, mess, \$23.24/24; do, clear, \$25.26/26; do, extra clear, \$26.27/27 # bbl; Pigs' Feet, \$12.50 # bbl; B-e-f, mess, bbls, \$7.50/8; do, extra mess, bbls, \$8.20/9; do, family, \$11.12 # bbl; extra do, \$12.50/13 # bbl; do, smoked 10¢/20¢; Eastern Lard, tierces, 9¢/9½¢; do, prime steam, 11½¢; 10-lb pails, 12¢; 5-lb pails, 12½¢; 3-lb, 12½¢; California, 10-lb tins, 11¢; do, 5-lb, 11½¢; do, kegs, 10¢/11¢; do, 20-lb huckets, 12¢/22½¢; compound, 8½¢ for tierces, and 9½¢ for lb bbls.

BUTTER—Larger receipts have tended to ease prices, and the market is not so firm as it was a few days ago. A local circular gives the following words of caution: "While it is gratifying to the selling and producing interest to have values on the up grade, it should be borne in mind that prices need not be carried to any very high figure to make an opening for Eastern creamery Butter, especially when the weather gets a little cooler. Should much Eastern creamery Butter be landed here, there would likely be a falling off in demand for high-grade local product, and there would be apt to be also a decline in price." Common qualities continue in liberal supply. Pickled roll is coming in for some attention. We quote: Fancy creamery, 28¢/29¢; fancy dairy, 25¢/27½¢; good to choice, 21¢/24¢; common grades, 18¢/20¢ # lb; pickled roll, 20¢/22¢; firkin, 18¢/20¢; Eastern, ladle packed, 17¢/18¢ # lb.

CHEESE—There is no surplus of a choice article, and prices for such quality have firm tone. We quote: Choice to fancy new, 8½¢/10¢; fair to good, 7¢/8¢; Eastern, ordinary to fine, 11¢/13¢ # lb.

EGGS—Select stock is scarce and high. There is a glut of common qualities. We quote: California ranch, 27½¢/30¢; store lots, 15¢/24¢ # dozen; Eastern Eggs, 12¢/18¢ # dozen.

Miscellaneous.

POULTRY—Quotations have not materially changed in a week. The demand is quiet and slow, while offerings are more than ample to satisfy immediate wants. We quote: Live Turkeys—Gobblers, 19¢/20¢ # lb; Hens, 17¢/18¢; Roosters, 55¢/60¢ for old and \$4.50 for young; Fryers, \$3.50/4.50; Broilers, \$2.30/3.50; Hens, 55¢/60¢; Ducks, old, \$4.45/5.00; young, \$3.50/5.00; Geese, \$1.25/1.50 # pair. Pigeons, \$1.25/1.50 # dozen.

HONEY—Offerings are liberal, while trade is only fair and prices continue to shape in favor of buyers. We quote: Comb, 9¢/11¢; light, amber, extracted, 5¢; dark, 4½¢/4¾¢; water-white extracted, 5½¢/5¾¢ # lb.

HOPS—There is a firm tone to the market. Growers are not inclined to contract ahead. Quotable at 18¢/21¢ # lb.

Tuesday's Sales of California Fruit.

CHICAGO, Aug. 22.—The Earl Fruit Company sold California fruit at auction to-day as follows: Tokay Grapes, half-crates, \$1.35/1.85; Muscat Grapes, half-crates, 70¢/90¢; Malaga Grapes, half-crates, 60¢/90¢; Bartlett Pears, \$1.35/1.65; some over-ripe, 60¢/81.20; Souvenir de Congress Pears, \$1.00/1.10; Plums, 50¢/85¢; Prunes, 70¢/81.10; Peaches, 65¢/75¢.

BOSTON, Aug. 22.—The Earl Fruit Company sold California fruit at auction to-day as follows: Bartlett Pears, \$1.50/2.00; some over-ripe, \$1.00/1.25; Peaches, 50¢/81.10; Plums, 65¢/75¢; Prunes, 50¢/81.10.

KANSAS CITY, Aug. 22.—The Earl Fruit Company sold California fruit at auction to-day as follows: Bartlett Pears, \$1.10/1.50; Peaches, 50¢/60¢.

MINNEAPOLIS, Aug. 22.—The Earl Fruit Company sold California fruit at auction to-day as follows: Peaches, 75¢/85¢; Plums, 65¢/75¢.

NEW YORK, Aug. 22.—The Earl Fruit Company sold California fruit at auction to-day as follows: Tokay Grapes, half-crates, \$2.40/2.50; Bartlett Pears,

— We are now better than ever prepared to receive consignments of all kinds of perishable products, such as Fruits, Vegetables, Eggs, etc. Our facilities for cool, dry storage and packing for long-distance shipping cannot be excelled. It is our constant aim to make our consignors and our customers stay with us. We make a specialty of handling dried fruits.

Horse Owners! Try GOMBAULT'S Caustic Balsam

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Taken the place of all liniments for mild or severe action. Removes all Bunches or Blisters from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blister. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circular. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

FALL 1893
"KEYSTONE"
Corn Husker and FODDER CUTTER.



Husks the corn and cuts the fodder at same time.

"KEYSTONE"
CIDER MILLS.
Two sizes:—
Do fast and good work.



"KEYSTONE"
DISC
GRAIN
DRILLS
Pulverize the soil, drill any grain and cover it.



"KEYSTONE"
DISC SEEDER
Pulverize the soil, broadcast the seed and cover it.



"KEYSTONE"
DISC
HARROW
The great pulverizer for any soil.



Send for full descriptions.
KEYSTONE MFG. CO.,
Sterling, Ill.

THE RIPANS TABLETS
REGULATE THE STOMACH, LIVER AND BOWELS, AND PURIFY THE BLOOD. A RELIABLE REMEDY FOR Indigestion, Biltousness, Headache, Constipation, Dyspepsia, Chronic Liver Troubles, Biltousness, Bad Complexion, Dysentery, Offensive Breath, and all disorders of the Stomach, Liver and Bowels. Ripans Tablets contain nothing injurious to the most delicate constitution. Pleasant to take, safe, effectual. Give immediate relief. Sold by druggists. A trial bottle sent by mail on receipt of 10 cents. Address THE RIPANS CHEMICAL CO., 10 SPRUCE STREET, NEW YORK CITY.

ROOFING

GUM ELASTIC ROOFING FELT costs only \$2 per 100 square feet. Makes a good roof for years, and any one can put it on.

GUM ELASTIC PAINT costs only 60 cents per gal. in bbl lots or \$4.50 for 5 gal. tubs. Color red. Will stop leaks in tin or iron roofs that will last for years. TRY IT.

Gum Elastic Roofing Co.,
89 & 41 West Broadway, NEW YORK.

Local Agents Wanted.

(Continued on next page.)

The Markets.

(Continued from preceding page.)

\$1.25@1.50; Prunes, 70c@81.35; Plums, 60@70c; Peaches, 50@75c

CHICAGO, Aug. 22.—Porter Brothers Company sold to-day at auction 14 cars of California fruit at the following prices: Muscat Grapes, \$1.95@2.10; half-crates of Muscat Grapes, 60c@81; half-crates of Tokay Grapes, \$1.25@1.95; half-crates of Malaga Grapes, 65c; half-crates of Fontainebleau Grapes, 45c@60c; half-crates Purple Damascus Grapes, 70c; Bartlett Pears, 70c@81.40; half-boxes Bartlett Pears, 65c@81.20; Beurre Hardy Pears, 90c@81.10; Beurre Clairgeau Pears, \$1.05; Plums, 65c@81.35; Egg Plums, 65c@81.35; Gros Prunes, 80c@81; Columbia Plums, 65c@95c; Feltenberg Prunes, 95c; Comedy Plums, 95c; Hungarian Prunes, 80c@90c; French Prunes, 65c; Silver Prunes, 65c; Golden Drop Plums, 65c; Early Crawford Peaches, 45c@75c; Peaches, 40c@55c; Susquehanna Peaches, 45c@60c; Nectarines, 35c@60c.

NEW YORK, Aug. 22.—Porter Brothers Company sold to-day at auction six cars of California fruit at the following prices: Bartlett Pears, \$1.25@1.55; half-boxes, 65c@85; Beurre Hardy Pears, \$1.25@1.30; Beurre Clairgeau Pears, \$1.25; Orange Cling Peaches, 60c@81; Early Crawford Peaches, 40c@60c; Gros Prunes, 70c@90c; Plums, 45c@60c; Silver Prunes, 70c; Egg Plums, 65c; Quakerbush Plums, 55c@65c; Columbia Plums, 60c@65c; Washington Plums, 60c; Nectarines, 35c@40c.

MINNEAPOLIS, Aug. 22.—Porter Brothers Company sold to-day at auction one car of California Peaches at 70c@75c per box.

OMAHA, Aug. 22.—Porter Brothers Company sold three cars California fruit to-day as follows: Pears, \$1@1.50; Plums, 70c@90c.

California Products in New York.

NEW YORK, Aug. 20th.—California special goods—Canned fruits, nothing doing above the customary patching up of grocery and hotels' broken stocks.

Prunes—Quiet. Coast views are above those of Eastern buyers. For four sizes f. o. b., 4½c is named, and 6c for three sizes.

Evaporated Peaches—Buyers have the impression that a large quantity will come upon the market this season if heavy yield continues, and are consequently indifferent as to any early offers.

Raisins—The Western demand is making further inroads upon our '92s. This is a crumb of comfort for all dealers, as the fewer fragments we have this fall from the old stock, the better it will be for the new crop. Three crowns spot, nominally 4½c. No demand for boxes of bunches or loose.

Apricots—In a wholesale way, feeble and indefinite. New spot have sold to the trade at 9½c; for good quality futures 10c is named. It has been a hard week for 60 cars of fresh California fruits.

All sellers made low averages on Prunes and Plums. Bartlett's, in a few instances, sold well, but the bulk was over-ripe. They sink quickly after exposure this year. Local Peaches are arriving at the rate of 150 cars a week and selling 25c@90c a basket, and give Coast-raised but little chance.

Wool—A number of mills have set their spindles going again, but the inactive ones are yet plenty enough to keep buyers away from the material market, and sales are again light. Wool-owners all seem ready to realize and reduce their stocks, and if manufacturers had sound orders in view the present prices would certainly be tempting ones. Sales at New York, 238,000 pounds domestic, chiefly unwashed, and 157,000 foreign. Sales at Boston, 859,500 pounds domestic and 106,000 foreign. Philadelphia also quiet.

Lima Beans—Quiet and doing no better.

Honey—No new features.

Hides—Three thousand California sold at 10c; general market dull with best foreign 11½@12½c.

Hops—Spots retain their long-standing ranges, and the statistical position of crops here and abroad is in holders' favor; a first bale of new State brought 34c.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per cwt. for the past week:

	Aug.	Sept.	Oct.	Nov.	Dec.
Thursday....	56c½d	56c½d	56c½d	56c½d	56c½d
Friday.....	56c½d	56c½d	56c½d	56c½d	56c½d
Saturday....	56c½d	56c½d	56c½d	56c½d	56c½d
Monday.....	56c½d	56c½d	56c½d	56c½d	56c½d
Tuesday....	56c½d	56c½d	56c½d	56c½d	56c½d

To-day's cablegram is as follows:

LIVERPOOL, Aug. 24.—Wheat—More disposition to buy. California spot lots, 5s 9d; off coast, 28s; just shipped, 29s 3d; nearly due, 28s; cargoes off coast and on passage, easier; Mark Lane wheat, very slow; wheat and flour in Paris, rather easier.

Eastern Markets.

The following shows the closing prices per bushel of wheat for the past week at

New York.

Day	Aug.	Sept.	Oct.	Dec.
Thursday.....	68½	72	76½	
Friday.....	68½	72	76½	
Saturday.....	68½	72	76½	
Monday.....	68½	72	76½	
Tuesday.....	68½	72	76½	

The following is to-day's telegram—per bushel:

NEW YORK, Aug. 24.—August, 67½; October, 70½; December, 75½.

Chicago.

Day	Aug.	Sept.	Dec.
Thursday.....	61½	61½	69½
Friday.....	61½	61½	69½
Saturday.....	61½	61½	69½
Monday.....	61½	61½	69½
Tuesday.....	61½	61½	69½

The following is to-day's telegram—per bushel: CHICAGO, Aug. 24.—August, 60½; September, 61½; December, 68½.

Local Markets.

WHEAT.

	New.	Dec.
Thursday, highest.....	1 07	\$1 13½
" lowest.....	1 07	1 19½
Friday, highest.....	1 05	1 16½
" lowest.....	1 05	1 16½
Saturday, highest.....	1 06	1 17½
" lowest.....	1 06	1 17½
Monday, highest.....	1 06	1 17
" lowest.....	1 06	1 17
Tuesday, highest.....	1 04	1 14½
" lowest.....	1 04	1 14½

*After Sept. 1.

The following are to-day's recorded sales on Call: Wheat—Morning—Informal Session—January—100 tons, \$1.16½ per cwt. Regular Session—December, 100 tons, \$1.14; 100, \$1.14; 100, \$1.13; 300, \$1.13; 800, \$1.13; 100, \$1.13; 800, \$1.13; 400, \$1.12. Seller 1893, new, after September 1st—200 tons, \$1.02; 100, \$1.01; 100, \$1.01 per cwt. Afternoon—December, 500 tons, \$1.12; 500, \$1.12; 100, \$1.13; 100, \$1.13. Seller 1893, new, after September 1st—100 tons, \$1.02 per cwt.

BARLEY.

	New.	Dec.
Thursday, highest.....	85	77½
" lowest.....	85	77
Friday, highest.....	69	76½
" lowest.....	69	76½
Saturday, highest.....	77	77½
" lowest.....	77	77½
Monday, highest.....	84½	77½
" lowest.....	84½	77½
Tuesday, highest.....	74½	74½
" lowest.....	74½	74½

The following are to-day's recorded sales on Call: Barley—Morning—Regular Session—December, 100 tons, 73½c; 200, 73½c per cwt. Afternoon—December, 200 tons, 73½c; 400, 73c; 700, 73c; 100, 73c; 100, 73c; 100, 74c. Seller 1893, new—300 tons, 65c; 100, 65c.

The Great Medical and Surgical Sanatorium of the Napa Valley.

The Rural Health Retreat is admirably located among the foothills within three miles of St. Helena village. The bus meets the railroad trains. It is open the entire year. The climate is all that could be desired in a medium altitude. Pure air and a plentiful supply of water from the famous crystal springs are some of the natural advantages enjoyed. The buildings consist of a main four-story building, 7 cottages, nestling among the cedars, madrone and live oak. In summer, some 30 tents are pitched in the grove, furnished with carpeted floors and necessary furniture for comfort. The main building is heated with steam, and has a passenger elevator. The Sanatorium furnishes the services of four physicians and surgeons, two ladies and gentlemen of large experience, graduates from the regular profession of medicine. Two have taken thorough post-graduate courses in N. Y., London and Berlin. Also from 10 to 20 masseurs, skilled as well in the use of electricity in all its forms, electro vapor and thermal baths, salt glows, sitz, hot and cold sprays, massage, and various other treatments with medicine when necessary. The treatment rooms are new, and the most elaborate in finish and appointment of any on the coast. The treatment is especially adapted for chronic difficulties of all classes, surgical and medical, and is dispensed in a way to improve the nutrition, thus insuring a permanency in health that could not otherwise be attained; hence, it is especially adapted to persons who are overworked, or from other causes are run down and weakened in nerve force. Send for illustrated pamphlet, furnished free. Address Rural Health Retreat, St. Helena, Cal.

Every Inventor Wants a Good Patent

Or none at all. To secure the best patents Inventors have only to address Dewey & Co., Pioneer Patent Agents, No. 220 Market St., San Francisco. There are many good reasons why Pacific Coast Inventors should patronize this Home Agency.

It is the ablest, largest, best, most convenient, economical and speedy for all Pacific Coast patrons. It is the oldest on this side of the American continent, most experienced, and every way reliable.

It has the largest library of Patent Law books, American and Foreign Patent Office Reports, scientific and mechanical newspaper files, latest works on science, art, inventions, and mechanical and other new discoveries.

Conducted from 1863 by its present owners (A. T. Dewey, W. B. Ewer and Geo. H. Strong) this agency has the best knowledge of patents already issued, and of the state of the arts in all lines of inventions most common on this coast.

Patents secured in the United States, Canada, Mexico, all British colonies and provinces, England and other civilized countries throughout the globe.

Caveats filed, assignments duly prepared, examinations made, and a general Patent Agency business conducted.

Established and successfully and popularly conducted for nearly thirty years, our patrons number many thousands, to whom we refer with confidence, as men of influence and reliability. Old and new inventors are cordially offered the complimentary use of our library and free advice, etc. No other agency can afford Pacific States inventors half the advantages possessed by this old, well-tried and experienced firm.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos., \$1 10 mos., \$2 15 mos., \$3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Treatise on the Horse and His Diseases.

By B. J. KENDALL, M. D.



36 Fine Engravings showing the positions and actions of sick horses. Gives the cause, symptoms and best treatment of diseases. Has a table giving the doses, effects and antidotes of all the principal medicines used for the horse, and a few pages on the action and uses of medicines. Rules for telling the age of a horse, with a fine engraving showing the appearance of the teeth at each year. It is printed on fine paper and has nearly 100 pages, 7½x10 inches. Price, only 25 cents, or five for \$1, on receipt of which we will send by mail to any address DEWEY PUBLISHING CO., 220 Market Street, San Francisco.

MAKE YOUR OWN GAS!

BADLAM BROS.,

519 Market St., San Francisco,

SOLE MANUFACTURERS OF THE CELEBRATED PEERLESS GAS WORKS. New process, safe and inexpensive, from \$100 upward. Light cheaper than coal oil. Send for catalogue and prices.

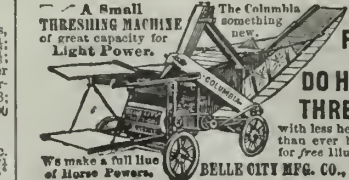
TREE WASH.

"Greenbank" Powdered Caustic Soda and Insecticide.

T. W. JACKSON & CO.,

Sole Agents,

No. 5 Market Street, San Francisco, Cal.

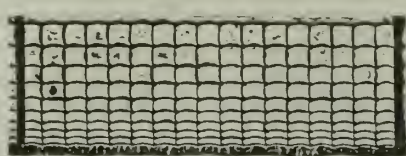


EVERY FARMER CAN DO HIS OWN THRESHING, with less help and power than ever before. Send for free illus. catalogue. We make a full line of Horse Powers. BELLE CITY MFG. CO., Racine, Wis.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.



All These You Can Have And Still Be Unhappy:

A little farm well tilled,
A little barn well filled,
A little wife well willed,
A little horse most killed

On the cruel harrowed wire. The use of Page Coiled Spring fence would have prevented such a catastrophe.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

A BEAUTIFUL PLACE

Comprising 4½ acres, within the town limits of Santa Rosa, well improved, has nursery of 50,000 trees, fine orchard, well stocked poultry yard (fancy varieties), house furniture, horse, carriage, etc. Everything in good order. Price reduced from \$10,000 to \$8000. Must be sold. Apply early.

JOHN F. BYXBEE,

42 Market St., San Francisco.

Almond Hullers FOR SALE!

— BY —
A. O. RIX, Irvington, Alameda Co., Cal.



FOR THE BEST IMPROVED
ARTIFICIAL LIMBS
ADDRESS
MENZO SPRING,
9 Geary St.,
SAN FRANCISCO, Cal.
Or call at
OFFICE 5.

WELL MACH'Y

All Kinds, Water, Gas, Oil, Mining, Ditching, Pumping, Wind and Steam Heating Boilers, &c. Will pay you to send 25c. for Encyclopedia, of 1500 Engravings. The American Well Works, Aurora, Ill. also, Chicago, Ill.; Dallas, Tex.; Sydney, N. S. W.

GRANGERS' BUSINESS ASSOCIATION, SHIPPING AND COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.

Full Cargoes of Wheat furnished Shippers at short Notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

A. M. BELT, Assistant Manager.

FRUIT PAPER!

RAISIN WRAPS, SWEAT PAPER

FROM THE MANUFACTURER DIRECT AT LOWEST PRICE.

Raisin-packers are advised that we will make and carry in stock the "Azure Blue" "Top Wrap," which has been used for years by the packers of Spain.

S. P. TAYLOR PAPER CO.,

414 & 416 CLAY STREET.....SAN FRANCISCO.



HERRMANN & HATTER

WILL GIVE YOU A BETTER HAT FOR YOUR MONEY THAN ANY STORE ON THE COAST.

Send for Illustrated Catalogue, mailed free.

332 & 336 KEARNY ST., SAN FRANCISCO.

DEWEY & CO. AMERICAN AND FOREIGN PATENT SOLICITORS ESTABLISHED 1860. OFFICE OF THE "Mining and Scientific Press" Pacific Rural-Press No. 220 Market St. TAKE ELEVATOR NO. 12 FRONT ST. SAN FRANCISCO, CAL.

Comparative Values of Timber.

In a lecture on timbers used for railway purposes, delivered by Mr. Goff, at the Railway Institute, Sydney, New South Wales, it was stated that timber when perfectly dry lost about one-third of its weight, and the following timbers shrink in breadth in drying as follows: English oak, 1-12; Riga fir, 1-32; Dantzic, 1-38; elm, 1-24; yellow pine, 1-38; pitch pine, 1-40; and kauri, 1-64. In his comparison Mr. Goff took English oak as a standard of measure of the qualities of strength, stiffness and toughness, and explained that by strength he meant the property which resists fracture or breakage whether as a beam or post; stiffness, the quality of resistance to flexure or bending; and toughness, the power to bend the most before fracture. The following table of comparative qualities of various woods was presented:

Variety.	Weight per cubic ft.	Strength.	Stiff- ness.	Tough- ness.
British oak....	45 to 58 lbs.	100	100	100
Baltic Riga oak	43 to 54 lbs.	108	93	125
American oak...	37 to 47 lbs.	86	114	117
Dantzic oak....	42 to 53 lbs.	107	117	99
Elm.....	35 to 46 lbs.	82	78	86
Pine or fir.....	29 to 42 lbs.	80	114	58
Poplar.....	33 lbs.	86	66	112
Mahogany.....	35 to 53 lbs.	96	93	93
Tamarack.....	32 to 40 lbs.	102	88	130
Walnut.....	50 lbs.	90	70	110

SHAPE OF EGGS.—Various attempts have been made to account for the diversity in shape seen in eggs. A recent study convinces Dr. Nicolsky that the differences may be all traced to gravity, and he finds his idea confirmed by all the eggs in the zoological collection of the St. Petersburg university. He supposes that pressure by the sides of the ovary tends to elongate the egg before the shell has hardened. In birds which keep a vertical position while at rest, as do the falcon and the owl, the soft egg is made short by the action of the weight of the body against the ovarian pressure; while in birds that, like the grebe, are nearly always swimming, the egg is lengthened, because the bird's weight acts with the compression by the ovary. The egg is made more pointed at one end than at the other in birds that, like the guillemot, are frequently changing their position, sometimes swimming and diving, sometimes perching on the rocks, etc.

Three and One-Half Days to the World's Fair.

We take pleasure in advising the readers of the PACIFIC RURAL PRESS that the UNION PACIFIC is the most direct and quickest line from San Francisco and all points in California to the WORLD'S FAIR. It is the ONLY LINE running Pullman's latest improved vestibuled Drawing-Room Sleepers and Dining Cars from San Francisco to Chicago without change, and only one change of cars to New York or Boston. Select Tourist Excursions via the UNION PACIFIC leave San Francisco every Thursday for Chicago, New York and Boston in charge of experienced managers, who give their personal attention to the comfort of ladies and children travelling alone. Steamship Tickets to and from all points in Europe. For tickets to the World's Fair and all points east and for Sleeping-Car accommodations call on or address D. W. Hitchcock, General Agent Union Pacific System, No 1 Montgomery street, San Francisco.

SITUATION WANTED.

A Lady, with boy of 7 years, wishes to assist in house, business, or with fruit, or to act as caretaker in owner's absence. MRS. JOSEPH JAMES, Buckeye, Shasta Co., California.

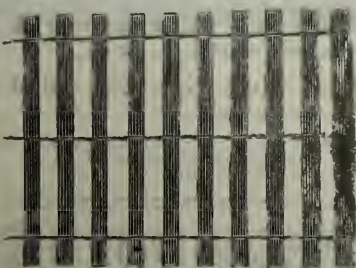
RABBIT-PROOF STOCK FENCE.

Cheap, Durable and Effective.

Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2½ ft., 4 ft., 4½ ft., and 6 ft. high. Send for circulars and price list to

JUDSON M'F'G CO.,

12 & 14 Fremont St. San Francisco.

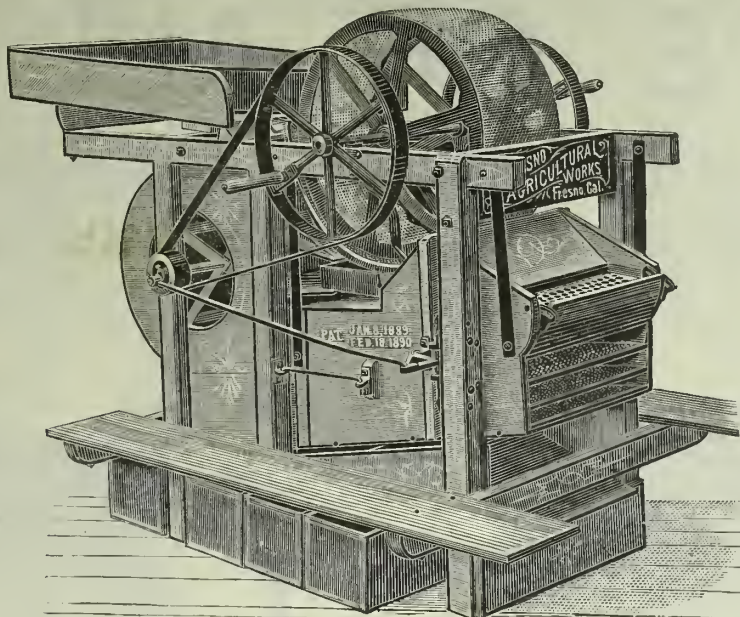


The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.

CALIFORNIA FRUITS

AND HOW TO GROW THEM. By Prof. Edward J. Wickson.

A practical, explicit and comprehensive book embodying the experience and methods of hundreds of successful growers, and constituting a trustworthy guide by which the inexperienced may successfully produce the fruits for which California is famous. 600 pages. Fully illustrated. Price \$3. Postpaid. Send for circular. DEWEY PUBLISHING CO. Publishers. 220 Market Street, San Francisco, Cal.

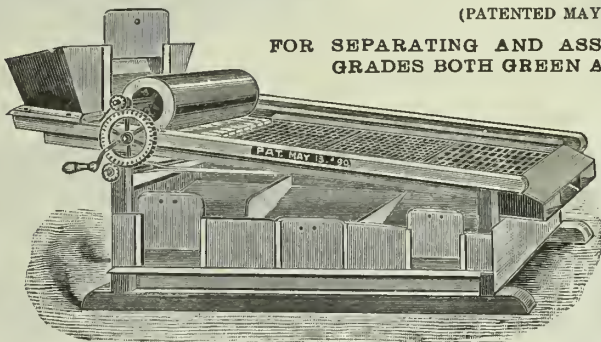


SEND FOR CATALOGUE OF RAISIN MACHINERY TO
FRESNO AGRICULTURAL W'K'S, FRESNO, CAL.

HAMILTON FRUIT GRADER.

(PATENTED MAY 13, 1890.)

FOR SEPARATING AND ASSORTING IN DIFFERENT GRADES BOTH GREEN AND DRIED FRUITS.



It is Simple, Durable and Efficient.

It has become the leading Fruit Grader of California. Col. Hersey has ordered three of these Fruit Graders this season. Send for catalogue and testimonials.

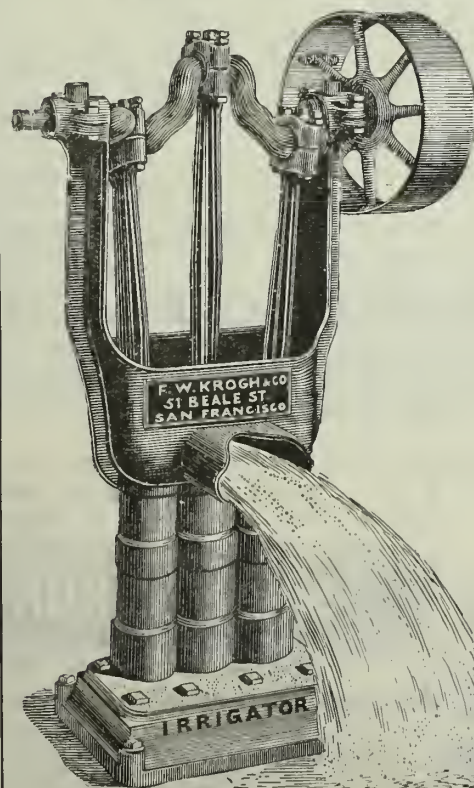
—A VARIETY OF—
Fruit Cars, Transfer Cars, Turn-
tables and Dipping Baskets
ALWAYS ON HAND.

MANUFACTURED AND FOR SALE BY
W. C. HAMILTON,

SAN JOSE..... CALIFORNIA.

F. W. KROGH & CO.,

51 BEALE STREET,
SAN FRANCISCO.



DEEP WELL

Pumps,

POWER PUMPS,
Steam and Irrigating
PUMPS,

— AND —

Pumping Machinery
OF ALL KINDS,

Also, several different kinds of
HORSE-POWERS.

F. W. KROGH & CO

Send for Catalogue and Price List.
Kindly mention this paper.



WEATHER
VANES

COFFEE
MILLS

For the Cheapest
and Best
SCALE

Of any style known
to the trade
Address

HOWE SCALE CO.

75 Front St., Portland, Or. 3 & 5 Front St., San Francisco

Grain & Store
TRUCKS

GROCERS'
FIXTURES

Seeds, Plants, Etc.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrabalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

ORANGE, LEMON & CITRON TREES.

If you have a Lemon or Orange grove, or wish to start one, remember that the success of your grove depends on the trees you plant. Common seedlings will give you a poor crop. Remember now that you are in time! If you will get your plants from this island, which, in point of fact, is the real citrus producing region in the world, in the course of time you will have a very prolific grove of the best Sicilian varieties. We only ship trees three years old, budded on the sour stock. Real trees and not common seedlings. Our leading varieties are: **ORANGE**:—Mountain, Etna, Aderno, Paterno, Binod, Oval and Mandarin. **THE LEMON**:—Messina, Mountain, Etna. **THE CITRON**:—Citrus Medica, Spadafara, Diamante, Perettone, Lemocella, Turk's Head, Lemuziana, Paradise, Etc. The fruit of the above-mentioned varieties is the one largely exported in boxes to the American markets from this island. We have made several successful shipments of plants to California, Florida and Louisiana. Special care in packing. Give us an order for one case containing 100 or 200 assorted trees. Remember that every dollar you lay out on Sicilian trees is a one hundred dollar bill you have gained in future. Apply:

G. SGROI & CO., Catania, Sicily.

AN INVITATION

IS EXTENDED TO ALL INTERESTED TO VISIT THE **SAUSAL FRUIT FARM** DURING THE FRUITING SEASON, WHERE ALL VARIETIES ARE TESTED THAT ARE GROWN AT

NAPA VALLEY NURSERIES.

AN INSPECTION OF THE NURSERIES ALSO SOLICITED. **CLEAN STOCK, UNIRRIGATED, PROPAGATED FROM BEARING TREES.**

LEONARD COATES, NAPA, CAL.

OLIVE TREES.

ALL KINDS OF
Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,
Pomona, Cal.

Dormant Buds FROM HEADQUARTERS.

I offer a very fine stock and assortment of **Dormant Buds** of Peach, Apricot, Nectarine, Plum and Plum. Prices low. NOW is the time to place your order. I also offer a general supply of choice nursery stock.

F. S. PHOENIX,

Bloomington, - - - Illinois.

C. H. EVANS & CO.,

(Successors to THOMSON & EVANS.)

110 and 112 Beale Street, S. F.
MACHINE WORKS,
Steam Pumps, Steam Engines
And All Kinds of MACHINERY.



DEEP WELL
PUMPS

BACK FILES of the PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. For year (two volumes) \$4. Inserted in Dewey's patent binder 50 cents additional per volume.

SEEDERS OF ALL KINDS.

SUPERIOR DRILLS, DEERE FORCE FEED SEEDERS,
PACIFIC, CYCLONE, GEM and CAHOON BROADCAST SEEDERS.



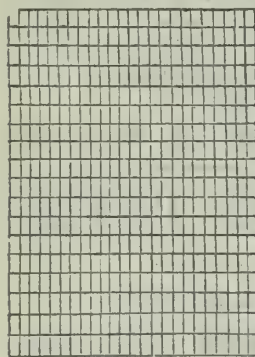
IMPROVED SUPERIOR SHOE DRILL.
Built With 12, 14, 16 and 20 Shoes.



SUPERIOR HOE DRILL.
Built With 12, 14 and 16 Hoes.

The frame of these machines is made of a single bar of high grade angle steel, with solid cold rolled steel axle, steel roller bars and steel draw bars. The corners are bent cold and are reinforced with a steel plate, making the frame very strong.

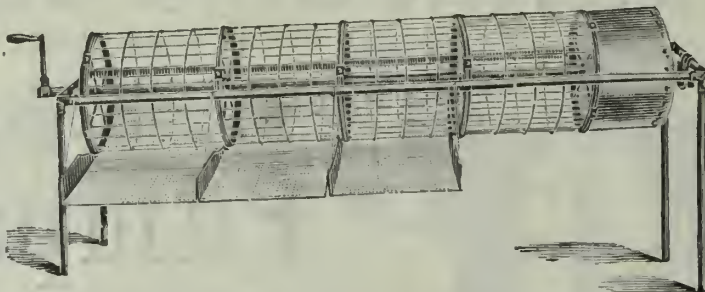
DEERE IMPLEMENT CO.,
305 and 307 MARKET ST., SAN FRANCISCO.



PRUNE SCREEN.

WIRE WORK OF ALL KINDS.

WINDGW GUARDS.
W R G U G H T I R G N
FENCING.
BANK, STORE AND OFFICE
RAILING.
STORE AND WINDOW
FIXTURES.
ORNAMENTAL WIRE
WORK.
ROOF CRESTING AND
FINIALS.
SIEVES, RIDDLES AND
SCREENS.
GALVANIZED DIPPING
BASKETS.
AND PRUNE SCREENS.

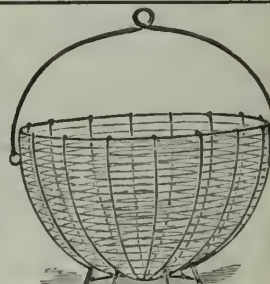


FOR GRADING
GRANGES, PRUNES,
OLIVES, WALNUTS,
PICKLES, ETC.

WILL GRADE GREEN OR
DRIED FRUIT EQUALLY
WELL.

IN USE BY PROMINENT
FRUIT-GROWERS.

PAYS FOR ITSELF QUICK-
LY IN SAVING TIME
AND MONEY.



DIPPING BASKET.

THE CYLINDER GRADER

IS THE MOST RAPID WORKING MACHINE FOR GRADING PRUNES, BOTH GREEN AND DRIED, that has ever been introduced. Wherever it was used last season it gave perfect satisfaction, both in the quantity of fruit graded and the way it did the work. The capacity is practically unlimited, as it will grade the fruit perfectly as fast as it can be fed into the machine.

I MAKE THREE SIZES OF THIS GRADER, from the large 30-inch cylinder down to a small hand machine for use of growers whose crops are small.
I FURNISH THE GRADER MOUNTED COMPLETE, OR THE CYLINDER ALONE, if, as is often the case, the purchaser prefers to mount it to suit himself. Send for circulars and prices.

D. D. WASS.

141-143 FIRST STREET.

SAN FRANCISCO, CAL.

HERCULES.

STEEL AND IRON.

The Best Windmill for Deep or Shallow Wells.

CENTRAL ACTION

DOUBLE BEARING.

Warranted to run with less
oil than any other
Windmill.

AUTOMATIC OIL BEARINGS.

THIRTY DAYS' TRIAL, IF DESIRED.

Deep Well Pumps, All Brass Cylinder Pumps.

PRICES ARE LOW—Save money by DEALING DIRECT
WITH THE MANUFACTURER.

Improved Davis, San Joaquin and Hercules
Windmills, Pumps, Etc.

Patent Non-Shrinkable Redwood Tanks.
Write for Prices.

ONE 15 H. P. OTTO GAS ENGINE FOR SALE CHEAP.

R. F. WILSON, WORKS, COR. MAIN & OTTER STS., STOCKTON, CAL.
OFFICE.....347 COMMERCIAL ST.,



FRANCIS SMITH & CO.,
MANUFACTURER OF

SHEET IRON & STEEL PIPE

FOR TOWN WATER WORKS.

Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes.

NO. 130 BEALE STREET, SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.



GEM STEEL WIND MILL WITH GRAPHITE BOXES.

Never Requires Oiling or Climbing of Towers.

Guaranteed more durable without oil than other mills that are sold. Practically, these mills require no attention. TRULY A GEM, and worth its weight in gold. It combines beauty, strength, durability and simplicity. Governs itself perfectly, is easily erected and is sold on its merits; in fact, it is the best mill on earth. They are geared back three to one—the wheel making three revolutions to one stroke of pump—making them run in the lightest wind or breeze. The mill is made entirely of Steel and Cast Iron. Each one of our Gem Wind Mills is warranted. If not satisfactory, freight will be paid both ways and money refunded. We also carry Pumps of all kinds, Tanks, Pipe Fittings, Hose, Etc. **WOODIN & LITTLE,** 312 MARKET ST., San Francisco, Cal.

SEND FOR.....

CATALOGUE...

MAILED FREE.

PACIFIC RURAL PRESS

Vol. XLVI. No. 10.

SAN FRANCISCO, SATURDAY, SEPTEMBER 2, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market Street.

The Midwinter Fair.

To keep our readers informed of the progress of a very important enterprise which is now being carried forward by San Francisco with the co-operation of the interior, we give in this issue views of two buildings which are to be erected for the Midwinter International Exposition in Golden Gate Park. This fair project has been urged with much energy and intelligence by the leaders of the enterprise, a large sum of money has been pledged, work is now in progress in preparation for the construction of the buildings, and, in short, the success of the enterprise seems in all ways assured. It is desirable, of course, that the

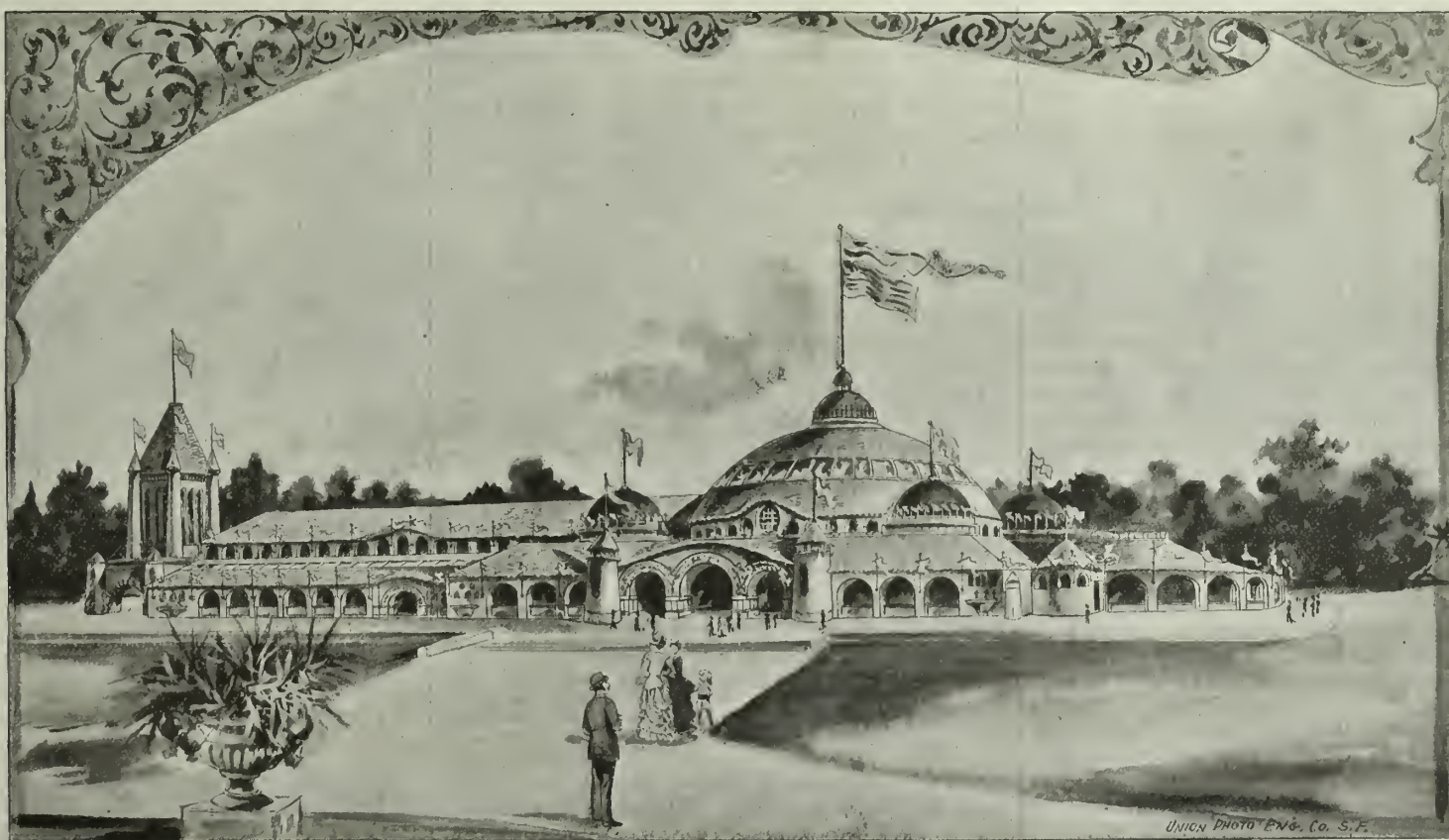
circling the globe. For these reasons we would invite our readers to the fullest interest and participation in this enterprise.

We expect to lay before our readers several engravings illustrative of the Midwinter Fair and its environment. We choose this week two which are especially significant, and we reproduce them from a very handsome publication which issues its first number this week under the title *California Midwinter International Exposition Illustrated*. It will be the authentic journal of the coming fair, and if maintained in its present style it will be a credit to the fair and to the State.

The building upon this page is that to be devoted to

beautifying and gala-like effects. It is to be 400 feet long and 200 feet wide, and completed at a cost of \$70,000.

Upon another page of this issue may be seen a view of the proposed fine art building as designed by C. C. McDougal. It is decidedly unique and original. It is planned to be fire-proof, being constructed of brick, to insure the safety of the valuable sculpture, paintings and other works of art it is to contain. The building will be 60 feet wide, 120 feet long and 40 feet high. It is an example of Egyptian architecture, or more correctly, perhaps, a collective illustration of the art of building as practiced by the Egyptians. In the entrance, flanked by full columns, the peculiar cave-like doorway is the cavern home of the



PROPOSED AGRICULTURAL AND HORTICULTURAL BUILDING FOR THE MIDWINTER EXPOSITION.

liberality and interest which are generally manifested should be universally shown forth, and that more funds may be contributed so that the full development of the undertaking, to the everlasting credit of the State, shall be attained.

The claim that to secure a notable success of this venture will prove of vast industrial importance to California cannot be questioned. Nothing could better focalize the rays of interest in California which have gone out to all parts of the world than to welcome the friends of the State and the seekers for new homes to a grand demonstration of our resources, industries and natural charms of earth and air, in handsome buildings in a beautiful park of a young and vigorous metropolis, while midwinter sunshine clothes the landscape with verdure and flowers, and midwinter air warms and stimulates to interest and to action. To do this will be to awake our own people anew to the wealth of their heritage and amass all in a new onward movement in life and industries which will lift our State wholly from the clouds of depression and distrust which seem to be en-

agriculture and horticulture. It follows the lines of the new and very popular mission type. The accepted design is by Samuel Newsom, who has produced an ornate and artistic effect. The building may be said to be in three parts, one of which is really an annex in the form of a tall redwood tower, about 80 feet high and 25 feet square. It will be connected with the main structure by a bridge. Of the main building the portion next the tower will be rectangular in form, with an open court in the center. This portion is intended particularly for agricultural exhibits, and in its spacious galleries the products of the field and market garden will be exhibited. The remainder of the building will be covered by a huge dome 100 feet in diameter and 100 feet high. Around it there will be a roof garden, and within it the treasures of the garden can be displayed. The triplicate arched entrance and the round windows over it are the particular pride of Mr. Newsom, and will be richly covered with ornamental work. To this, as indeed to all the buildings, hundreds of bright-colored banners and streamers will add their

Egyptian. The columns are grotesquely ornamented, and in the second story take the form of or give place to elephants. Above the portico is the type of building classed with the world's wonders, and a small pyramid surmounts the vestibule. The columns will all be of wood on the outside of a plain, solid rectangular fire-proof brick structure. The blank walls will be decorated in Egyptian style, the acquillæ being naturally very prominent. The estimated cost of this structure is about \$70,000. It will be lighted entirely from the roof, and will have apartments for the different branches of fine art work.

In addition to the buildings shown, there will be the Manufactures and Liberal Arts Building and the Administration Building, of which we will give views at another time. All these main buildings will be grouped around a central fountain. On one side will be erected the Manufactures Building, at its right corner south the Fine Arts Building. On the north is the Administration Building. On the diagonal will be Machinery Hall, and on the opposite diagonal the Agricultural and Horticultural Building.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING Co.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$4 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half inch (1 square).....	1.00	2.50	6.50	22.00
One inch.....	1.60	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, September 2, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—Proposed Agricultural and Horticultural Building for the Midwinter Exposition, 165. The Fine Arts Building of the Midwinter Fair, 167.
EDITORIALS.—The Midwinter Fair, 165. The Week: The Situation in Wheat; Miscellaneous, 166. From an Independent Standpoint, 167.
MISCELLANEOUS.—Wrongs of Nurserymen; A Golden Horse for California; The Hop Outlook; State Horticultural Society; At a Chicago Fruit Auction; Gleanings, 168.
HORTICULTURE.—Prune-Curing in the Santa Clara Valley; Preserving Fruit for Exhibition Purposes; The Best Apricot; California Citrus Fruit Growing, 169.
POULTRY YARD.—Experiments with Capons; Clover Chaff for Fowls, 170.
THE DAIRY.—Protein Food for Dairy Cows, 170. Improving Skim-Milk for Calf Feed, 171.
THE STABLE.—An Experiment in Feeding Horses, 171.
THE FIELD.—Tobacco Growing in California, 171.
SWINE YARD.—Lessons of Experience with Swine Diseases, 171.
THE HOME CIRCLE.—Miscellaneous, 172-173.
YOUNG FOLKS' COLUMN.—Miscellaneous, 173.
DOMESTIC ECONOMY.—Kitchen Lore, 173.
PARLORS OF HUSBANDRY.—The Master's Desk; From Live Oak; Honest Difference of Opinion; From Merced; Letter from New Hope; The Grangers' Bank; From Sacramento Grange; Notes, 174.
AGRICULTURAL NOTES.—175.
MARKET REPORTS.—177-178.

The Week.

This week brings us into the last third of this cross-grained, crooked and gnarly year. According to different degrees of croaking we have passed either one-third or one-ninth of the hard times; for the trouble is to last from one to three years according to the amount of dyspepsia the prophet has aboard. And now it is about time to begin to croak about a dry year. If we are not mistaken the sun spots are about right for it, the wild goose has flown north and the wild ass has brayed at the full of the moon. There never was a better time to get in a good paralyzing croak than at present. Let us predict again the horrors and hardships of '64 and '77, but meantime we advise that good care be taken to get all the produce from the fields, to provide plenty of trays to cover the fruit and plenty of wood in the shed. We never knew a croaker's dry year which did not prove a soaker. And would it not be strange, too, if the early rains should clear the skies of the gloomy clouds which have been so diligently conjured up? A heavy rain stops a revolution in Central America—a good rain has performed many cures in California and may renew confidence by giving people more chance to work and less to talk. Let all this resolve and thus it shall be.

AND NOW THE LABOR QUESTION TROUBLES are moved to the hop regions. At Ukiah there was a demonstration pending upon the arrival of a carload of Chinamen, but the Chinamen were dropped from the train two miles south of town and presumably reached the hop fields across lots. But there was another reception also awaiting them. The Indians held a grand pow-wow and war-dance also about two miles from town. The influx of Chinese has greatly excited the aborigines. It is reported from Oregon that the hanks cannot supply hop-pickers with money until the hops are in hale. Hop tickets will be legal tender for the first week of picking.

THERE IS TROUBLE ALOOF about the judging of wines at the World's Fair. The California exhibitors understood that their wines were all to be judged by disinterested foreign experts, but there now seems to be danger that they will be judged by one Californian, and he a special protegee of one California exhibitor. For this reason some Californians propose to withdraw from competition, but the Viticultural Commissioners are trying to get matters upon another basis.

THE LOS ANGELES COUNTY SUPERVISORS seem disposed to undertake an investigation to see what is the ground of the issue between the southern California horticultural commissioners and the State Board. The anti-pest work which these supervisors desire to do seems to bring them between the two contending parties, and the supervisors propose to find out "who frowd dat brick." They will have a merry time of an investigation.

The Situation in Wheat.

Although it cannot be claimed that there is any immediate prospect of higher values for wheat, there are a number of deductions of an interesting character which can be made from the features of the situation. The simple reason why any marked advance in values is unlikely is because there is more wheat in sight than the people can eat for some time. Orators sometimes encourage producers by the proclamation that the world never had too much good food. This may be true upon sentimental and humanitarian grounds, and it is also true, and a lamentable fact, that there is always a considerable fraction of the world's population which never has enough good food.

But these two great facts do not prevent a drop in values, or at least do not cause a rise in values, when in ship and warehouse, and in uncut fields there is discernible more than enough to supply the ordinary demands of commerce for a cereal year. This seems to be the chief reason to expect a considerable duration of low values, although, of course, it is possible that wheat may at least get its head out of the deep pit into which it has now fallen and thus do a little better in its own behalf. How much this will amount to no one can tell. Some of our growers evidently have confidence that it will be something worth while because they are still carrying the wheat they hypothecated last year, and are putting new wheat under the same blanket to convince the banker that he is safe in covering it. This course is one for personal judgment to decide. We can but hope that advantage may follow.

We read a somewhat characteristic remark of John Bull in a London exchange just received, that "the financial position in the United States does not improve, tangibly, and it is now clear to all onlookers that the only remedy is British gold, to be applied as occasion demands, which is frequently." We disregard the broad aspect of the question involved in the remark to acknowledge that gold received for wheat is really doing much to carry our people over a hard time. While our hanks do not advance money on wheat in warehouse they shell out the gold for wheat afloat, and the grower chooses a present measure of comfort as better than a possible future profit. It has been shown by a local contemporary that \$1,000,000 in gold has been put in circulation as equivalent for the wheat shipped during the first three weeks in August, and it is anticipated that \$2,500,000 will escape from the banks on the same route during the next three weeks. Although the price is so low that the grower cannot figure a profit and often shows a loss, it is better to have half a loaf than none, and to contribute that much to the public good in a troublous time.

And, speaking of having nothing, one can but count himself more fortunate than his British cousins, even with all the gold they have on Lombard street. The London Gazette of August 14th, gives its customary reports of the home crops and says:

It is with regret that we have to pronounce the estimates, as a whole, among the most unfavorable that we have ever published. Indeed, taking all crops into consideration, the returns of 1893 are worse than any received since the "black year," 1879. The hay crop shows up distinctly as the worst on record. There is no doubt that if we had had a separate return under feed it would be the worst ever made. Wheat comes out a little better than in the returns for 1888, and barley than in those for 1887, both being worse than in any year since 1879. Oats are better than they were in 1887, but worse than our reports showed the crop to be in 1879. The bean crop only once before for as many years as we have referred to has been as bad as it is this year, and the pea crop has seldom been lighter.

And this lamentable shortage in English home-grown food products also shows how little effect those supplies have on the world's values. There was a time when poor crops in England would lift the world's wheat price notably but now there are too many great supply regions. It may be a blessing to the English trade and manufacturing population, but it is crushing to the English farmer, and it is not wonderful that we see emigration again preached as the only cure for his hardships. And not only is the English crop of less influence in fixing values, but the United States has also less power in the same direction. Again we quote from the Gazette:

The advance in the bank rate here from 2½ to 3, and from 3 to 4 per cent, with a month, shows where the pinch lies, and whilst large purchases are being made of the wheat reserves at low prices for cash, the "visible supply" is beginning to grow bigger from the additions made to it of the new crop now being harvested. Under these circumstances, the probable deficiency of this year's wheat crop in the United States loses all effect on the market, because the world's granaries are oppressively full of wheat which will probably take another cereal year to clear away, even if all Europe had a short crop this year.

But all Europe has not a short crop and besides, Russia, India and other great supply regions have unusually large surpluses. On the whole, wheat seems to be in a bad way so far as any considerable improvement is concerned. And yet, for all the gold it brings us, thanks.

NEVADA may have deteriorated as a mining State, but in other lines it seems to be doing very well. Irrigation has done much for the State in recent years. Census

figures at hand show for 1890 as follows: Total acreage cultivated by irrigation, 224,403; total number of farms, 1341; farms irrigated for crops, 1167; average size of irrigated farms, 192 acres; average cost of water rights, per acre, \$7.58; average value of water rights, per acre, \$24.60; average annual rental, \$.84; average first cost of production, per acre, \$10.57; average valuation, per acre, \$41.00; apparent profit, less cost of buildings, etc., \$21.60; average value of products, per acre, \$12.92; cost of productive irrigation systems, \$1,251,000; value of same in 1890, \$3,714,000; increase in value, \$2,463,000; total cost of water and maintaining ditches in 1889-90, \$188,000; value of products, \$2,899,000; difference, \$2,711,000.

IT SEEMS THAT GREAT BRITAIN is to have a chance at our kind of hay, and they don't seem to take kindly to it at first. We read in a London exchange: "An experimental shipment of oaten hay has been made from Geelong and consigned to Messrs. Cruickshank and Lovell. In Australia, green corn, wheat or oats is habitually cut for hay, and is considered to be much more nutritive than hay made from grass. It remains to be seen whether, as stocks in England are low, our farmers can be induced to experiment with this rather new kind of fodder. It is understood that £7 a ton will pay the exporter." We can assure our contemporary that oaten, wheaten and harleyan hay is very good fodder. Our live stock has done well on it for the last half century—nearly.

IT IS TELEGRAPHED FROM FRESNO that the Cudahy Packing Co. of Omaha has offered to advance money to responsible vineyardists in that section with which to purchase hogs to eat the raisin crop on the vines. The telegram says: "By this means there need be no money raised to pay labor expenses for curing the raisins, and the unsettled condition of the raisin market makes it necessary that no chances be taken by the grower." It is all very kind of Cudahy and "raisin-fed pork" would doubtless be a drawing card for his products, but we do not imagine his hogs will get anything but refuse and second crop unless things should be considerably worse than they are at present.

EX-GOVERNOR R. PACHECO of California has been appointed one of the viticultural judges at the World's Fair. The following is the full list of judges chosen from this State: Dr. Charles E. Blake of San Francisco and David Starr Jordan of Palo Alto, liberal arts; T. C. White of Fresno, horticulture; Professor Rising of Berkeley, manufactures; William Irelan Jr. and F. White, mining; H. N. Rust of Pasadena, ethnological; Laura de Force Gordon of Lodi, silk; Addie Elliott of Santa Rosa, horticulture; Mrs. A. M. Nuttall, ethnological; Kate Douglass Wiggin of San Francisco, liberal arts; Romaldo Pacheco, viticultural.

THE LATEST NEWS FROM THE NORTH on the grain-hag famine is serious. It is announced that in eastern Washington not over one-tenth of the grain is yet harvested, though the supply of hurlap sacks is about exhausted. Merchants are unable to produce more. The simplest solution will be to bin the grain in the field, which most farmers are preparing to do, but still there will be an obstacle to overcome, unless sacks are soon obtainable, when the grain is sold for shipment. The present outlook seems to indicate that much of the crop cannot move before late in the winter or early in the spring.

THERE IS A MEETING being held this week in Chicago, a meeting of wool growers, to discuss the present situation of the wool interest as affected by the threatened tariff changes. On October 5th, at the same place, there will be a meeting of the National Wool Growers for the same purposes. These two meetings should result in some clear declaration of the facts about the wool producers' interest and some united action to meet portending disaster. California should certainly be represented at the meeting of October 5th.

THE ATTORNEY-GENERAL HAS ADVISED the prison directors that the act limiting sales of hags to farmers is class legislation, and therefore unconstitutional. This placed the directors in new trouble, and they adjourned for ten days to think it over.

TWO SAN JOSE PRODUCING COMPANIES made a joint shipment of prunes on Monday, consisting of 44,000 pounds, which will go through on special time, reaching Chicago in eight days.

THE DEPARTMENT OF AGRICULTURE has received cable advices to the effect that the French Government has determined to admit American forage into France free of duty.

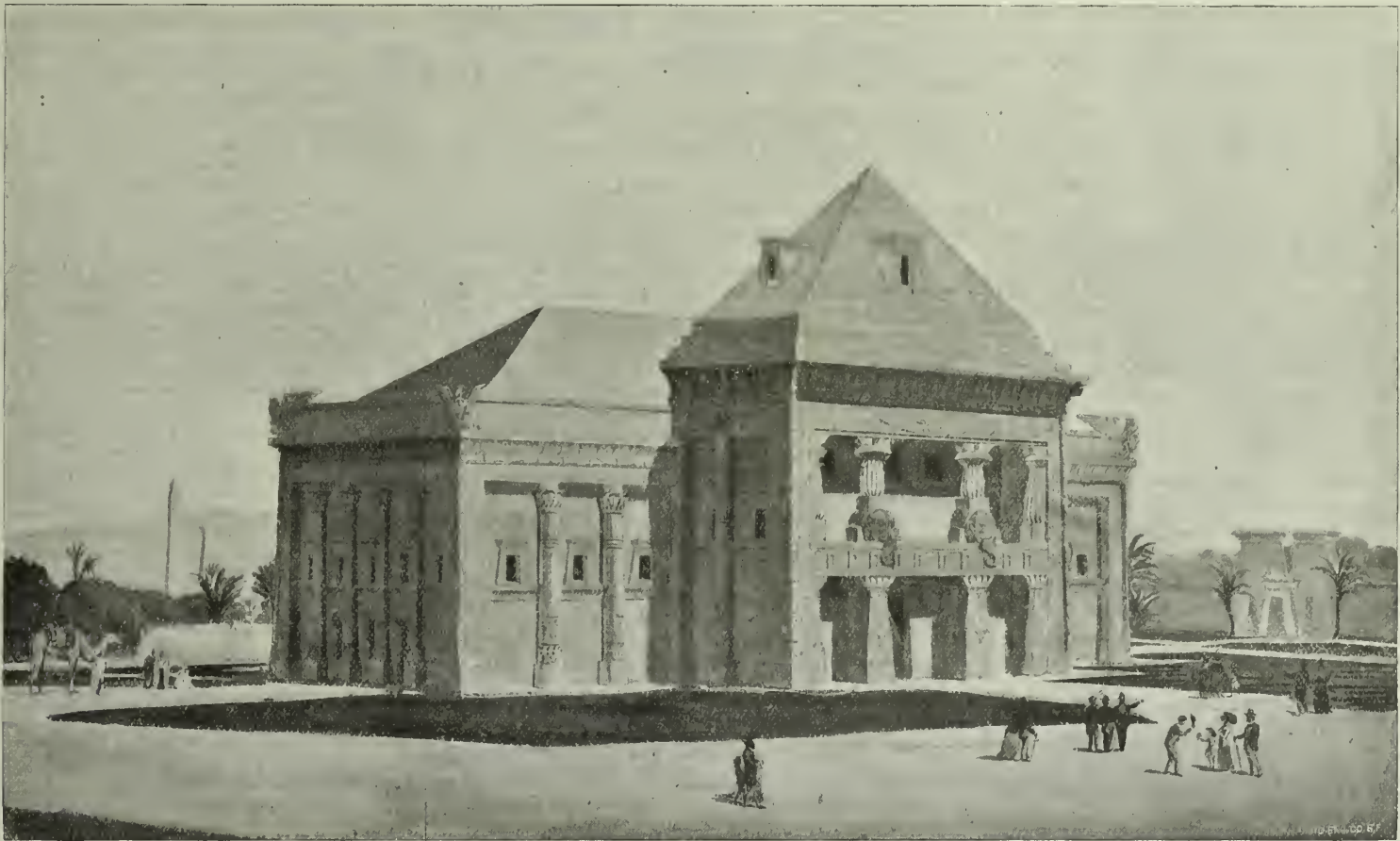
THE JUDGING OF LIVE STOCK continues at the World's Fair, and forms the center of attraction. The total admissions Monday were 160,669, of which 129,488 were paid.

From an Independent Standpoint.

On Monday of this week the House of Representatives decided by a vote of 240 ayes to 110 noes to repeal the purchase clause of the Sherman law. This outcome was generally expected, but the overwhelming vote by which it was accomplished surprised everybody. The anti-silver men had counted on a majority of from twenty-five to thirty while, until the balloting was well under way, the silver men had not wholly lost hope. The vote upon the direct question of repeal came after several divisions scarcely less significant and interesting. The first was an amendment by Bland, providing for free coinage of silver at the old ratio of 16 to 1, which was defeated by 220 to 124. The second was an amendment providing for free coinage at 17 to 1—defeated by 240 to 100. The third was an amendment providing for free coinage at 18 to 1—defeated by 239 to 102. The fourth was an amendment providing for free coinage at 19 to 1—defeated by 237 to 105. The fifth was an amendment providing for free coinage at 20 to 1—defeated by 222 to 119. The sixth and final vote was directly upon the question of repeal of the

in the tricks of the financial trade might speculate a long time before hitting upon the true explanation of this extraordinary situation, for there is nothing in common experience or in the common sense of things to explain why anybody should pay a dollar and six cents for a dollar. The truth is that the New York banks found themselves practically bankrupt over a month ago—that is, unable to meet in cash the demands suddenly made upon them—with apparently no alternative but to close their doors. In this extremity they hit upon the expedient of creating a currency for temporary use by the issuance of clearing-house certificates based upon the credit of the Clearing-house Association, which includes all the banks of the city. The plan is for the clearing-house to receive from its members deposits of approved securities or bills receivable and to issue against them certificates to the face value of seventy-five per cent of the value of the deposited collateral. By mutual agreement of the banks, these certificates are received and treated the same as money. In this way, during the past two months, a currency representing upward of \$37,000,000 has been created and put into circulation in New York. Of course the

In the meantime, the interests of the country call for more currency, must have more currency for protection against distempers like that from which we are now suffering, and to keep pace with the constant increase in the volume of commercial transactions. There are many propositions to this end, but that which seems most in favor at Washington is a suggestion that the national banks of the country be allowed to increase their circulation to the full amount of their deposits. For the information of those who may not wholly understand the national banking system, it should be explained that each national bank upon receiving its charter is allowed to deposit, with the national treasurer, interest-bearing government bonds in a specified amount to be held as collateral security for what is called its "authorized circulation." This circulation is an issue of notes provided by the Government, the whole amount allowed to be issued by any one bank being ninety per cent, or nine-tenths the sum of its deposited bonds. The Government guarantees this circulation, holding the bonds for its own security; and it is this guarantee that makes a national bank note go everywhere like any other piece of money. For the purpose of ex-



THE FINE ARTS BUILDING AT THE CALIFORNIA MIDWINTER FAIR.

purchase clause, and resulted, as stated above, in 240 ayes and 110 noes. After the first ballot, in which they were for straight free coinage, the Populists refrained from voting; and this was the only sign of party division. There was absolutely no line of distinction between Republicans and Democrats, each side of the House giving a majority for repeal. Of the Californians, Cannon and Geary voted for repeal, while Bowers, Caminetti, Hilborn, Loud and Maguire voted in the negative. The bill will now go to the Senate, and if that body shall follow the example of the House, nothing will be left of the Sherman law excepting its declaration of the purpose of the Government to maintain a parity between gold and silver.

It has been the expectation all along that the fight in the Senate will be a hard one, but the decisive character of Monday's proceedings in the House has weakened the silver forces. By voting down the several propositions for free coinage at varying ratios, the House has given the negative in advance to plans which would otherwise be proposed in the way of compromise. In short, the silver fight is practically lost, for the chances are nine to one that the repeal measure carried through the House will also be carried through the Senate. The only point likely to be made by the silver men in the Senate will be a definite reaffirmation of the policy of the Government favorable to bimetallism.

From day to day during the past month the telegraph has reported money "above par" in New York, with the percentage of premium ranging all the way from a fraction of one per cent up to six per cent. Those uninitiated

whole scheme is, broadly speaking, illegal, but it is perhaps not wise to scrutinize too closely an expedient which has saved the country from a repetition of the universal banking collapse of 1873. The premiums reported to have been paid for money have represented the difference between the current values of this certificate currency and actual money. Large employers and others compelled to meet obligations with actual cash have given the premiums reported, receiving ordinary money and paying for it with clearing-house currency.

The resort to this expedient which, under the circumstances, ought not to be criticised, is practical confession by the New York bankers of the inadequacy of our money supply. We get along without friction in ordinary times with ten per cent of cash and ninety per cent of business confidence (in the form of checks, bills of credit, etc.), but when a pinch comes, the ninety per cent takes wings and the ten per cent of actual cash will not do the business of the country. Whatever they may say about it, the bankers of New York have admitted by their recent course that the demands of those who call for expansion of the currency, are founded in the legitimate necessities of the country.

The wholesome and final way to expand the currency is to re-establish international bimetallism—that is, by mutual agreement and co-operation among the commercial nations, to allow free coinage of gold and silver at a fixed ratio of value. This is the logical, necessary and ultimate outcome. But the road to complete fiscal reform is a long one, and it will probably take a long time to get there.

panding the general money supply, the proposition now is to permit the national banks to increase their circulation to an amount equal to the full value of the bonds deposited with the Government. This would give them each in fresh currency another ten per cent of the value of their bonds deposited with the treasurer, and the result would be an addition of approximately \$20,000,000 to the volume of money in general circulation.

The objection to this proposition is the standard objection to the national bank system, namely, that it permits bond-owners to draw interest on their holdings and at the same time to have the use of the money (or, as the law stands, of ninety per cent of it) which these bonds represent. To adopt the suggestion now made to authorize a further issue upon the basis of the present bond deposit, would be in effect to give to a class already very rich a large volume of currency guaranteed by the Government without interest and without increase of their security obligations. It would seem that, if we must have more paper currency, and if the Government must be finally responsible for it, that a way should be found for the Government to issue it directly. Why would it not be practicable for Congress to provide that anybody who may hold a Government bond—a farmer or a mechanic as well as a national banker—may deposit it with the U. S. Treasurer and receive currency equal to its value, the bond being left as collateral security for the repayment of the money? Let it further be provided that while on deposit the bond shall draw no interest, but that the owner may redeem it at any time by returning to the treasury the amount for which it stands in pledge.

Such a system would at least have the merit of avoiding the peculiar vice of the national bank system which allows bankers the use of their capital and full interest on it at the hands of the Government at the same time. It would provide a "flexible currency"—that is, make a way for the increase or decrease of the volume of money as the times demanded. The RURAL is not proposing to join the already too-full rank of theorists who know it all, but it does seem to us that the plan above outlined, or something equally simple, would be fairer than to give another twenty millions to the national banks of the country.

Circumstances combine to give interest to the campaign now in progress in Ohio. Major McKinley, the Republican nominee for Governor, is the Apostle of Protection; while his opponent, Mr. Lawrence T. Neal, is scarcely less prominent as a Tariff Reformer. He was the author of the tariff plank adopted by the Democrats at Chicago and fairly out-Cleavelands Cleveland in tariff radicalism. The election will come at a time (November) when the financial question should be out of the way and when Congress will be about settling down to consideration of the tariff, hence it will have the political value of a special judgment upon the question of the hour. Broadly speaking, the odds are somewhat in McKinley's favor. He has the advantage due to universal personal esteem for a "favorite son" and was elected Governor in 1891 by a majority of 21,511 over Campbell, a Democrat who two years before was himself elected by a majority of 10,872. His election as Governor in 1891 was, however, upon general issues, and followed his defeat for Congress in 1890 upon the special issue which will again be tested this year. The coming election must, in the nature of things, have a profound influence upon the future policy of the Republican party. Should McKinley and Protection win by a decisive vote, then McKinley and Protection will be practically irresistible in the next Republican National Convention. On the other hand, should Neal and Tariff Reform win by a decisive vote it will set the Republicans to work upon a new scheme of party policy. In any possible event the election must have an important effect upon our immediate political future.

Wrongs by Nurserymen.

TO THE EDITOR:—In the RURAL PRESS of August 19th is an article headed, "California Nurserymen's Association," giving an account of a meeting held in San Francisco of some 25 nurserymen for reasons as stated by G. C. Roeding, who was chosen temporary chairman. One member spoke of protection against excessive damages which are sometimes claimed for trees not true to name, and upon motion the Executive Committee was directed to ascertain and to advise the members what measures could be adopted to protect the nurserymen in this direction.

The reason of this anxiety on the part of the nurserymen can be readily understood by asking some of the orchardists of the upper and lower Ojai valleys, to relate their experience in regard to trees "true to name." As I am told, several hundred peach trees (Muir) were bought of a nurseryman, planted out, and in due time (three years) grew some other variety. Who felt hurt, to speak mildly, and needed protection?

JOSEPH HOBART.

Nordhoff, Ventura Co.

[Wrongs by nurserymen are legitimate topics for discussion. No doubt, fruit tree planters need protection from careless or dishonest nurserymen. Our columns are open to such propositions from honest men like Mr. Hobart, but we take this occasion to say that we have no use for contributions to which the writer puts a nom de plume and then gives a false name and address besides, with the purpose of concealing even from us his true personality. A man who will endeavor to practice such deception has no right to preach against dishonesty in others. Fortunately we are sometimes able to detect even such an imposition as this and to consign the article to the oblivion which the writer seems to covet. We make these remarks because we have had to deal with such an article this week.—ED.]

A Golden Horse for California.

NEW YORK, Aug. 27.—Ormonde left for California tonight. With the \$150,000 stallion were the mares and weanlings imported with him, also five racehorses from W. O. B. Macdonough's racing string. They travel in a special train of horse palace cars.

The horses are shipped by the Adams Express Company. No company would take Ormonde unless his value was waived—that is, the horse is uninsured. The actual time of the trip will be about six days. Ormonde will be kept for the present at the Menlo Park stock farm, but later he will be taken to the new ranch owned by Mr. Macdonough. Lawson, the groom, who arrived with Ormonde, will make his home in California.

Ormonde has cost Mr. Macdonough \$50,000 in traveling expenses since he was bought in Buenos Ayres. His value when the California ranch is reached will exceed an investment of \$200,000.

The Hop Outlook.

Meeker & Co., the well-known hop growers and dealers of Pyallup, Wash., have just issued the following:

As the season for the hop harvest approaches, it is well to review the situation, to "put our houses in order" for the inevitable struggle coming to save the crop, and take into account the factors governing the markets, and hence the final result.

Statistically the situation is very strong, and so it was last year, and yet the market "slumped," and growers wondered why and blamed buyers for the drop in prices. The cause for this decline is not difficult to find.

First.—The quality was defective, caused by early picking and the ravages of lice.

Second.—Large blocks of the crop of the Pacific slope were consigned by growers to be sold on commission in London, which depressed the price, and always will, when such business is done. If there is anything an Englishman excels in, commercially, it is in shrewd buying. Let him know by the cable that hops sufficient are consigned, from which to purchase his supplies, he simply awaits their arrival, knowing full well that such are well out of the way of a competing market, and will have to be sold at substantially his own price. Such was the situation last year, and we warn the hop growers of the Pacific coast that such will be the case for this or any future year if a similar policy is pursued.

The remedy lies primarily in the production of a better quality. Relatively last year California stood at the head of the list as to quality, Oregon next, and Washington last, but neither of the two latter States produced the quality equal to their best, and may never reasonably expect a high price with inferior qualities.

It lies with the growers themselves to govern the question of quality.

First.—Let your hops mature before picking.

Second.—Pick them clean.

Third.—Cure them at a low temperature and thorough, and

Fourth.—Bale at once before the hops have time to take in moisture (toughen) and bale them whole; this last can not be done where the hops are tramped into the bale.

Keep your hops within reach of the competition of both markets; that of the United States as well as of England, and the buyers will come to you if you don't rush out after them. This firm never speculates in hops and never consigns upon their own account, but always sells by samples before the hops are shipped.

Notwithstanding the unprecedented drouth in England and the early severe attack of vermin, the cable from our own correspondent reports the estimate of the crop at 200,000 old duty, or substantially the same as last year.

Charles Whitehead's estimate is 30,000 old duty less than the foregoing. The production last year was 215,000 old duty.

Germany has fared worse, and reports from many districts are to the effect that the crop is almost a total failure. Nevertheless, in others it is good. Conservative estimates place the crop at 60 per cent of that of last year, which will bring the crop below the average, and with but few, if any, hops to spare for the English market.

New York will produce less hops than last year—probably 80 per cent of last year's crop. This shortage will be substantially made up by the increased yield of the Pacific slope from last year's acreage first coming into full bearing and new hops planted the present year.

So, upon the whole, the situation, as we have said, statistically is a very strong one. Let not growers, from that known fact, deceive themselves into the expectation of very high prices, or allow others to deceive them. Our Mr. E. Meeker, who is now in the East, has met many in the trade who firmly believe that the financial distress is certain to force hops to a low price (as it has already forced other produce down), particularly at harvest time, when the grower is in need of harvest funds. The same factor, on the other side, prevents free operations of dealers or free purchases from consumers, hence a restricted, slow domestic trade as expected.

England will want a large block of our hops, if suited to their wants, variously estimated from 60,000 to 100,000 bales. The English buyer will wait for samples or for arrived hops, knowing full well from all past experience that his "sovereigns" will fetch them sooner or later, one way or another. It rests with the grower to say whether his hops shall be sold at home and the money paid him at home or in a foreign country by parties whom he cannot know or control, and who, however honest, are subject to the laws of trade, that he who runs after a buyer must need suffer in price.

State Horticultural Society.

An interesting meeting was held at the State Board of Horticulture on August 25th, President Lelong in the chair.

A report was received from a committee which recommended that fruit-dealers and railroad statisticians be requested to use the term "fresh fruits" instead of "green fruits," to distinguish those that reach the market in their natural condition instead of being canned or dried. The recommendation was approved by the society.

A letter from the imperial Russian consulate at San Francisco was read, inviting California fruit-growers to send exhibits to a show which the Russian Society of Fruit Culture will hold in St. Petersburg in the autumn of 1894.

President Lelong gave an account of what he is doing to secure a fine fruit exhibit for the Midwinter Fair. He stated that he had written to different fruit-growers throughout the State requesting choice samples for exhibition. Last week he received 400 boxes, but out of these scarcely more than 20 could be used, as the fruit was badly packed, and had spoiled on the road.

President Lelong went on to advise would-be exhibitors to wrap up their fruit carefully, and place it on layers of

fine straw, using small wooden boxes for packing. "As the exhibits arrive," he said, "they are photographed and preserved in glass jars. On the jar is pasted a label giving the name of the fruit and a description of where it was grown, also its general characteristics and its color. However carefully fruit is preserved it changes color slightly.

"What we want is an instructive exhibit, and one not merely for show. We ask especially for choice varieties of fruit, properly named, and for small branches of walnuts and almonds. If any one is willing to preserve the fruit in his own orchard the State Board of Horticulture will send jars and materials and pay the shipment both ways. A number of jars in various parts of the State have already been filled in the orchards."

Mr. Lelong also spoke about materials for preserving fruit for exhibition, in the same lines described by him in a letter upon another page of this issue.

Capt. Brainard of San Jose read a paper on prune curing in the Santa Clara valley, which is published on another page.

Before adjourning the society resolved to devote the September meeting to a consideration of how best to push the sale of California fruit. The following gentlemen will be invited to take part in the meeting: Col. Hersey, of the Santa Clara Fruit Exchange; L. W. Buck, of the California Fruit Union; A. G. Freeman, of J. K. Armsby & Co.; N. S. Salisbury, of Porter Brothers Co.; Mr. Porter, of Porter Brothers Co., and the traffic managers of the Southern Pacific and Santa Fe railways.

At a Chicago Fruit Auction.

Mr. H. E. Parker, of Penryn, recently gave in the courthouse at Auburn a lecture on his observations at the World's Fair, and among the things he said, as reported by the *Placer Herald*, was the following:

I attended a sale on July 3d, in Chicago, a city of 1,500,000 people, where there are from 5000 to 10,000 retail dealers. Some seven or eight carloads of California fruit arrived the day before. There was no notice of the sale in the papers the day before, not a word. The fruit was piled in the warehouses so as to expose all the different varieties. I discovered but two or three boxes that were not in good order. The lots were numbered according to the variety. In an upper room the fruit was sold at auction. In the sale-room were only 48 persons, including myself, and yet outside were the retailers in throngs hungering for the fruit, but could not get in. The members of the Fruit-Buyers' Union, who form a ring to make money at our expense, alone were in the room. Peaches that sold for only 65 cents were on the stand next day at a cost to the retailer of \$1.75. The same is true of cherries and other fruits. All the retailers I talked to said they were anxious to have a chance to bid, but under the rules of the buyers' ring they could not. The only remedy I know of is for the growers to combine and conduct their own sales and allow all buyers to come in and bid. When we do this we shall hear no cry of overproduction and the producer will make money.

Gleanings.

—It is a strange meteorological fact that the sun never shines so hot on a baseball ground as on the harvest field.

—San Jose *Mercury*: Those Tlulare men who think that our soil is impoverished, will please take notice that it has developed a white French prune just for hy-play.

—A Chinaman who owns a store at Borden, Madera county, and whose name is Yee Chung, has, it is said, made fruit contracts in Kings county so far this summer to the amount of \$13,000.

—The Redlands *Facts* believes that in placing a bounty of 20 cents on jackrabbit scalps the supervisors have made a mistake. The amount is too large and will simply lead to rabbit farming on a large scale.

—"I say," said Fuddles, who sometimes thinks he is smart, "what sort of fruit can you raise on an electric plant?" But Faddles, who also thinks he is smart occasionally, promptly replied, "Currents."—Washington Star.

—Noting that certain citizens of Redlands are "advancing irrefutable against the holding of the Midwinter Fair," the *Facts* suggests that "They ought to supplement them with a few irrefutable arguments against the coming of Christmas."

—The raisin crop of southern California this year will be the largest ever produced not only on the account of the large number of new vineyards that are coming into bearing, but on account of an unusually large crop in the older vineyards as well. This season seems to have been just what the grapes have needed to bring them to a perfect maturity, and they in turn have taken advantage of all the favorable conditions. The next month will witness busy scenes in the vineyards of San Diego county.

—A calculating citizen of Wheatland, says the *Four Corners*, estimates the following as the result of his wife's labor in a hop field: Received at 1 cent per pound daily average 150 pounds \$1.50; or \$45 for 30 days; paid \$2 for box; \$1 for shade; 50 cents per day for meals, \$15; for doctor's bill, \$25; for extra lamp light, (estimated) \$2.80; for medicine, \$6; extras for lunch for the season, \$7.25; for loss of time in accompanying his wife to and fro, \$12; for loss on sole leather, \$2; for loss in business occasioned by bad temper, \$89; total, \$162.05. Balance in favor of loss, \$117.05.

—This from the *Livermore Herald*: It has been customary ever since sheep shearing was inaugurated to "commence clipping" at the head of the animal, (says the Yolo Mail). In passing through the country recently where a farmer was shearing sheep, the passer-by noticed that the operator commenced shearing the sheep at the reverse end. The strange proceeding caused the looker-on to inquire why he did not commence clipping at the head in accordance with the established custom. With a feeling of remorse the farmer replied that he had voted for Cleveland last year, since which time he had not had cheek enough to look a sheep in the face.

HORTICULTURE.

Prune-Curing in the Santa Clara Valley.

[By Captain H. A. Brainard of San Jose, at the August meeting of the State Horticultural Society.]

The prune in California has become so well known that it would seem in a manner useless to speak of the methods of curing, yet it is in fact true that in places where the prune has only been recently planted the best ways of curing are not so thoroughly understood. And not only the methods of curing in order to meet the demands of the market are worthy to be considered, but, in view of the close competition which is likely to arise, and the increasing amount of fruit that is likely to be produced, the methods of handling must be such as to reduce the expense to the very lowest point.

Eight or nine years ago such a process as grading prunes into definite sizes was unknown. Each lot was bought or sold on its merits and general appearance and could not be described, as is now so easy to do.

Santa Clara valley has the distinction of being the oldest district in the State in the matter of prune-growing and curing, and still produces the great bulk of this fruit. It is natural, therefore, that the methods there pursued should be those which the judgment and experience of several years have called out; and without further preliminary I will proceed to set forth the best methods, or, at least, the methods pursued by the best growers and curers in that locality.

Gathering.—It is now the general practice to allow the fruit to become so ripe that a very gentle shake will detach it from the tree. It must be so ripe that no stems will adhere to the fruit. It was formerly, and still is, the practice with some to level off the earth under the trees with a rake and make it very smooth and even, and to allow the prunes to drop of their own accord or with a very light shake, picking them up by hand, but the general practice is to shake them down, either upon a simple canvas or upon a canvas one edge of which is fastened to the body of an orchard truck, the canvas being divided for a part of the way so that a part may be spread on each side of a tree. Sometimes there is a screen between the canvas and the truck to separate the leaves, sometimes not. There are still other forms and arrangements by which the canvas is spread or arranged under the tree, and the fruit conducted into boxes, either on a truck or on the ground. Prunes can be gathered very rapidly in this way. The tree is only shaken lightly, and the fruit gathered every two or three days.

Grading.—The practice is now almost universal to grade the fruit as it comes from the orchard. By far the greater number grade into two or three grades only. Mr. Lieb grades his into six grades.

Trays.—Trays for drying prunes are made either 4x8 feet or 3x6 feet, the larger size being most used, as two men are required to handle either size. Mr. Lieb has receiving boxes for his grader, made of such a size that a box-full is exactly equivalent to a tray-full, ascertained by experiment. Where prunes are graded the leaves and very small prunes are separated in the grading.

Dipping.—After grading, the prunes are dipped in a boiling solution of lye. Different operators differ as to the strength of the solution, generally using a pound of lye to ten gallons of water. The strength is adjusted as the dipping proceeds, adding water and lye and keeping it at a strength which makes it work well. The simplest way to dip is, a large kettle or tank for the lye, a wire basket for the fruit, with a pulley and rope to lower it into and raise it from the solution. There are two types of machines for this purpose. One type has an endless belt on which the prunes are poured; this descends into the boiling lye, carrying the fruit with it, rises again, and again descends into a tank of clean water, where the fruit is rinsed, then carried out and deposited on the trays or in a bin from which the trays are filled. The speed of the belt can be regulated so that the time of immersion can be varied. The other type consists of a large perforated dipper in the hot tank, hinged at one edge. The fruit is placed in this, and with an easy up and down motion by means of a rope and pulley, the fruit is exposed to the action of the lye for a sufficient length of time and then, by another pulley, dropped over into the cold water tank where it is rinsed in the same way and dumped either on the trays or into a bin as before. This machine can be arranged to operate by power by a system of friction wheels and levers. The object of dipping is to remove the varnish with which the fruit is covered, and to crack the skin into minute cracks, which causes it to dry very quickly. After dipping, the fruit is spread on trays. The tray is placed on a sloping frame and the fruit poured on the upper end, when it will almost spread itself. There are other arrangements for this.

Drying.—The drying ground is arranged usually with a railroad track across one end or side, the track having a gauge of about four feet. On this runs a transfer car, the platform being very low. On the platform of this car is the narrow gauge car on which the trays are loaded. At right angles to the transfer track are narrow-gauge tracks running across the drying ground, these tracks being from 84 to 110 feet apart. Thus the transfer car with its narrow-gauge car on its platform can be run along to the proper track, and then the narrow-gauge car can be run out into the field, the trays removed and placed on the ground. Here the fruit remains until nearly dry. Then the trays are stacked for a day or two till cured. The fruit is then removed to the storehouse and placed in piles or bins to sweat and complete the curing process.

When cured, the fruit is run through the dried-fruit grader and graded into the standard sizes. If the fruit is dipped, it is dipped into boiling hot water for a moment, a pound of glycerine being dissolved in the water to give a finish and to restrain a tendency to sugar or become oxidized. Whether dipped or not is decided by the demands

of the market. It should be dipped previous to boxing. This insures a perfect freedom from eggs of insects and a fine, flexible condition which facilitates packing.

General Remarks.—This is the general way in which the common or California cured prunes are prepared. On cutting one of the prunes open, you will see that it is of a bright, fresh yellow color, requiring only to be soaked in water to separate into its original condition. Some driers have tried to imitate the French curing, which certain customers used to the French prunes demand. Mr. S. F. Lieb formerly prepared a good many tons each season, cooking them by steam in close iron cylinders, the heat being regulated by a complicated electric apparatus, so that the results are uniform. Mr. Lieb tells me he has not prepared any prunes in this way for two years, owing to the limited demand. Sorosis Fruit Farm prepares prunes in a somewhat similar manner, enclosing and sealing them in air-tight cans. They find a demand for this kind of fruit. It is said that the English people are fond of prunes cured in this way, and it is probable that if we wish to seek that market, we must prepare our prunes in some such way. We may educate them to our California prunes, which are really the best, but the Englishman is slow to educate and it will take time. Probably not a hundredth part of the prunes are processed in any way different from the common California way, which is in reality the best way ever practiced, and we think tastes will eventually come to recognize this.

Only a very few prunes are evaporated by artificial heat in Santa Clara valley. They have been dried for a day or two in the sun and then finished in an evaporator. It does not pay, and is going out of practice.

Only the finest fruit is packed in boxes; the greater portion in sacks. Perhaps the difference in freight rates may make a change. Popular packages are about 4, 10, 25 and 50 pounds weight.

Some of the large driers have arranged machinery so perfect that almost the whole work is done automatically. The fruit as it comes from the drying ground is carried by endless belts to the graders, from the graders through the dippers, and deposited in the bins ready for packing, and it is said that the cost is no more than a quarter of that of grading, dipping and moving by hand labor. In most of the driers the graders are run by steam. Steam is used to heat the lye solution and perform a great deal of the labor of handling.

If a grower has prunes from a single orchard, or orchards growing fruit of a uniform quality, carefully grading the green fruit may answer once for all, but as a general practice the green grading is simply to facilitate uniform drying. It must be graded after drying to get accurate grades.

Preserving Fruit for Exhibition Purposes.

TO THE EDITOR:—I wish to add a few pertinent suggestions to Mr. Maslin's article in last week's PRESS on "Preserving Fruit for Exhibition Purposes." The preservatives that have given the most satisfaction are, as Mr. Maslin states, sulphurous acid gas and bisulphite of soda. In preparing the former, many have met with disappointment because of lack of experience, required to make it uniformly, by not following the details closely. To those contemplating the preparation of fruit samples, I would advise to procure sulphurous acid, which can be obtained from our wholesale druggists. Mr. Justinian Caire and Messrs. Reddington & Co. of this city will furnish it in five-pound bottles at 35 cents per pound. Two ounces of sulphurous acid to the gallon of water is the required amount to preserve most fruits. In using the acid, better results will be obtained than by undertaking to make sulphurous acid gas, especially without some experience. Of bisulphite of soda, Mr. Maslin undoubtedly refers to "commercial bisulphite," which he and I have used extensively. Recently, I found it to contain so many impurities and to deposit so much that I have discontinued using the "commercial" altogether, and have substituted Merck's Dry Pure Sodium Bisulphite, obtained from wholesale druggists in pound bottles, costing 65 cents per pound. In using pure sodium bisulphite the quantity required is much less than of the "commercial." I use one-half ounce per gallon of water and add four ounces alcohol. The addition of alcohol prevents the fruit from bursting. Pure sodium bisulphite does not deposit, and the solution is applied to the fruit as soon as it is dissolved. To prevent floating particles from going into the jar, the solution should be passed through cloth or filtering paper. Great care must be used not to allow these acids to come in contact with metals of any kind. In using sulphurous acid, the best way is to place the fruit in the glass jar, which must be clean, and fill it with water. After leaving it stand a half hour, to allow the air to escape, pour in the acid and cover immediately.

In using bisulphite of soda, the required amount should be placed in the glass jar, a half pint of water poured on it, and leave standing. The soda will soon dissolve, then the jar is filled with water and the required amount of alcohol added. The solution is then passed into another jar through cloth or filtering paper, then poured on the fruit and covered immediately. B. M. LELONG, Sec'y.

The Best Apricot.

TO THE EDITOR:—Would you please inform me through the columns of the RURAL PRESS which is the best kind of apricot to plant out for all purposes, and what is the best root to be grafted on?

San Jose.

The best all-around apricot is the Royal, and the best root for it on good, well-drained orchard soils is the peach root.

If Mr. Emil E. Kusel, who addressed the State Board of Agriculture for information regarding scale on orange trees, will send his address to the secretary, E. F. Smith, at Sacramento, he will be answered.

California Citrus Fruit Growing.

There was a horticultural assemblage recently in the California Building at the World's Fair, at which G. W. Garcelon of Riverside read an essay on the above subject, from which we make the following selections:

As regards varieties of the citrus fruits grown on the Pacific slope: First, we will consider the orange. No doubt the majority will allow the Washington Navel to lead. It surely ripens earliest in California. Our holiday trade is supplied with this variety. Although well colored at that time it is far from being in its best edible condition. This fruit was first grown in California by Riverside orchardists, and the condition of soil, climate and care brought the good qualities of it to such prominence that it is worthily a general favorite. The Washington Navel orange had its origin in Bahia, Brazil. It was sent to Washington, D. C., from Bahia as one of the best. From Washington, Florida and California received specimen trees. While Florida—especially the Indian River territory—is famous for the excellence of her oranges, the Navel has not been a favorite with the growers, as, owing to some conditions of the country, the young fruit of this variety drops so much as to make its production less profitable than other varieties. Probably irrigation, which is the rule in California and not considered necessary in Florida, may be the reason. If some varieties of orange trees are allowed, during their fruiting season, all the moisture they would take, it might stimulate the growth of wood at the expense of the fruit. Perhaps there is no variety of orange which, when at its best in Riverside—March and April—combines so many good qualities as the Washington Navel. Being seedless, good-sized, high-flavored and juicy, very attractive externally with its peculiar marking, advertises its merits and has reached a very enviable popularity. Yet the danger is that too many trees of this variety may be grown, as two months is the length of its annual reign; and to be marketed when at its best might very materially overstock the trade and reduce profits.

The Seedling orange of California is put on the market in February, but should not be, unless grown in most favored locations, before from the middle of March to the 10th of May, which is the period that this variety is at its best. Just here allow me to say that the oranges become often well colored before they are suitable for consumption, and the reputation of different varieties suffers almost irreparably because marketed too soon and kept on trees too late. During the exhibit of Riverside oranges at the World's Fair, of which I had charge, I called the attention of many lovers of this fruit to the good qualities of varieties of oranges which, while in California during the early winter, they had rejected, and became very much prejudiced against. Such persons changed their mind and accepted with thanks my explanation. Our orange-consumers should become better educated in the seasons of the different varieties, and not be at the mercy of many unscrupulous dealers, whose only object is to get the fruit at lowest figures, and sell for large profits, regardless of the reputation of the grower or satisfaction of the consumer.

Beginning from the middle of April until the first of June the varieties of Bloods, Paper Rind St. Michaels, Mediterranean Sweets, Valencia Late, King, etc., are in season, and growers of these varieties should make as great an effort to put them, when at their best, upon the market as to grow them; for in these days, when tastes are being cultivated for the best of fruit, it will soon be true, to the loss of the careless and indifferent producer, that only the fittest will survive and pay. Our duties are not done in growing, for we owe it to ourselves, if we desire the best of results, to make sure that our products reach the consumer in the very best condition possible. Our object, then, should be to not only use our best diligence in selection, but be careful in growing, careful in handling, and see that our products reach our patrons through the very best possible agencies.

For the past three months I have not been an idle spectator to the methods of Chicago in handling citrus fruits, and feel sure that if the blame for spoiled fruit could be properly located, and damages assessed accordingly, much of the evil could be averted. Only responsibility, with liability for damages, will rectify many of the evils between the grower and the consumer, and we should have laws that would not permit the penalty to fall upon the innocent. So long as it seems to be necessary and right to pay to the workman higher wages than those countries which have like productions, a moderate tariff only sufficient to make up the difference in wages should be tolerated. This, to my mind, is so one-sided that no political party should make any division upon the question. Unfortunately for many interests, politicians will split hairs upon topics where there is hardly a ghost of a chance for a difference, only to secure some new opportunity to obtain public office.

Lemons, on account of the extra attention required after the fruit is produced to make it marketable, have not been so popular with growers, yet all admit that a lemon is a necessity, while an orange is still classed among the luxuries. Lands suitable for growing lemons profitably are rarer in the United States than orange territory. It is wise in case the object is to secure lands for growing lemons, to not too readily fall into well-laid and wily schemes of some unscrupulous real estate men, but examine critically the merits of such claims before purchasing. Unfortunately, California, like other States, has received much injury from exaggerated tales in the hands of those whose sole object is to pocket a commission or make a sale, and much time and money would be saved to the investor if he makes haste slowly, to invest in what he needs. California has some of the very best and most productive lemon lands, but they are not always located where the owner's interest influences him to conclude. In our State, like seedling oranges with more disastrous results, seedling lemons have until within a few years been to the front, so far as production is involved, but very much in the rear, so far as satisfaction to the consumer and profit to the grower. Yet when one has a seedling lemon tree which has cost him time, money and years to grow, he is very loathe to uproot it, or even bud it

with other and better varieties of lemons, for the root of the seedling lemon tree lacks the vitality of the orange, is liable to gum disease, very often influences coarseness, and roughness in the fruit. It has been *rightly* concluded that orange stock is the best on which to bud and grow the lemon, and to-day the leading varieties to bud are the Lisbon, Eureka and Villa Franca.

The Lisbon, in my opinion, leads, because it has all the desirable qualities required to make a first-class fruit—in appearance, in quality, and in quantity of acid, and, when properly treated, in keeping qualities. The origin of this variety is not clearly defined. The original Lisbon lemon trees of California came from Australia. If its name is a true intimation of its origin, then of course we know—but names are not always given as an indication of where first produced. Yet, if its origin is *obscure*, we will not take from it the place where its merits demand.

The Eureka is a thornless, first-class lemon; it is quite popular in California, and by some is considered the best.

The Villa Franca is a later introduction in our State. I think Florida sent it to California. I have not grown it, but readily concede some very good points in its favor, provided the specimens I have seen were true to its name. This lemon has been exhibited at our citrus fairs in California, and the different exhibits varied so that it was hard to conclude which was the true Villa Franca. I have heard of a lemon grower who purchased a lemon orchard with budded varieties, of which the name was lost and he named them to suit himself and the demands of the market. This may be enterprise for the pocket, but very confusing, all will admit.

We need very much competent experts in nomenclature in California. It is amusing to go through different orchards and find the same fruit introduced to you under different names. Sometimes, as in case of lemons when budded on lemon roots, a branch of the original tree will grow out undetected, and when it does it will make up for lost time by luxuriant growth of wood, and if its fruitage is heavy and the orchard changes hands—of course it is true to its name—and buds are taken and put into new trees, so that we are all at sea without a compass.

It is claimed that a seedless variety of lemon is being introduced as the Royal Messina, and bids fair to compete favorably with the best for popularity.

We grow limes in California. Demand outside of our own State is small, and the trees being more tender than oranges and lemons, not much attention is given to this product.

Grape fruit, pumalos, shaddock, etc., receive more or less attention, according to demand. Grape fruit is a production that is quite rapidly coming into favor on account of its medicinal qualities, which first attracts it to its consumers, who afterward acquire a taste for the fruit and become quite fond of it.

As I have before stated the growing of citrus fruits in our county is in its infancy. There is plenty of room for progress, although we are on the road, and if we wish to keep up in the procession, so as to supply our own country with the best, we must be alert, for many centuries have given much experience to those with whom we would compete.

When we succeed in placing on our markets citrus products second to none produced, then we shall have a right to demand their consumption in place of those grown abroad.

G. W. GARCELON.

POULTRY YARD.

Experiments with Capons.

Mr. W. P. Wheeler, of the New York Experiment Station, has given much of his time to the experiments with capons. We give below extracts from his bulletin that may be of service:

During last fall and winter four lots of capons and also one lot of cockerels were fed for periods of five months. These records of feeding include the time at which the birds were caponized and account for any loss of weight or smaller gain during certain periods in consequence.

Fowls of several breeds, and a few crosses, have been used. Light Brahma, Buff Cochins, Plymouth Rock, Black Langshan, Indian Game, Indian Game and Light Brahma cross, Indian Game-Buff and Cochins cross and W. P. Rock and Black Minorca cross.

The cockerels were caponized at an average weight of 3.8 pounds. The average weight of those caponized at smallest size (B. P. Rocks) was 2.7 pounds, and of those at largest (the Light Brahmas) 4.8 pounds, when the operation was performed. While the former recovered from the operation much more rapidly, the latter made after recovery much the more rapid and profitable growth.

The average loss in weight from 36 hours fasting and operation was 11.2 per cent. Within five days thereafter the birds had generally recovered the weight lost, so that seven days from the time of the removal found the cockerels back in the pen as capons at the same weight (the average showed a slight increase of three-tenths per cent), with but the additional cost for food of that consumed during the five days.

The special feeding of the separate lots was not begun until they had attained the weight of from two to four pounds.

The excess that the average market price shows over the cost for food, however, is enough to promise a fair profit, for an ordinary per cent of loss, for any reasonable investment of labor, etc. The cost of caponizing where the services of an expert operator can be obtained, is but a few cents per fowl (sometimes as low as four cents). After a fall in the high broiler prices of spring and early summer, it will probably be found more profitable to caponize the surplus cockerels than to market them, especially when cheap skim-milk and grain is to be turned into market product. For while often the per cent of profit over the cost of food in selling at broiler age is greatest, the actual difference per fowl in market price over cost of food is

greater with the capon, providing the latter is sold before growth has ceased. After caponizing, the labor in caring for and feeding is but little more than in feeding cattle or pigs, and the proportion of labor to produce 100 pounds of capons is therefore less in production of 100 pounds of broilers, as the latter have most of the time been with the hen or in brooders.

As the demand for capons does not come from those who are looking for the cheapest possible animal food, it is evident that effort should be made by any grower toward improvement in quality, and the most successful and profitable competition will probably be in this direction.

It is better of course to use only the larger breeds for capons, and the Brahmas and Cochins are among the best; but while these breeds furnish poultry of superior size and excellent quality, there is, compared to the Game, an undesirable deficiency of breast development, which is plainly noticeable in dressed fowls.

Cockerels and Capons.—One lot of cockerels was fed at the same time with these lots of capons. These cockerels, Buff Cochins, were entirely comparable with the lot of the same breed selected for caponizing, being of the same parentage, age and previous treatment, with the exception that, as no pen large enough was available at the time the lot for caponizing was separated, the cockerels were allowed to run for a few weeks longer before special feeding began. The feeding trials with the capons began in August and with the cockerels in September.

The proportion of skim-milk in the ration was about the same for each during all the time, after special feeding of the cockerels began, except the last two weeks. With the cockerels, during 18 weeks, the skim-milk supplied over 49 per cent of the total food and 11½ per cent of the water-free food; and with the capons, during the same time, over 47 per cent of the total food and nearly 11 per cent of the water-free food. The ratio of protein to total carbohydrates was nearly the same in each ration.

The growth made by the cockerels was more rapid than that of the capons but much less regular. Although on September 26th the cockerels averaged nearly six-tenths of a pound lighter than the capons, they averaged on February 13th nearly nine-tenths of a pound heavier. The cockerels consumed more food, however, than the capons, so that at nine pounds average weight the cockerels had cost seven-tenths of a cent per pound live weight more than the capon. At the average weight of six pounds, a few weeks after the operation of caponizing, the cockerels had cost less, having cost at this weight six cents per pound, and the capons having cost six and seven-tenths cents per pound live weight.

The Cochins were caponized at the average weight of 4.3 pounds. The loss from fasting and the operation was 10.8 per cent, but during the week in which caponizing was done the average gain was 1.8 per cent.

General Observations.—While capons continue to command so much higher prices than the average of poultry of the same weights, it will probably be found more profitable to caponize surplus cockerels of the larger breeds after the high broiler prices of spring and early summer have dropped—especially where cheap food is available. With the fancier, of course, whose time is occupied in the production of breeding and exhibition stock, the earlier the surplus chicks are disposed of the better.

The labor required in feeding capons is less than with young chicks. The cost of caponizing is small where expert services can be obtained, and an expert should be employed where possible. The methods of operation can be learned from the printed instructions accompanying several of the different sets of instruments advertised and sold, but any one endeavoring to teach himself should operate on several dead cockerels before attempting to operate on a live one.

The largest breeds will be found the most profitable for capons, and it is useless to caponize cockerels of the smaller breeds.

Skim-milk can be profitably fed to capons, and, if sweet, in large quantities. If sour, very little should be fed. It is very important that the dishes from which milk is fed should be cleaned often and scalded occasionally.

A variety of food should be given to capons as well as other fowls, and rations somewhat similar to those fed in these experiments will give good results. With equally good lots of birds, rations differing somewhat (but not extensively) in the proportion of nitrogenous to non-nitrogenous constituents will not make much difference in the growth.

The cost of feeding capons after they have nearly reached their full size is approximately five cents per day for each 100 pounds live weight. The advisability of holding those of middle-weight breeds, after reaching seven to eight pounds weight, or the larger breeds after reaching nine or ten pounds weight, will depend upon the prices to be obtained.

Clover Chaff for Fowls.

The following remarks of the *Poultry World* will apply as well to the chaff from alfalfa as from the clovers which are grown at the east: "Green food, or some suitable substitute, is reckoned one of the indispensables for feeding of poultry. The tender blades of grass, the crisp leaves of lettuce are not always to be had, but there are substitutes for these to be found, and among them is the chaff which collects on the barn floor where large quantities of clover hay are fed. This is regarded by the average farmer as worthless, and is unceremoniously scraped from the floor into the manure pit, or is used for litter for the cows and hogs. Yet it really consists of the choicest parts of the hay, being composed of fine pieces of leaves, broken bits of heads, and a greater or less quantity of clover seed. It is too valuable to waste. It should be daily gathered and stored in barrels or boxes for use.

"It may be fed in one of three ways. If it is placed in boxes, conveniently arranged for the fowls to get at, but so they will not waste it, a large quantity will be eaten dry. It may be rendered more palatable by pouring boiling hot

water over it in some convenient receptacle and placing over the mass a cover to keep in the steam and allow it to swell and partially cook. The finest portions of it may be stirred into the soft feed and the fowls will eat it with relish.

As clover is rich in those elements that increase the laying, there is every reason why it should be largely used. Many successful breeders are recognizing this fact, and clover, in one form or another, is becoming a staple poultry food. Larger quantities are used each year, and where the use has once begun it is seldom discontinued. It is by making use of the materials which are often considered valueless, that poultry serves a very useful purpose upon the farm. The cost of keeping is reduced, and what was once considered pure waste, becomes converted into marketable products.

THE DAIRY.

Protein Food for Dairy Cows.

The Babcock test is in the field to test the relative value of different milks, but, says *Hoard's Dairyman*, there is no machine except common sense to test the relative value of different kinds of feed. We answer almost every day by mail the following questions: "I am obliged to buy a certain amount of feed. Would you advise me to buy linseed meal, cottonseed meal or bran?" A great many farmers are waking up to the fact that there is a profitable field of study right here. Farmers are apt to go in flocks the same as birds of other feather. If A, B, C and D buy bran, E will be very apt to go down to the railroad station and buy some too. Just as likely as not, neither one of them has ever taken his pencil out and, with prices of linseed meal, cottonseed meal and bran in his mind, figured right down fine as to the relative value of each. Farmers do so hate to do any fine figuring. A few years ago, when the drouth cut off the hay crop here in Wisconsin, we saw hundreds of farmers buying poor prairie hay from Iowa at \$9 a ton when good bran was worth \$12 to \$14 a ton. A few thinking farmers could not be fooled that way; they bought the bran. They had taken out their pencils, and, with an understanding of the value of each food to start with, they soon found that one ton of bran had more feeding value in it for a cow, horse or sheep than three tons of that overripe miserable hay. We remember distinctly how we tried that year to get some of those hay-buying farmers to spend \$2 in the purchase of "Stewart's Feeding Animals," so that each one might have a book in his own house that would help him to get at the relative value of different kinds of feed. But no one could fool them into buying a book! One man said to us: "What does a book know about feeding a cow?" He threw away over \$50 in Iowa horse bedding. He belonged to that class that thinks it is smart and economical to use as little brains as possible in all farm operations. We publish below a short extract from the *Rural New Yorker* under the head, "The Reason of the Thing," which clearly shows up the proportion of value in different kinds of feed, and furnishes the tape line or two-foot rule that any man can use to determine whether it is cheapest to buy this, that or the other kind of food for his cows. The one thing we are after in all these boughten foods is the protein. That is the element that makes them worth buying. The cows need it. If we do not grow peas, or flaxseed, we must buy it. We hope every one will read the following, for it puts the question in its true light:

In order to obtain protein enough to enable her to do her duty, a large milch cow would be forced to eat about 80 pounds of good timothy hay per day, or nearly 160 pounds of corn fodder, or 150 pounds of ensilage, or nearly 400 pounds of oat straw. She could obtain the needed quantity in 12 pounds of peameal, 9 pounds of linseed meal, 7 pounds of cottonseed meal, or 20 pounds of wheat bran. Timothy hay costs us this winter just 1 cent per pound, while linseed meal is worth 1½ cents. The timothy ration would cost 80 cents, while the linseed meal would cost 13½ cents. A cow's time is worth nothing, but still she cannot afford to spend the hours required to chew and digest 80 pounds of timothy hay. Neither can she live on the linseed meal ration without something to add bulk to the food and thus keep her digestive organs in condition. In "combination" there is strength—and profit. Forty-five pounds of clover hay will supply more digestible protein than 80 pounds of timothy. We know dairymen near the large cities who can sell timothy hay at one cent a pound and buy good clover at three-fourths of a cent. Under such circumstances, when they feed their timothy, they feed it at a loss of more than one-fourth of a cent for every pound they handle, which is a mighty big price to pay for the fun of "doing as father did."

There is something very instructive in those figures. A man is figuring, for instance, which form of protein he will buy: Shall it be bran at \$20 or linseed meal at \$30 a ton? According to the *Rural's* calculation, and it is correct, it costs 20 cents to get the same amount of protein in bran that would cost 13½ cents in linseed meal.

But suppose it is poor adulterated bran we are buying. What then? But suppose we have shown cow sense enough not to buy either, but have grown on our own land about a thousand pounds of nice peas for each cow. If well handled in a fair season, 2000 pounds of peas should be grown on an acre of land. Take the same proportion of value that the *Rural* gives pea meal, which is nearly twice as valuable for butter food as the bran. It would simply amount to helping the farmer to grow, say, \$40 worth of protein food, and that, too, on one acre, that he would have to pay that amount of money for if he bought bran.

We want to see the dairy farmers keep all of their money in their pockets that they possibly can, and it will pay big profits to look into this question. Begin to lay plans to grow your own protein food. But the first thing of all for these long winter evenings, send \$2 for "Stewart's Feeding Animals." Post up a little more on the relative value of foods. As the Hoosier said, "There is a heap to learn that'll pay to know."

[Some California dairymen are already proceeding in the direction indicated by our contemporary. In many of our dairy regions it is possible to grow peas, and where

peas do not do well "cow peas" or "horse beans" may thrive. Those who can grow alfalfa and succeed in making good alfalfa hay secure a food rich in protein. Corn fodder, squashes, beets and other similar dairy feed crops need supplementing with protein, and where it can be grown it will prove a saving in the bran or oil-meal bill. Stewart's book on "Feeding Animals" can be ordered from this office.—ED.]

Improving Skim-Milk for Calf Feed.

G. W. Farlee, a Jersey breeder, gives his experience in the *Breeders' Gazette* as follows: I wean my calves when two days old, and immediately add one-fourth sweet skim-milk to the ration. The whole milk of a highly bred Jersey cow is too rich for calves and is liable to give them scours. If the calves are doing well at two weeks old the proportion of skim-milk is slightly increased and a little oatmeal and oilmeal, thoroughly scalded, is added, not to exceed a tablespoonful of the mixture daily. The oat and oilmeal are gradually increased, also the proportion of skim-milk, until, when five or six weeks old, the calf is getting no whole milk. The calf receives skim-milk and grain mixed with it until it is nine months old, if I have the milk. I get great size with this treatment, and believe I can make as fat veal on this ration as on the whole milk of ordinary cows. My heifers at two years old are often mistaken for three-year-olds and are frequently criticised by visitors as being too fat for milch stock. However, directly after calving, the fat disappears and is caught in the pail. The oatmeal I use is pure meal, too fine for the table, sifted off in the process of making the pin-head oatmeal of commerce, and costs about the same as cornmeal. Cornmeal would doubtless be valuable as part of the ration, but I like the combination of oat and oilmeal, as I breed more for frame and size than fat. Cornmeal mush would help increase fat in the calf, but nothing equals oatmeal in promoting growth in young animals. Now, if we can find or establish a breed with beef qualities that will give milk testing 20 per cent cream, we will have solved the problem of making the cow pay her way in butter while at the same time she performs the function of bearing and rearing a calf, skim-milk and grain relieving her of the latter duty in a large measure.

THE STABLE.

An Experiment in Feeding Horses.

Bulletin No. 13 of the Agricultural Experiment Station of Utah reports the results of a feeding trial by the director, J. W. Sanborn, of feeding horses hay and grain mixed, and feeding cut against whole hay to horses, which is condensed by the *Breeders' Gazette* as follows:

It is a common belief with horsemen that when grain, especially meal, and more especially such meal as cornmeal, is fed to horses alone or mixed with hay, it tends to compact in the stomach and produce indigestion. It is believed that it is so far compact that the gastric juices do not have free access to the mass of it. Furthermore, it is believed to be subject more to the washing influence of heavy drinking. In the latter respect, it is known that the horse's stomach is very small and that grain is liable to be washed out of it, as the stomach necessarily overflows with water.

Prof. Sanborn fed two lots of horses for nearly three months, one lot with hay and grain mixed, and the other lot with hay and grain fed separately. At the end of this period the food was reversed and the horses were fed some two months more. It was found that horses, as in the case of cattle and pigs, showed no disadvantage by the division of the grain and hay into separate feeds over feeding hay mixed with grain. Indeed, in this trial he found a disadvantage for the horses on the hay and grain mixed, they not maintaining their weight as well. The author ascribed this result to the fact that the timothy hay when cut fine with its sharp, solid ends, irritated and made sore the mouths of the horses and possibly induced too rapid eating, as when the hay and grain were moist they would be more likely to eat more rapidly than when fed dry. As this trial is in accord with trials with ruminants and with the pig, Prof. Sanders thinks that it seems quite probable that the old and persistent argument in favor of mixing hay and grain is not sound.

The second trial reported in this bulletin covered feeding of cut against whole hay to horses. This trial also covered two periods in which the foods were reversed with the sets in order to determine whether any change of weights found was due to the individualism of the horses, or whether it was due to the system of feeding. The two periods covered from August 10th to December 31st. This trial was very decisively in favor of the cut hay. The difference in weight of horses was 115 pounds in favor of cut clover for the four months and a half covered by this period. The food fed was clover, and the author points out the fact that clover hay and lucerne, unlike timothy hay, do not present sharp, solid, cutting edges. Prof. Sanborn considers the results decisive and in accord with those of a trial made by the Indiana Experiment Station with cattle. He points out the fact that these trials, covering nearly a year's time with four horses, showed that horses consume practically the same amount of food that cattle do when high fed, and makes it somewhat clear that horses make as economical use of hay and grain as do cattle, and calls attention to the fact that the practice of charging more for pasturage of horses where grooming is not involved is not well founded. He also shows that less food was eaten during the hot months than during the cooler months, and particularly that the horses ate less grain during the hot months than during the cooler months.

The trial seems to show also that a rather large ration of grain for work horses is an economical one.

THE FIELD.

Tobacco Growing in California.

The following paper by J. D. Culp, of Gilroy, was prepared by invitation of the State Board of Trade and read at a recent meeting of that organization:

According to the memory of the earliest American settlers of this State, the tobacco plant was successfully grown and cured by the original Mexican settlers of California in very many portions of the State, and it is entirely probable that the original seed came with the Jesuits from Mexico, but not until 1862 did its cultivation assume any commercial importance. In that year the State of California produced 2,000,000 pounds of leaf tobacco.

I deem it unnecessary for the purposes of this paper to relate the subsequent history of the industry, recounting its struggles against the opposition and prejudice of capital and men interested in the handling of imported products, as well as the inadequate knowledge of the peculiar methods necessary to successfully grow and cure a high grade of tobacco under the entirely different conditions of climate and soil which obtain in our State.

With a few exceptions, I remain the only original grower of the leaf in the State, and I am glad to tell you that the reward for my persistent cultivation of cigar tobacco in Santa Clara county is well realized in the superior quality and satisfactory value of the crops I am now producing and marketing, and let me say that nothing deserves a more hearty and enthusiastic encouragement from the people of this State than the present plan for the immediate organization of a company, the purpose of which shall be to introduce and direct the general planting of all varieties of tobacco in every portion of California adapted to its cultivation, and cured under the process now employed at the San Felipe plantation, and further extend the functions of this company by using it as a means through which the general markets of the United States shall be rendered accessible to the producers of California tobacco.

The opportunities for the development of the tobacco industry in this State are recognized to be superior to any elsewhere in the United States. It may be truthfully said that there is no county in the State which has not some portions of it adapted to the raising of some kind of tobacco. The peculiar quality of tobacco lands in our State renders manuring unnecessary, which item is a saving of about \$100 per acre as compared with cigar tobacco producing lands of the East.

The absence of frosts during the growing season, together with the long dry summer, renders two crops each year a certainty, and the difference in cost of cultivation is five to one in favor of California. Again, the tobacco industry in this State is the natural companion of the horticultural industry. Nine-tenths of the young orchards of our State can be successfully employed in tobacco-raising in conjunction with tree-growing, and not only thus increase enormously the productiveness of the land devoted to fruit culture, but utilize the necessary cultivation of the orchard itself in growing a tobacco crop intermediately among the trees at a nominal cost, and secure a quality of leaf largely enhanced by the protection it receives from the presence of the trees surrounding it.

To illustrate the success which tobacco-growing is now finding in California, it may be stated that a contract has been made for 60,000 pounds of California cigar leaf at 50 cents per pound, and liberal estimates place the cost of growing an acre of tobacco at not more than \$50. The average yield may be stated at from 1000 to 1500 pounds of cured leaf, having an average value, outside of cigar wrappers, of from 20 to 25 cents per pound. This shows an acreage profit of from \$200 to \$300. It is needless to say that no other crop will equal it in steady and reliable profit.

It is well known that the State of Connecticut has produced, according to statistics, an average profit of \$350 in a single year, and, as to the extent of the crop, it may be stated that the single county of Lancaster, Penn., produces annually about fifteen million pounds of leaf tobacco.

The business of tobacco-growing in California is in no sense experimental. There are probably not ten counties in the State where tobacco has not been grown during the last 30 years, and the only difficulty met with anywhere is that it has possessed too much strength—a condition that can be absolutely controlled by the system of cultivation and curing now in practice in Santa Clara county.

All the samples of California cigar leaf so far exhibited to Eastern dealers have been pronounced better than any other produced in the United States, and likewise local tobacco experts do not hesitate to say that it is superior to anything not imported in the market, and what is yet more encouraging is the fact that each crop of cigar tobacco now being grown in this State is steadily increasing in quality and contains a large percentage of wrapper stock—more than is sufficient to work up the crop. And these wrappers are found to have a higher value than anything produced in the State of Florida, where \$1 per pound is readily paid for entire crops.

As an evidence of the esteem in which our California tobacco is held in the largest market of the United States, let me quote from a letter by Mr. E. M. Crawford, president of the New York Tobacco Board of Trade, addressed to Prof. Henry A. Mott, of New York, as follows:

NEW YORK, March 19, 1893.

Your favor of the 18th instance is received, and, in compliance with your request for my opinion regarding tobacco grown on the San Felipe ranch, California, I would state that I have tested various samples of said tobacco and have two full cases of the same now in my possession, from all of which I have smoked many cigars and find the quality excellent, superior in my judgment to any tobacco grown outside of Cuba and better than a large proportion grown on that island. I do not think it equal to the best grades of Havana tobacco shipped here in leaf, but the best substitute for it that I have seen grown anywhere else. Yours respectfully,

E. M. CRAWFORD.

This opinion, which comes from President Crawford as the result of his inquiry made in the interest of the tobacco

trade at large and justified by over 30 years of very wide experience, is sufficiently reliable and complimentary to give an incentive to larger planting in this State, if no other testimony were available, and ought to set at rest the slightest question of a market for our leaf when properly cured. California tobacco, when grown from Havana seed, seems to preserve all its original characteristics as produced on the island of Cuba, and while to insure large and permanent profits in the business it is unnecessary to reach the highest standard of excellence, it is not too much to say that we can more nearly reproduce the Cuban product than any other section yet discovered outside of the Island itself.

The consumption of tobacco is increasing more rapidly than its production, and can be still further accelerated by substituting California leaf grown from Havana seed for the imported varieties at prices that will at once yield a handsome profit to the industry here and greatly cheapen the cost to the present consumer of the heavily dutied foreign product.

According to a universal commercial law, manufacturing must always develop where the raw material is produced, conditions being equal, and no reason can be found why California should not successfully manufacture a large percentage of its future product as do other States of the Union.

When the leaf is here in sufficient quantity, manufacturers will speedily make overtures for its purchase, and, with the incalculable advantages California has over the East at every stage of tobacco growth, including the certainty of crops, the liberal yield, the small expense of cultivation, the absence of natural enemies to the plant, and the ease with which it can be prepared for market, there can be no question as to the attractiveness of our State for both growers and purchasers of the leaf. California should produce annually from fifty to one hundred million pounds of cured leaf, which would represent but a small part of the world's output.

I trust, through the instrumentality of your Board of Trade, and the active work of the company already referred to, the farmers of our State may at once embark in this new field awaiting them.

I shall take much pleasure in giving other and more detailed information to any who may see fit to make inquiry of me. I have the honor to remain, very respectfully,

J. D. CULP.

SWINE YARD.

Lessons of Experience With Swine Diseases.

TO THE EDITOR:—In California the hog has not received as much attention as horses, cattle and sheep, in the way of bringing the animals up to standards of breeding, nor has his adaptability to the small farm or orchard been fully appreciated. He converts into cash waste fruit and, more than that, crops you could not afford to grow without him. Squash, beets, carrots, peas and corn are profitable to raise and feed to good pigs, leaving the grower the manure and saving expense of marketing bulky stuff. The hog, too, is ready for the market every day; fat or lean, he is cash. The better you treat him the more money and satisfaction he will bring you.

Feeding rotten food in dirty pens germinates swine plague, cholera and all the contagious diseases among swine, and endangers also the human family. I would say nothing if the laziness, ignorance and stupidity of the man who cares for hogs in this way only brought disaster to him and his hog on his own farm, but when they result in death-bringing bacilli and bacteria, they are carried by the highway, scattering myriads of deadly germs to come in contact with other hogs that have been cared for, and on the butcher who kills them and suffers or compels other hogs he is to kill to eat the blood and intestines of those very same hogs. Thus on and on goes the destroyer.

Three months ago I had 20 fine brood sows, headed by a \$75 Poland-China boar from the H. J. Philpott herd at Niles. To increase my herd I bought 20 more sows in Butchertown, San Francisco, which had been exposed in the manner stated above, and in two weeks they began dying of swine plague or so-called cholera. In two weeks more I had lost my boar and 20 head of sows and 50 head of marketable pigs. Nearly all my sows were with pig and their pigs came dead or died in four or five weeks.

I telephoned to the men in Butchertown and learned from them that the hogs most always had cholera and swine plague and the only remedy they knew was to "butcher." From Prof. Wickson and others I was able to gather many books on diseases of swine. I studied, dissected and treated with everything I could find out that was in my judgment likely to aid. Whatever cures consumption and typhoid fever may cure swine plague and what is called "cholera." I fed my hogs high on good food of all kinds that would not be heating; administered sulphur, salt, ashes, oil, turpentine, coal oil and carbolic acid in their food in a systematic way. Some that were nearly dead have partly recovered. As a result of the swine plague and so-called cholera (if there be two diseases, though I think they are one and the same in the different forms) I have one sow that suckled seven pigs until they all died. After a relapse in her case she has now what you would call on seeing her "leprosy." Many have broken out as with small pox, some have got well of it, some have died from the breaking out, yet they had passed through one, and, some of them, two relapses of the swine plague. Some of the sows are looking well and none have died for six weeks except one that was lingering. There is not more than three of the 20 left that will die. Now, I think, the ones that are left are not good to breed from.

One thousand dollars would not make good my loss, but I have had my money's worth of experience, and expect next year, when my place is clear and clean from that disease which I bought and paid for in Butchertown, to stock up with 40 more fine sows.

H. W. WOODS.

Niles.

THE HOME CIRCLE.

A Discouraged Farmer.

The summer wind is sniffin' round the bloomin' locus' trees,
And the clover in the pastur' is a big thing for the bees,
And they've been a swiggin' honey above board and on the sly,
Till they stouter in their buzzin' and stagger as they fly.

They's been a heap of rain, but the sun's out to-day,
And the clouds of the wet spell is all cleared away,
And the weeds is all the greener and the grass is still;
It may rain again to-morrow, but I don't think it will.

Some say the crops is ruined and the corn's drowned out,
And prophecy the wheat will be a failure without doubt;
But the kind Providence that has never failed us yet
Will be on hand once more at the eleventh hour I bet!

Does the meadow lark complain as he swims high and dry
Through the waves of the wind and the blue of the sky?
Does the quail sit up and whistle in a disappointed way,
'Er hang his head in silence and sorrow all the day?
Is the chipmunk's health a failure? Does he walk or does he run?
Don't the buzzards ooze around up there jest like they've allus done?
Is there anything the matter with the rooster's lungs or voice?
Ort a mortal be complainin' when dumb animals rejoice?

Then let us, one and all, be contented with our lot;
The June is here this morning and the sun is shining hot,
O, let us fill our hearts with the glory of the day,
And banish every doubt and care and sorrow far away.

Whatever be our station, with Providence for a guide,
Such fine circumstances ort to make us satisfied,
For the world is full of roses and the roses full of dew,
And the dew is full of heavenly love that drips for me and you.

—James Whitcomb Riley.

When I Was Mary's Beau.

Away down East, where I was reared, among my Yankee kith,
There used to live a pretty girl whose name was Mary Smith;
And though it's many years since last I saw that pretty girl,
And though I feel I'm sadly worn by Western strife and whirl,
Still, oftentimes I think about the old familiar place,
Which oftentimes seemed the brighter for Miss Mary's pretty face.
And in my heart I feel once more revived the glow
I used to feel in those old times when I was Mary's beau.
On Friday night I'd drop around to make my weekly call,
And, though I came to visit her, I'd have to see 'em all.
With Mary's mother sitting here and Mary's father there,
The conversation never flagged so far as I'm aware;
Sometimes I'd hold her worsted, sometimes we'd play at games,
Sometimes dissect the apple which we named each other's names—
Oh, how I loathed the shrill-toned clock that told me when to go,
'Twas ten o'clock at half past eight when I was Mary's beau.
And, Mary, should these lines of mine seek out your biding place,
God grant they bring the old sweet smile back to your pretty face—
God grant they bring you thoughts of me, not as I am to-day,
With faltering step and dimming eyes and aspect grimly gray;
But thoughts that picture me as fair and full of life and glee
As we were in the olden time—as you shall always be,
Think of me ever, Mary, as the boy you used to know
When time was fleet and life was sweet and I was Mary's beau.

—Eugene Field.

Queer Mr. Klingling.

DOUBT he was the funniest little man that ever you saw. He was so short that when he stood behind the counter of his drug store his chin was scarcely above it. His head, which was bald on the crown, had a handful of stiff, bristly hair that, especially in front, stood straight up. Now, if he had worn spectacles it wouldn't have been so bad, but he did not, and, being very near-sighted, when he desired to inspect anything he had to hold it against his very nose or eyes—and such a squint! Johnny was born in Wurtemberg, Germany, and dressed after the manner of the Wurtembergers. So very quaint was his clothes; always the same, always the same swallow-tailed coat, short

pants, high-cut vest, and folks said that he always had worn the same suit, or, if he ever changed them, he changed for clothes of such self-same cut and material that none could tell the difference. And his collars! They, indeed, were a curiosity; always clean, however. They were half diamond shaped, and came to long points, and fitted very closely to the sides of his face, and were so stiff that when he bent over the points would stick up over his little round head, so when he looked down and closely at anything, with his collar points sticking up, and with that odd squint on his thin, weazeny face, he presented a sight that always caused a smile to appear on the gravest face, and to make the boys nearly die with laughter.

How he lived no one knew, and it was always a matter of conjecture to the folks about him, for no one ever saw him or his sister—who was his opposite in physical proportions, and lived with him in the rear of their dingy store—buy any thing eatable; and, although they had abundance of room in his large store building, it was current belief that he slept in a store box on the ground floor. When he came upon the street, which was indeed very seldom, he either wore a very tall, slim stove-pipe hat, or else a faded blue cloth cap, with a very wide top and very narrow rim; his hose were always woolen, his shoes coarse, low cut, very ancient and unpolished. He was always in a hurry, and when he stepped he seemed to move with a jerk, and locomotion was seemingly obtained by a peculiar lifting of the knees, then throwing the feet out until they became at right angles to the extended upper part of the leg and knee, when they were set down, thus making him move as though he were trying to sit down on an imaginary chair and walk at the same time.

Well, we never could get used to Johnny. He was a mirth-provoking curiosity always, and we boys considered it a rare treat to see him, whether in his shop or on the sidewalk, because of his marvelously comical appearance and actions. "As funny as John Klingling" became a synonym of all that was odd in personality, and mothers used to quiet rebellious urchins by threatening them with an interview with Johnny, and crying children were instantly stilled by a hint from the paternal side of the house that if the crying were continued a sure resemblance to Johnny would be indelibly stamped on the juvenile features. I do not suppose there ever was a more penurious man. He was a miser in the strictest sense; there was no mistake about that; not a cent went for anything but the settlement of his bills, all of which were paid promptly. He was exact and just in business matters. If a cent were due him he wanted it and got it; if a cent were due another from him it was paid. I remember, when a lad, of going to his store and calling for a cent's worth of sour drops; he took his step-ladder and went to the back of the room where the candy was, clambered up to the shelf where the jars were, obtained the one wanted, brought it to where I was, took out the coveted sweets or sours, and counted out the ten due for the money, and then replaced the jar on the far-away shelf. To see what he would do, my brother told him there were eleven in the bunch. Straightway, Johnny took the extra one, and, with his step-ladder, walked back to the candy department, clambered up to the jar again, replaced the drop and the jar, and with his ladder returned again to where we were, and thanked us for our honesty, saying we were "goot boys."

The people never tired talking of old Johnny and his quaint ways, and hundreds were the stories told of him, to the infinite amusement of the elders and of astonishment and fear-provoking effect to the children, so that his eccentricities became a symbol for all that was most peculiar and odd, while his parsimony became the standard of measure for all that was close, beggarly and small in business transactions. To be as stingy as he, was to be about as stingy as it was possible for a human being to be; to be as close as he, was a more emphatic expression than to be "as close as the bark on a tree." So that, take him all in all, old Johnny Klingling, in the community in which he lived, was the butt of jokes, the object of ridicule, and the embodiment of all that was downright selfish, miserly and penurious in human kind, and he was only permitted to exist because the community had no respectable way of getting rid of him.

Well, one morning the shutters were not taken down, nor was the door of the store unfastened, and after a while the quaint old sister of his, dressed in plain blue homespun, with her ever-present small basket on her arm, came out, locked the door, pulled her sun-bonnet a little further forward over her wrinkled face, clambered down the stone steps, and saying nothing, shuffled off up the street, and in a short time returned with

an old friend and legal adviser, Judge M—, who entered the house with her, and who presently appeared and tied a black ribbon upon the door knob; then the truth of what had been surmised became apparent.

Old Johnny was dead.
The fact somewhat startled the people of the town after all. As it had always been an incomprehensible thing to them why he was permitted to live as he did, or to live at all, it was a mystery still, why such as he should ever have to die. They didn't know whether to be glad or sorry over the event, but I think most of those who discussed the situation were glad. There were one or two in the crowd that stood around the corner, who indirectly said a few timid, negative words of praise for the old man, or rather there were one or two who said little among the much that was said uncomplimentary to the dead miser. On the whole the community was not sorry. For in its estimation he had lived perfectly useless, hoarding up his money for none but a selfish and sordid purpose. It certainly was much better for the bustling, work-a-day, money-getting and money-spending community about him, that he was dead. There was a few who went to his unceremonious funeral, impelled more by curiosity to see this singular and useless old man buried, than from any respect they bore for him or his kin.

In a day or two after he was laid away Judge M. produced the queer little Wurtemberg's will. A few business men were called in to hear it read, and among other things was this:

"I hereby give and bequeath the sum of one hundred thousand dollars to establish a home for little children who walk the earth with weary feet."

When the people heard this they rose as one man and said: "Blessed be the name of John Klingling! This he shall not do by himself alone. He has taught us a lesson of humanity, and we will add as much more to his gift."

And it was done.
Now, if you should ever go to the fair town of Lebanon, Ohio, you will see near the western borders of that lovely place, and surrounded by a landscape of wondrous beauty, a great building containing all that money can buy or mind suggest for the education, care, pleasure and comfort of the many orphan children who live therein, and which only exists because of the sacrifices of a life time of quaint, curious, ridiculed, yet noble little old Johnny Klingling.

MARION D. EGBERT.

Modern Chivalry.

The *Unitarian* for August gives the following incident which took place in Chicago: At one of the gates, near which the writer of this happened to be, occurred as beautiful a bit of knight-errantry as has come to our notice in many a long day. We could not forgive ourselves if we did not give it to our readers. There was a solid mass of men and women outside the gate struggling to get trains, and among them an old woman who was entirely too feeble to hold her own against the crush. Half a dozen young men noticed her condition and came at once to her aid. They immediately surrounded her, a big six-footer leading the way. "Fall back there, boys, and make way for mother." The six walked on either side of the old lady, and the crowd which had seemed tightly wedged together found some way of swaying back enough to allow "mother" and her chivalric escort to reach the train. Having seen her safely on board, her stalwart body-guard came back into the crowd and lent service to a little woman who was holding a small child high up in her arms to keep it from being injured in the press. The big leader took the baby, and, lifting it up high above harm, led the way until, with the aid of his faithful helpers, he had escorted this lady also to the train. We do not know the names of these young men, but by their noble and unselfish conduct they not only benefited two unprotected women who greatly needed aid, but they unconsciously lifted up an ideal of manhood which no one who saw their deed or learns of it will fail to feel the nobleness of. One who looked on declared next morning: "No princess ever received more courteous service than was given by these unheralded, unknown knights to those unprotected American mothers."

Dressing the Children.

For the little girl's gowns, after white has been laid aside, soft cashmeres of gray, wood or steel blue are fancied, and occasionally one sees a toilette made of old rose or of the faintest shade of yellow, writes Isabel A. Mallon. However, this, of course, is the gown selected for a festivity, and not

the one preferred for general wear. Pretty plaids are specially liked for the girl of seven, and with such a gown she will almost invariably have a coat of the same material, with very wide Empire revers, faced usually with a bright color, while her hat is a large felt one, trimmed with rosettes, wings or feathers.

The shoes and stockings of the small women continue to be black, the former being for state occasions of patent leather, and for general wear of soft kid.

Burdette in a Parlor Car.

Every one has observed the easy facility with which some people can accomplish the apparently delicate ceremony of the introduction of two strangers to each other by a third stranger, writes Robert J. Burdette in the September *Ladies' Home Journal*. This social phenomena is oftenest seen in public places and on public conveyances. I was recently making a journey across a small portion of this planet, sitting alone by the car window and hoping that nobody had taken the upper flat in my compartment, when a man whose freshness chilled me, seated himself opposite me, threw his feet airily upon the seat beside me saying in a loud tone and with extravagant hospitality, "Make yourself at home!" He explained to me as I relieved his advances with somewhat "cold respect" that a young lady of forty-eight summers was occupying the lower floor of his section, and had appropriated his seat for her baggage room, while at the same time she had transformed the entire premises into a cold storage apartment. The man said that he had sat amidst her luggage until the cold chills began to run up and down his back, and he had no doubt he was even now on the direct road to an attack of pneumonia. He then went on to inform me, in that easy, confidential, autobiographical turn, that he lived in Kolusa, Tipton county, when he was home; he had been married twice, and had five children—all born to him by his first wife. "Three boys," he said, and remained for a moment or two in silence, when he suddenly looked up and added, "and two girls." You cannot imagine what a load was lifted off my mind when I learned what those remaining children were. You see he hadn't told me, and I felt a little delicate about asking. The man noted the look of interest on my face and went on with his narrative. His first wife was a woman of very despondent temperament; as good a woman, he said, as ever lived, but was always afraid something was going to happen; always worried about the children or something. She was a good mother to the children, too; but then she was never well—always sick with some kind of complaint. This, the man said made it almighty hard for him.

He sighed so deeply at the remembrance of the hard lines through which he had passed that I sympathized with him, and asked him if this continuous illness seemed to effect his wife any?

Oh, no, he said; not so much as it did him; she appeared to get sort of used to it.

Electricity Made Perfectly Plain.

An old man from somewhere among the suburbs stood on a Forty-seventh street corner watching a trolley car moving swiftly eastward with a heavy load of passengers.

"That's some of these 'lectric cars, ain't it?" he said, turning to a bored-looking man who was leaning against a telegraph pole.

"Yes."
"I don't see how 'lectricity can make a car full o' people flip along over the ground like that."

"You don't?" exclaimed the other, becoming interested. "Why, it's easy enough to see through when you once understand it."

"I 'xpect so; but I've never heard enough about it to understand it."

"It is all a matter of watts. A watt, don't you see, is a fraction of a horse power expressed in the technical language of electrical engineering. You know what an ampere is, don't you?"

"A what?"

"An ampere. It is a quantity of electricity that goes through the wire and develops the watt. The electricity comes from the central dynamo through that wire you see running along overhead, runs down through that iron pole and goes to the motor, which is an ingenious but perfectly simple arrangement of wire coils with a revolving frame, acted upon by the current, which sets it to spinning and thus puts in motion a small cog-wheel that engages another cog-wheel that communicates the rotary movement to a third cog-wheel

fastened to the axle of the car. It is as plain as day when you get the idea."

"Yes, but how—" "Don't you understand it yet? There's a sort of wire brush that presses against a copper plate connected with the motor, and the wire is wound on the frame I was telling you about, so that when the current enters the motor it can go either way, and part of it goes one way and part the other, so that the pressure is applied in opposite directions, and that's what makes the jigger revolve and sets the wheels in motion. The current goes back through an underground wire. See through it now?"

"Y-yes. I think I kind o' get the idea." The affable stranger strolled down the street and the old man took another look at the overhead wire, gazed earnestly in the direction in which the car had gone, took off his hat and wiped his forehead. "What I'd like to know," he muttered, "is how in thunder the electricity makes the car go."—Philadelphia Inquirer.

Hints to Housekeepers.

A young lady who has a beautifully kept hand, as well as an extremely pretty one, says that she believes that she owes her taper fingers and almond-shaped nails entirely to her mother, who accustomed her from her earliest childhood to dry her hands in a certain fashion. After the hand was carefully wiped, she pinched the end of each finger with the towel and then rubbed back the skin which grows around the nail "to find the moon," as the children call it. Then came a final pinch to the fingers and the process was finished. This method of drying the hands soon becomes a habit, and, if persevered in, is sure to elongate the fingers and make them taper. It is better than manicuring for preventing the ugly growth of the skin around the base of the nail.

Ink stains on clothes may be taken out by washing—first with pure water, next with soap and water, and lastly with lemon juice; but, if old, they must be treated with oxalic acid.

When the eyes are tired, or inflamed from loss of sleep, apply an old linen handkerchief dripping with water as hot as you can possibly bear it.

In ordinary burns and scalds, the only remedy required is to thoroughly exclude the air from the injured part. Cotton batting will do this most effectually.

Isinglass and gelatine are entirely different articles to produce the same effect in the thickening of jelly. Isinglass is a little the more expensive. It is said to be made from the bladder of the sturgeon, and the best is that brought from Russia. It is a little more delicate than gelatine.

When you are packing your pretty dresses, put soft paper between the folds, and they will crease very little when you reach your journey's end.

Towels will give better wear if overcast between the fringe before they are washed.

Never put patent fasteners on shoes until they have been worn and stretched for a couple of weeks.

The aroma of the strawberry is largely lost in cooking, and it should be used fresh wherever it is possible to do so. In preserving, it is essential to success to can the fruit when luscious and fresh from the bed, and to use a variety of berry that is of rich flavor. The Wiesbaden preservers, who are more successful with strawberries than any one else, do not allow their berries to cook more than a moment. They fill the cans with the fresh fruit, and set them in a large kettle containing water just hot enough to bear the hand. There should be a wooden rack in the bottom of the boiler, and cloth should be packed around the jars to prevent their touching each other. When they begin to boil, the German preservers watch them, and as soon as the berries rise to the mouth of the jar they take them out and cover them with a rich, cold syrup. By this means the plump appearance of the berry as well as its flavor is preserved.

Talmage on Women's Rights.

I know there are women of most undesirable nature, who wander up and down the country—having no homes of their own or forsaking their own homes—talking about their rights, and we know very well that they themselves are fit neither to vote nor to keep house, writes the Rev. T. De Witt Talmage in an article headed "Male and Female Created He Them." Their mission seems to be to humiliate the two sexes at the thought of what any one of us might become. No one wants to live under the laws that such women would enact, nor to have cast upon society the children that such women would raise. The best rights that woman can own she already has in her

possession. Her position in this country at this time is not one of commiseration but one of congratulation. The grandeur and power of her realm have never yet been appreciated. She sits to-day on a throne so high that all the thrones of earth piled on top of each other would not make for her a footstool. Here is the platform on which she stands. Away down below it are the ballot-box and the congressional assemblage and the legislative hall.

Electrical Cooking.

All of the cooking in the Minnesota clubhouse at St. Paul is done by electricity, and the members are reported to be enthusiastic over the superior manner in which electric heat does the work, says the *Industrial World*. The heat being distributed evenly in the various utensils, the cooking is evenly done and the flavors retained, while the inconvenience is reduced to a minimum. Geo. Foster Peabody of Brooklyn, New York, has dispensed with coal entirely, and all household operations are now performed by electricity. The house is lighted by electricity, warmed by electric heaters, and cooled in summer by electric fans; the cooking is done and all water heated by electricity, and the work of ironing is rendered easy by the use of electric irons, no longer "sad." Whenever power is needed, electric motors are employed, as for running a sewing machine or in laundry operations.

Papering of Walls.

Wall papers were little used in Europe before the eighteenth century, though they had been long before that applied to house decoration by the Chinese. Those that were first manufactured in the west were adaptations of design from Italian brocades, and at first they were used in an unobjectionable manner, just as hangings of the costlier material were employed, namely: To fill spaces between obvious structural lines; and so applied, no objection could be made to their use. On the contrary, the invention brought it within the means of every householder to fill blank wall spaces with agreeable tracery and harmonious color.—Ex.

YOUNG FOLKS' COLUMN.

Mr. Crow and Miss Smutty.

THE story that I am about to tell my little readers is a really true story, and every one of the little points in it, however wonderful and strange it may seem, actually happened.

Once upon a time then, and not so very long ago, either, there lived upon the loveliest of all the lovely islands on the beautiful blue waters of Casco Bay a tame crow and a pet kitten.

The bird we will call Mr. Crow; the kitten was always called Smutty. Each was as black as the other, and in their friendship they were as harmonious as they were alike in color.

They were also of the same age, and, of course, lived together with the same people, else their intimacy would not have had such opportunities for growth, as houses are far apart on this little island.

Mr. Crow slept at night in the branches of a little tree near the house, but Miss Smutty had her bed in the house. They would both awaken very early in the morning, and when the house door was opened to let the kitten out, Jim Crow would greet her with his hoarse "hulloa," the only word he could speak.

Miss Smutty had not even learned to speak at all, but nevertheless she had her own morning greeting for him, which was a little cuff with her paw.

This blow, however gentle, would result in Mr. Crow's falling over on to his back and pretending to be dead.

Then Miss Smutty would creep up to him softly, oh, so softly, and lick him with her little rough, pink tongue, and Mr. Crow would open his eyes and hop up on his nimble feet, laugh his hoarse crow laugh, and then would begin their real frolic. Whatever Smutty would hit with her paw, Jim would try to pick up with his bill, and they would roll and toss about in the grass together like two black balls.

In the yard back of the house stood an empty barrel. In this the little pets would play peek-a-boo and hide-and-seek. One would stay on the ground in the barrel, the other would perch on the edge of the barrel for a moment and then jump to the ground outside. Like a flash, the one inside would come up to the top, and then would be heard all about Mr. Crow's "hulloa," and so the

tiny creatures would play together day after day.

They were both sad thieves, I am sorry to say, although their tastes did not run in the same way. Smutty being a greedily little epicure, took fish, lobster and all or any sea-shore delicacy that she might find. Mr. Crow showed a more elevated taste in his little thefts. All the flowers of all the surrounding gardens had to be closely watched by their owners lest they fall an easy prey to his mischievous bill. Scissors, thimbles and spools of thread were also very pleasing to him, but his most wicked prank was to pick the clothes-pins from the line of wet clothes, causing them all to drop to the ground.

Mr. Crow and Miss Smutty would follow their little friends, the children, wherever they went in their walks, and Mr. Crow showed such a taste for learning that he even went to the schoolhouse with them like Mary's little lamb, although he did not venture in like that animal, but perched about on the trees until they came out from school.

One day a neighbor's little pug dog called Fanny came to the house, and a fight at once took place between these natural enemies, the cat and dog. Mr. Crow was much affected by the attack on his friend, and, I regret to say, evidently much frightened at the warfare, for he stood back on the broad piazza and screamed with all his might. But when Smutty came out victorious he stepped to the front, and from his loud caw, caw, caw, one would have thought that he himself had won the battle.

Mr. Crow had one other taste not in common with Miss Smutty. It was the love for going to church on Sunday. Not that he often went into church, but almost any Sunday he, in his smooth black coat of feathers, might be seen walking toward the church a mile away. Doubtless it was his love for being with the children and his ability to go longer distances than Smutty could manage that led him so far, for in the short walks about the rocks or through the forest they would both follow their little friends, and many a dainty lunch of clams and rock lobsters have they shared together served to them fresh from Nature's storehouse by the children.

But this friendship was at last broken by a sad accident. The children were one day walking on the beach followed by these little creatures, when Norman, one of the boys, started to throw a stone from his sling. It slipped from the sling as he raised his hand to throw it and fell backward on the small black head of Mr. Crow, killing him instantly. The children were all in tears over the loss of one of their so constant companions, and mourned for him a long time. He was put into a little box, and buried at the end of the garden where the sweet peas and sunflowers grow.

Smutty still lives with her own little daughter, a black kitten called Pansy. During these long summer days, should any of you chance to come to this lovely island and should see the black cat sitting on a broad piazza, step up to her and ask her where Mr. Crow is. You would be answered by a mournful droop of the eyelids and a tremble of her expressive black tail.—Mary Simonds in Portland Transcript.

DOMESTIC ECONOMY.

Kitchen Lore.

Lady Cake.—Beat one-quarter pound of butter to a cream and add gradually one and one-half cups of granulated sugar. Mix and add slowly, beating all the while, one cup of lukewarm water, then measure two and one-half cups of sifted flour. Add one-half of this to the batter, beat vigorously. Beat the whites of two eggs to a stiff froth, add half of this to the batter. Mix, stir in the remaining half of the flour, beat again. Add the juice and the grated yellow rind of one lemon, two teaspoonfuls of baking powder and the remaining half of the whites of the eggs; bake in a moderately quick oven for three-quarters of an hour.

Salad Dressing Without Oil.—Beat the yolks of two eggs light. Add two tablespoonfuls of vinegar, one tablespoonful of salt and one-half of a teaspoonful of pepper. Cook over hot water until it thickens and put it away to cool. Whip one-half of a cup of cream; add to the cooked egg, stirring all the while until well mixed.

Chocolate Creams.—Two cups of white sugar, one-half cup of water. Put on the fire and boil about three minutes, stirring constantly. Then stir in a large half-cup of corn starch; flavor with lemon; work up very quickly into little cones; have ready one-half cake of melted chocolate; dip in the cones and place on a plate to harden.

Raisin Filling for Layer Cake.—One teacupful of coffee-sugar and three tablespoonfuls of water, boiled five minutes. Beat the whites of two eggs to a stiff froth and pour the boiling syrup over it. Seed and chop one-half pound of raisins and beat all together till cold.

Custard Pie.—Three eggs, one cup of sugar, one quart of milk, one tablespoonful of corn starch, one teaspoonful of vanilla, a small pinch of salt. Beat the sugar and eggs together; mix in the other ingredients well, and bake on one crust. This makes two pies.

Potato Puree.—To make potato puree take two cups of mashed potato, one onion, four cups of boiling water, one cup of milk, one stalk of celery, one teaspoonful butter, one tablespoonful flour, with salt and pepper to taste. The onion, potato and celery are cooked in the water half an hour; they are then rubbed through a colander. After returning to the fire, the milk, thickening and seasoning are added.

A Trick About Ironing.

The Chinese laundryman knows a little ironing trick worth trying. Instead of heating his iron just right for use he heats in scorching hot; then he plunges it into cold water for an instant, which cools the surface sufficiently to allow him to make several effective passes, the heat meantime gradually returning to the surface. If necessary he repeats this two or three times till the iron is of the right temperature to ply its vocation uninterruptedly. This saves the frequent changing of irons of Bridget's method.—Exchange.

From Delmonico's Kitchen.



NEW YORK, February 11.

In my use of the Royal Baking Powder I have found it superior to all others.



I recommend it as of the first quality.



C. GORJU,

Late Chef de cuisine,

Delmonico's, N. Y.

PATRONS OF HUSBANDRY.

The Master's Desk.

Let nothing deter you from attending the session of the State Grange at Petaluma! Remember the day is October 3d, 1893. There will be abundant accommodations, at reasonable rates, and a splendid programme for the entire week. Try to be present at the opening session.

Hop-growers are now in the midst of their harvest. They are the only tillers of the soil in California who will make even this year. With wheat at one cent per pound, wool at seven or eight and no buyers, fruit not worth the picking, and live stock a dead weight on the market, is it any wonder that producers are complaining! There is no call for labor and the brawn and muscle of the land is idle and almost penniless. Where is the person to solve the problem? Give us help!

Petaluma and Two Rock Granges competed, at the Fourth District Agricultural Fair, for the premium for the best display of farm products. The competition was on the proper basis, viz., "Of those who could best work and best agree."

Officers of the State Grange, county, district and State deputies, please prepare your reports in writing and forward at once to the secretary, A. T. Dewey, 220 Market St., San Francisco, California.

The degrees of Pomona and Flora—the fifth and sixth degrees of the order—will be conferred at Masonic hall, Petaluma, on Thursday evening, October 5th, 1893. Let all who desire to have these degrees take due notice and act accordingly.

Colonel J. B. Armstrong, well known to many readers of the RURAL, lies in a critical condition at his cosy home at Cloverdale.

What has become of the many correspondents who, from time to time, have been furnishing grange news to the RURAL? If one-half the notes of interest which come to the master's office found their way to the RURAL, we would have a much better grange department. What's the matter.

State Fair next week! Will there be any grange meeting held at the hall of Sacramento Grange? Why not have two or three grange days? Get some of our orators, readers, singers and pianists together and then make "Rome howl." It could be done without any expense and with but little trouble. Who will take the lead? There will be many patrons in Sacramento during Fair week who would enjoy just such a meeting. Why not hold a grange meeting there during the session of the Road Convention? It might do some good, surely it could do no harm. Patrons of Sacramento, look into the subject please!

The State Road Convention, which is called to meet at the State Capitol on the 7th of September, will be one of the largest conventions ever held, if all bodies invited to send delegates do so. The work to come before the convention is of the greatest importance, not only to the farmers, but to the taxpayers of the State. Nothing is more conducive to State development than good roads. Their maintenance is a standing menace to the extortion of transportation companies as well as protection to property and convenience to the traveling public. We sincerely hope the convention soon to assemble will act wisely, weigh carefully and do discreetly. Any efforts on the part of men who have axes to grind on the public stone ought to be frowned down. The taxpayers have about all they can handle without any further "heavy burdens."

As we write, there is every indication that the purchase clause of the Sherman silver bill will be repealed by the lower house of Congress. What the Senate will do on this subject is now a mere matter of guesswork. It is also one of the unknown equations to tell what will be done with silver, even after the repeal of the Sherman act. A strong effort will then be made to adjourn Congress till the time of the regular session in December. In the meantime, if this should be the action, the people of North and South Dakota, of Wyoming, of Utah, of Colorado, of New Mexico, of Idaho, of Arizona, of Oregon, of Washington and of California, together with millions of people in the Southern and Western States, will be prostrate before Wall Street. How long will forbearance cease to be a virtue? E. W. D.

Santa Rosa, August 28th, 1893.

From Live Oak.

TO THE EDITOR:—Harvest is now over and it is hoped that North Butte Grange will again be aroused to full activity. Our

grange met in regular session August 12th. The afternoon was spent in listening to speeches by Bro. Frisbie and others. Two applications were read at our last meeting which is the starter for a class and it means another profitable and good time in the end.

I inclose a little poem composed by one of the young ladies who is employed in the packing department of the Riviera Orchard:

We grew by the Feather river,
Where the cooling waters flow,
From the thirsty lands of the valley,
From the mountain's melting snow.

The earth has nourished our tree-home,
Water and air were our food,
In the sunlight we swelled and ripened.
Till our owner said, "They are good."

We were picked from the swaying branches,
By the rippling Feather's shore;
Our life in the free, bright sunshine
And the sweet, pure air was o'er.

We were picked in these shallow baskets
By four busy, eager girls;
They rolled us in sheets of paper,
With many twists and twirls.

We were shipped from the Live Oak depot,
On the train with its rush and roar,
And the Riviera Orchard
Will be our home no more.

We come to you from the Westland
Whose story is still untold;
We bring you the wealth of her prairies;
We are California's gold.

We bring you her joyous greetings,
O'er mountains, rivers and plain,
The beauty and joy of living
Is bounding in every vein.

We tell of the joy and pleasure
In the tilling of the sod;
We point to bounteous Nature,
The glorious gift of God.

A breath from the wind-swept prairies
To your Eastern home we bring;
With greetings from far-off Sutter,
I am

Truly yours,

TUSCAN CLING.

It is indeed interesting to watch the girls busily engaged in preparing the fruit for the Eastern markets, and the preceding poem will no doubt be retained by some fortunate one as a souvenir, as it was placed in a box of neatly packed fruit and sent East. Fraternally,
E. M. B.
Live Oak, Aug. 22, 1893.

Honest Difference of Opinion.

TO THE EDITOR:—It will be recollected by some of your readers that a few months ago a resolution was introduced in the San Jose Grange having in view the propriety of severing its relations with the National Grange. It was not then, nor is it now, the desire of a single member of our grange to have the relations with the National Grange otherwise than they are. The question of what are the social, financial or educational ties that unite the subordinate granges more firmly to the National Grange than to any other fraternal order was discussed, if not ably, at least from an "independent standpoint."

The differences existing between San Jose Grange and the National Grange are many and radical. San Jose Grange unanimously indorsed the two per cent land-loan bill. The National Grange defeated Leonard Rhone's report, which embodied principles of the land-loan bill. San Jose Grange wants lower rates of interest. The National Grange, by defeating said report, in effect said to the farmers that they should be satisfied to pay eight or ten per cent, notwithstanding the Government is loaning money to bond-holders for two or less per cent. The action of the National Grange in defeating this land-loan project is evidence conclusive to the writer that it has subordinated its interest in the welfare of the farmer to its greater fealty to the moneyed power of Wall street.

A little more dust was thrown in the farmers' eyes when the National Grange appointed a committee to interview banks and moneyed men and ascertain if they would not loan money on farm mortgages at three or four per cent, when the banks could get eight or nine for it from others on equally good security. For broad, comprehensive ignorance this brilliant stroke at a financial policy is deserving a chromo.

San Jose Grange asked Congress to authorize the construction of the Nicaragua canal by the Government and control it. The National Grange favored "its construction under such stipulations as will protect the citizens and Government of the United States." This is a milk and water resolution, but mostly water.

San Jose Grange has repeatedly petitioned for shorter initiatory ceremonies. The National Grange rejected the proposition to change.

San Jose Grange has frequently expressed

itself in favor of female suffrage. The National Grange declined to place itself on record on this question, but referred it to the State Granges for their action. This course was taken, we presume, on the ground that female suffrage was a new question, and that the members of the National Grange needed more time for consideration.

The above are but a few differences of opinion that exist between the two granges. We have referred by name to San Jose Grange, but we believe every grange in California is in harmony with San Jose Grange. We close by asking the question, "What benefits do subordinate granges derive educationally, socially or financially from the National Grange?"
AMOS ADAMS.
San Jose, Aug. 26, 1893.

From Merced.

TO THE EDITOR:—During the recent hot weather Merced Grange has kept on the "shady" side, and has had diminished attendance on account of harvest hurry, but now that the weather has moderated and the grain is cut, our meetings (always held regularly) are again full in number and animated in manner. Interest in grange work and principles has not abated one jot; in fact, after the summer's rest from debate and discussion, we feel keener appetites for such mental pabulum.

Delegates to the State Road Convention have been elected, the grange voting to pay the expenses of each one who attends. We believe that better roads are much needed; that they can be secured only by more general and accurate information as to their cost and benefit, and that such information can be most readily and wisely disseminated by means of conventions and free discussion; hence the action taken.

Through the labors of the Committee on Woman's Work, a contribution of \$19.50 to the grange temple fund has been forwarded to Sister Jones of Sacramento. Of this amount \$10.50, the net receipts of Flora's Day celebration, was sent by the grange as a body, the remainder being made up of individual contributions. The hat is still going its rounds, and it is the intention to devote to the same good work the proceeds of a future Ceres' Day celebration.

An alternate to the State Grange has been elected, and Merced expects to be represented by a number of fourth degree members, besides the regular delegates.

At the meeting held August 19th, the following resolution was adopted without a dissenting vote:

Resolved, That this grange most heartily endorses the action of the board of supervisors in fixing the liquor license in Merced county at \$1000 per month, and that it is the desire of this grange that all legal means be employed to enforce the law.

In view of the fact that many bitter attacks have been made upon our supervisors and the ordinance alluded to, the grange takes this method of expressing its approval of the law.

Your correspondent notes with pleasure that a move is being made to simplify the ritual, not that it is lacking in truth or worth or impressiveness or that any of the teachings can with profit be entirely omitted, but because the average candidate, always more or less embarrassed amid strange surroundings, possibly among strange faces, is not in a condition to note and appreciate the lessons inculcated. Let the candidate be initiated with as simple ceremony as possible; let him be heartily welcomed, made thoroughly at ease and at home, and, after he has learned to feel himself "one of us," let the lessons of the order be given. Then, with his mind free from other excitement, feeling the support of known friends, not distracted by the stare (imagined or not) of strange eyes, he can give due and proper attention and profit by instruction. The grange is an order of simplicity and charity; let us then show charity by the simplicity of our welcome to the stranger within our gates.
CORRESPONDENT.

Merced, August 27th.

Letter from New Hope.

TO THE EDITOR:—The ranchers are still very busy in this vicinity. The thrasher, traction engine and cook wagon can be seen on the move from one grain-field to another. One of our enterprising grangers, Bro. Ries, says he will have four weeks more thrashing before laying up for the season.

Bro. Ohleyer expresses my sentiments in pronouncing the RURAL one of the best papers for good, sound sense and general information, also instructive, and many of its pages should be read in all subordinate granges as an educational exercise.

At our meeting on Aug. 7th we conferred the third and fourth degrees on two mem-

bers, and closed a pleasant evening with a feast. At our next regular meeting, Saturday, Aug. 19th, we gave our third new member the obligations in the third and fourth degrees. Then the proposition of a picnic was discussed, and decided upon to take place on the 29th of September, as that was thought to be the best time to have one, because the busiest time would be over and all would feel like taking a holiday. This is to be a basket picnic, and the pleasures of the day will be closed with a dance in the evening at our fine hall just a short distance from the grove.

It will be the regret of all members of New Hope Grange to lose our worthy master, Bro. W. E. Journey, and Sister Journey, who will in the near future move to their new home ranch near Woodbridge, but we hope to see them at our meetings, as the latch-string will hang on the outside of the doors of their many friends here at all times.

Many have just sold their last year's wheat, and some have sold this year's crop already, while others are not ready to sell. The prices of potatoes are better, and at all times of the day teams can be seen loaded with them, also wheat and fruit on their way to the steamboat landing to be shipped to the city.
CARRIE CARLETON.
New Hope, Aug. 20, 1893.

The Grangers' Bank.

The Grangers' Bank is carrying itself well during these troublous times. On July 11th the directors called in the last installment of its capital stock, so that its paid capital is now \$1,000,000. The call was made "to enable the bank to assist the farmers as heretofore to harvest their crops, in which the bank is largely interested, as the stringency of the money market, which exists all over the State, prevents them from obtaining this much needed accommodation." It is significant of the confidence of the stockholders in the institution that not a single share of the stock went delinquent. The bank has all along pursued a safe course and still has done an enterprising business, for it has paid to its stockholders in dividends \$775,000. Although it has not accepted many loans on wheat from new applicants during the present stringency, it has done much to assist farmers in their time of need. It has furnished about one and a half million bags, which were purchased in the interest of the customers of the bank, it has sent coin by express to those who needed it to pay laborers, and it has in some cases guaranteed thrashing and machinery bills. It is still carrying a considerable sum in loans on wheat in warehouse, making arrangements to make its loan safe without insisting on sale of the produce at a sacrifice, as some banks have done. It is a great satisfaction to the manager, Mr. Montpelier, to find himself working with a fully paid up capital stock and with ample funds for any possible contingency.

From Sacramento Grange.

TO THE EDITOR:—Despite the prevailing hard times and financial distress, Sacramento Grange still increases in membership. Two weeks ago the third and fourth degrees were conferred on a class of six, and a class of four are now on their way to receive their reward and partake of the harvest feast.

Last Saturday was Literary Day, and the festival of Pomona was celebrated. As music "hath charms to soothe the savage breast," it hath also power to bring the soul of civilized man into a state which enables him to fully enjoy such a programme as the worthy lecturer, Mrs. A. M. Williams, had prepared.

Theodore Deming read a paper on "Diversified Farming," and the discussion following brought out many valuable points. W. M., E. Greer, spoke of "Irrigation," of which he is now a strong advocate since having given it a thorough trial in his Fruit Ridge orchard. Mr. G. ships large quantities of fruit, and he is convinced of the practical benefits arising from proper irrigation. Mrs. Hattie S. Jones read a brief history of the "Goddess of Garden Fruits," and then, to musical rhythm, Pomona, preceded by Flora and Ceres and followed by Spring, Summer, Autumn and attendants, appropriately robed, entered the Hall. Pomona was welcomed by them, handed to her place by Ceres, and offerings of rare fruits made by the Seasons, to which she responded fittingly. The attendants then placed their gifts at her feet, and were rewarded by sharing the invocation for blessings which she had bestowed upon the Seasons.

The curtain closed, strains of sweet music

fell upon the air, and Pomona before her throne stood revealed, with hand upraised and finger pointing heavenward, surrounded by Flora, Ceres and the Seasons, with hands extended bearing gifts of flowers and wheat and baskets of fruit, and with eyes uplifted, forming a striking tableau. A wave of applause greeted its conclusion. Miss Maggie Kelley read a humorous essay, "Aunt Deborah at the World's Fair," and Miss Wilcox sang a selection and was encored. A bevy of charming maidens then dispensed ice cream and fruits and a social hour was enjoyed. The grouping of the tableau was under the direction of Mrs. H. S. Jones and was very effective. As it might be of assistance to some one in arranging for fancy dresses, it may be stated that the young ladies' robes were of appropriate colors, the material being cheese-cloth and draped upon them by the aid of pins. J.

Notes.

At its last meeting Tulare Grange adopted the following resolution: "Resolved, Tulare Grange declines the request to send delegates to the good road convention to convene in Sacramento, September 7th, and that we are opposed to any scheme whereby any bonds are to be issued or new offices created upon the pretenses of securing better roads."

The chairman of the State committee on woman's work has received from Mrs. H. J. Brouse, Mrs. J. A. Perry and Mrs. M. D. Atwater, committee on W. W. in Merced Grange, No. 7, P. of H., a draft for \$19.50 for the temple fund, \$10.50 of which was the result of a social, the remainder being the contribution of members.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

Oroville Register: A well-known fruit-grower in the foothills, who has had years of experience in growing the various fruits, says: "The best and most profitable fruits to grow in the foothills are oranges, olives, figs, grapes and Bartlett pears. The soil is well adapted to these fruits and they attain perfection here, but we cannot compete with the bottom lands in growing peaches, apricots, nectarines and prunes."

Fresno.

Two hundred vineyardists at Fresno have agreed that they will pay but 75 cents per day and board during the coming grape harvest, or \$1.15 without board. They will give white labor the preference. These wages are low, but the price of raisins is very low also. In fact, there is no money in anything.

Reedley Exponent: Mr. D. L. Wright shipped two carloads of hogs to Los Angeles Saturday. This is the first shipment of hogs from this point. The hogs were mostly raised in the foothill region. We are glad to hear that Mr. Wright expects to continue to make large shipments. It would be a blessing locally if there were more of a diversity of products in this section. Ready money would circulate more freely and greatly add to the general prosperity. Mr. Wright is paying the highest market price.

Glenn.

Dr. Gatliff, of Butte City, says the Willows Gazette, has conceived the idea of planting 30 acres of his land to the black fig simply for hog feed. When it is considered that this fig bears three prolific crops per year, that the fig is an exceedingly fattening food, and that it is relished by all kinds of stock, it will be seen that the doctor's idea is a good one. One acre of figs for hog purposes will equal ten acres of corn land, and the only expense attached is the planting and first year of cultivation. After that the trees will look out for themselves. There is a great deal of land in the foothills too steep for plowing which could be profitably used in this way.

Kern.

Bakersfield Californian: Quite a number of industrious men have already obtained work in large vineyards by agreeing to wait for their pay until the raisins are sold. They are certainly sensible and believe that in these times a job that will pay "grub" is better than none at all.

Mendocino.

Ukiah Press: Dr. King is now erecting on his fruit ranch an improved drier. It has a capacity of five tons of green fruit daily, and is one of the latest improved pieces of mechanism in the valley. The doctor says that this year's fruit crop will be one of the finest in the history of Mendocino.

Ukiah Press: John Thompson, who lives seven miles south of Ukiah, has been recently greatly bothered by the depredation of vast numbers of the genus cervus. The absence of an open season for the killing of deer has proven quite detrimental to his fruit interests. They eat nothing but the buds of bearing fruit trees.

Kings.

Hanford Sentinel: The Lucerne vineyard is having 70,000 trays made this season. It required a carload of nails to make the trays and boxes.

Hanford Sentinel: At W. D. Morrison's

dryer west of town, the crew, about 70, men, women and children, are winding up the peach crop for the season. They had cut, up to yesterday evening, a little over 180 tons of peaches, and this week will about wind up the cutting of about 200 tons for the season. This establishment has cut 120 tons of apricots and 80 tons of nectarines. About six tons of plums have been dried there thus far, and the drying of French prunes will commence next week. Mr. Morrison has shipped out eight carloads of dried goods to date. He employs white help, who have been cutting peaches at 4½ cents per 20-pound box. He has given all applicants a chance to work.

Monterey.

Pajaronian: Pajaro valley's great and money-laden crop is coming. There will be neither freight, storage or wharfage to take from its proceeds, and it will be paid for in coin at a fixed price. Wouldn't California be a booming State this fall if it had about 20 beet factories like that of Watsonville, each in operation and paying \$5 per ton for beets? The sugar beet is about the only one of California's field crops that is going to give the grower a margin of profit this year.

Orange.

The orange fruit-driers are doing an extensive business. Over 75,000 pounds of dried apricots alone have been shipped from Orange thus far.

San Bernardino.

Chino Champion: W. A. Smith brought in two beets yesterday which were pulled by Martin's harvester. One measured 3 feet 5 inches and weighed 3½ pounds. The other measured 3 feet and weighed 5 pounds.

Banning Cor. Riverside Press: The fruit business is booming, all but the price. Only \$10 a ton is offered for pears and peaches, as fine as ever grew on trees. Plums are bringing \$30 per ton, and are mostly shipped to Whittier cannery. A cannery of sufficient capacity to work up the fruit now produced here would be a benediction to our orchardists and a source of profit to whoever would engage in it.

Chino Champion: Just four weeks of the present beet harvest is now past. The weather was excellent for maturing beets up to the first of last week, when several foggy mornings ensued, which noticeably retarded ripening. This week, however, the mornings are again clear, and the sugar contents of the beets will probably increase. One marked feature of the crop this year is a tonnage heavier than usual, and throughout the heavier tonnage the percentage of sugar is keeping well up to a satisfactory average. For instance, numbers of fields are turning out 20 tons and more per acre, of 16 per cent beets.

San Diego.

Riverside Press: J. M. Gonzales, who is in from Temecula, gives a good report of the crops in the vicinity of Temecula and Murrieta, so far as yield and quality are concerned; but he says the ruinously low prices will greatly incommode the ranchers. About all the wheat shipped goes to San Diego, and the price realized is about an average of 52 cents per sack net. All who can afford to hold their crop are storing for a hoped-for increase in prices, but many are compelled to sell at any price they can get. He says that the honey crop is also being largely stored. The prices offered per pound are 4 and 4½ cents. Even at those prices many would sell, but there is little cash to buy with.

San Joaquin.

Stockton Mail: The Young Brothers, orchardists on West's Lane, are shipping every five days 400 boxes of table grapes to Seattle and Portland.

Santa Barbara.

A large olive-oil mill is to be built in Santa Barbara county this fall, to meet the increasing demand for the pure California product which has acquired a reputation, although the output has been small.

Solano.

Vacaville Reporter: Several of our most prosperous fruit-growers have set an example which, if followed by all, would in a great measure relieve the local financial condition. They have sold enough dried fruit to pay their debts, while others are holding for better prices and making their creditors wait, and perhaps both are paying interest to the bank.

Tulare.

Tulare Register: J. S. Woody has some Indian corn just north of town that will yield 100 bushels to the acre. There are four rows of it between each row of prune trees and it is planted about 3½ rows apart each way. Some of it is 16 feet high and has eared out heavily. He is now cutting and putting it into the shock and after husking will feed it the fodder to cattle and horses. It was grown on irrigated ground and had all the moisture it wanted.

Sonoma.

In Sonoma county there have as yet been no sales of dried fruit to speak of. The Tribune says that the bulk of the season's product will go as consignments to commission merchants in San Francisco.

Sonoma Tribune: Martin Peter of Glen Ellen has made an agreement with Mr. McCarthy of the Los Gatos, to take all of his red grapes, estimated at 100 tons, to make into wine on shares, at the ratio of 90 gallons, to be delivered in March to the producer, clear wine. Mr. Peter has also contracted for 100 tons from other vineyards, which, with his own crop, will make about 35,000 gallons to fill his cooage.

Stony Point Cor. Sonoma Farmer: Apple packing still continues, the fruit having been picked over a week ago and has gotten the much-desired color. Now it is ready for market. Some orchardists heap the fruit under

the trees, others carry it to the house or bins. For myself, I choose the former plan, as it is a more rapid process. Being heated directly by the sun the apples soon color.

Index-Tribune: The grape crop of Sonoma valley will be quite large and fine in quality this season. So far no price has been offered for grapes by the dealers.

Yolo.

Woodland Democrat: W. H. Gregory has just completed the sale of 500 acres of the Good-year place. The purchaser is an Englishman residing in San Francisco. He says he intends to colonize it. The price paid was \$50,000.

Capay cor. Woodland Democrat: Grape-picking will commence at the Orleans vineyard about Wednesday of this week. Mr. Silberstein has about 450 acres of vines, all in heavy bearing, but he may not pick the entire crop if the price of wine continues too low. He has a big lot of hogs and he may conclude that it is more profitable to convert grapes into pork than into wine. He also has about 120 acres of prune trees that will be ready to pick this week, and the crop will be very large.

Winters letter: White labor appears to be gradually supplanting Japs and Chinese hereabout, but the change began to take place rather too late to be of real benefit. As soon as the peaches are all dried there will be nothing left of the fruit crop but grapes and prunes. Shipments of late fruit to the East are holding up better than was anticipated. If there had been three active agencies for Eastern commission houses here earlier in the season, the fruit-growers would probably not be lamenting a disastrous season.

Yuba.

The three hop-yards of Woods, Dnrst and the Rodney brothers are running almost 3000 persons in picking. All are whites and Indians. No Chinese or Japs are employed. The area planted to hops here is only 800 acres. The crop will be marketed in Europe, hence these acres will bring to this coast over \$450,000 of English gold. This land is among that which the valley people are striving to protect from debris from the hydraulic mines.

WE GUARANTEE

That one tablespoonful of

GOMBAULT'S CAUSTIC BALSAM

will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made. It is therefore the cheapest (as well as safest and best) external applicant known for man or beast.

THE LAWRENCE WILLIAMS CO., CLEVELAND, OHIO.



REGULATE THE STOMACH, LIVER AND BOWELS, AND PURIFY THE BLOOD.

A RELIABLE REMEDY FOR

Indigestion, Biliousness, Headache, Constipation, Dyspepsia, Chronic Liver Troubles, Dizziness, Bad Complexion, Dysentery, Offensive Breath, and all disorders of the Stomach, Liver and Bowels.

Ripans Tablets contain nothing injurious to the most delicate constitution. Pleasant to take, safe, effectual. Give immediate relief.

Sold by druggists. A trial bottle sent by mail on receipt of 10 cents. Address

THE RIPANS CHEMICAL CO., 10 SPRUCE STREET, NEW YORK CITY.

MAKE YOUR OWN GAS! BADLAM BROS.,

519 Market St., San Francisco.

SOLE MANUFACTURERS OF THE CELEBRATED PEERLESS GAS WORKS. New process, safe and inexpensive, from \$100 upward. Light cheaper than coal oil. Send for catalogue and prices.

FARMERS!

Now is the time when you should protect your families.

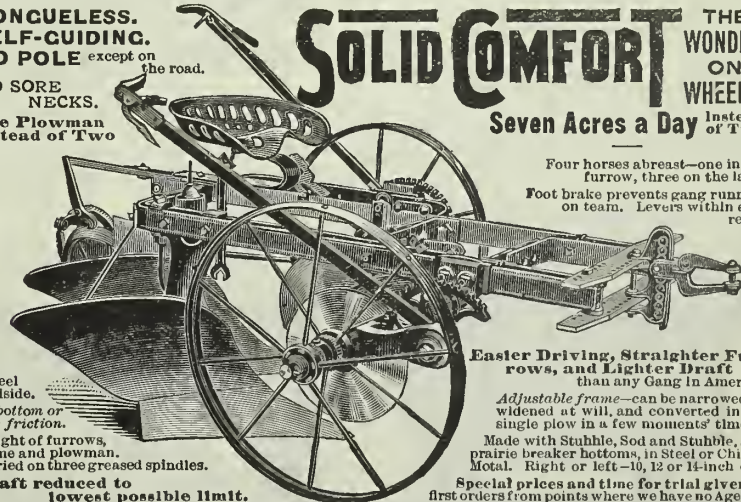
Take a policy in the only company which loans its money to the farmers of California—

THE PACIFIC MUTUAL LIFE INS. CO.,

KILGARIF & BEAVER, General Agents,

PACIFIC MUTUAL BUILDING, - - SAN FRANCISCO, CAL.

TONQUELESS. SELF-GUIDING. NO POLE except on the road. NO SORE NECKS. One Plowman instead of Two



SOLID COMFORT THE WONDER ON WHEELS. Seven Acres a Day Instead of Two.

Four horses abreast—one in the furrow, three on the land. Foot brake prevents gang running on team. Levers within easy reach

Easier Driving, Straighter Furrows, and Lighter Draft than any Gang in America.

Adjustable frame—can be narrowed or widened at will, and converted into a single plow in a few moments' time.

Made with Stubble, Sod and Stubble, and prairie breaker bottoms, in Steel or Chilled Metal. Right or left—10, 12 or 14-inch cut.

Special prices and time for trial given on first orders from points where we have no Agents.

ECONOMIST PLOW CO., So. Bend, Ind., or Stanton, Thompson & Co., Sacramento.

GRANGERS' BUSINESS ASSOCIATION, SHIPPING AND COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.

Full Cargoes of Wheat furnished Shippers at short Notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

A. M. BELT, Assistant Manager.

Send for Price Lists OF GUNS And all Articles used by Hunters and Anglers.



GUNS SENT ON TRIAL.

OLD GUNS TAKEN IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All stallions.

M. D. HOPKINS, Petaluma. Registered Shortborn Cattle. Both sexes for sale.

P. PETERSEN, Siles, Colusa Co. Importer & Breeder of Registered Shortborn Cattle. Young Bulls for sale.

JOHN LYNCH, Petaluma. Breeder of Thoroughbred Shortborn. Young Stock for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER SAKS & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS—The best A. J. C. C. Registered Prize Herd is owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

R. H. CRANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

SWINE.

OHAS. A. STOWE, Stockton, Cal., (Box 283). Breeder of Berkshire and Poland-China Hogs; Milking Strain of Durham Cattle, and M. B. Turkeys. Write for Prices.

H. J. PHILPOTT, Niles, Cal., Importer and breeder of Tecumseh and other choice strains of Registered Poland-China Hogs.

J. E. ALSFORD, Woodside, San Mateo Co. Breeder of Berkshire Hogs and Toulouse Geese.

P. H. MURPHY, Perkins, Sac. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, Low Prices.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.



OXFORD DOWN SHEEP FOR THE PACIFIC COAST.

W. A. SHAFOR, Middletown, Ohio, Largest American Importer of O. D. Sheep.

Is prepared to quote prices on the best stock of Oxford Down Sheep to be had in England. Parties wanting first-class stock should write for particulars and induce their neighbors to join them. Import will arrive about August 1st. Write at once.

FRANK A. BRUSH, SANTA ROSA, CAL. (Care Santa Rosa National Bank.)

Wants you all to write to him for prices on Young Stock.

MINORCAS: White and Black.

LEGHORNS: White, Brown, Black, Buff.

B. P. ROCKS.

Mention the age desired and when shipped. Circular Free.

THE BALSTED INCUBATOR COMPANY, 1312 Myrtle Street, Oakland, Cal. Send Stamp for Circular.

AT AUCTION AT STATE FAIR.



GILT EDGE BROOD MARES

STINTED TO FAMOUS STALLIONS.

Being a Draft from the World-renowned

PALO ALTO STOCK FARM.

It having been determined to reduce the breeding plant at this famous stock farm, the undersigned have been authorized to dispose of at

SACRAMENTO,

WEDNESDAY, SEPT. 13, 1893, at 10 A. M.

FORTY HEAD CHOICE BROOD MARES,

Daughters of Electioneer, Ansel, Falls, Woolsey, Antevolo, Nephew, Wild Boy, Piedmont, Etc.

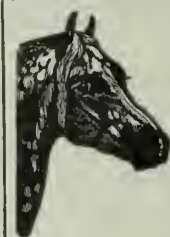
STINTED TO THE NOTED STALLIONS

TRUMAN, 2:12; WHIP, 2:27; MONACO, 2:19; AZMOOR, 2:30; NORRIS, 2:32; ELECTRICITY, 2:17; PAOLA, 2:28; HUGO, 2:29; PIEDMONT, 2:17, etc.

Catalogue, giving description and pedigrees, will be ready Aug. 20th. Apply to

EDWIN F. SMITH, Agricultural Pavilion, Sacramento, Cal.

KILLIP & CO, Live Stock Auctioneers, 22 Montgomery St., S. F.



ONLY 25 YEARS OLD AND A GIANT!

THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular

E. FOUGERA & CO.,

30 North William Street, New York.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

- KENDALL'S SPAVIN CURE. -

STOCKTON, CAL., Dec. 19th, '92.

DR. R. J. KENDALL CO.
Gentlemen:—Having read one of your Treatise on the Horse and seeing the Spavin Cure advertised, I thought I would try it. I had one horse with a prominent Spavin of 12 months standing. I removed it with a bottle. It tied up one fore foot on same side the spavin was and compelling the horse to rest on lame leg while I took a surcingle and drew it across the back or spavin until the hock or spavin got very warm with the friction, then putting on Spavin Cure. I had a mare that had a running from her nose for 12 or 14 months. I rubbed the Spavin Cure from her eyes down to nostrils, then from back of jaw bone down under the throat for a week. I have not seen any discharge for two months.

Yours truly, **HUGH McDADE.**

Price \$1.00 per bottle.

DR. R. J. KENDALL CO.

Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

WELLMACHY All kinds, Water, Gas, Oil Mining, Ditching, Pumping Wind and Steam Heating Boilers, &c. Will send you to send 25c. for Encyclopedia, of 1500 Engravings. The American Well Works, Aurora, Ill., also, Chicago, Ill.; Dallas, Tex.; Sydney, N. S. W.

Short-Horn BULLS

Calves, Yearlings and 2-year-olds

FOR SALE.

ROBERT ASHBURNER,

Baden Station, San Mateo County, Cal

Only three-fourths mile from the terminus of the S. F. and San Mateo Electric Road.

STOCK SCALES

4 TON \$45.

U. S. STANDARD. FULLY WARRANTED.

Delivered at your R. R. Station and ample time for building and testing allowed before acceptance.

OSGOOD & THOMPSON, Binghamton, N. Y.

PORTABLE PLATFORM SCALES TRUCKS, ETC.

Twenty-five per cent cheaper than any other on the market. Send for Catalogue.

C. H. LINDEMANN, Agent,

126 KEARNY STREET, SAN FRANCISCO

Dr. A. E. BUZARD,

VETERINARY SURGEON.

MEMBER OF THE ROYAL COLLEGE OF VETERINARY Surgeons, London, England. Late Veterinary Surgeon in the United States Army. Veterinary Contributor to the "Pacific Rural Press." The Diseases of all Domestic Animals treated on Scientific Principles. Special attention given to Chronic Lameness and Surgical Operations. 405 BRODERICK ST., SAN FRANCISCO. Calls to the country promptly attended to. Telephone No. 4667.

The American Bee Journal,

(Established 1861.)

Is Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample.

\$1.00 BEE-BOOK FREE

GEO. W. YORK & CO. 56 Fifth Ave., Chicago, Ill.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.

MECHAM & FRITSON,

Importers & Breeders of Red Polled Cattle.

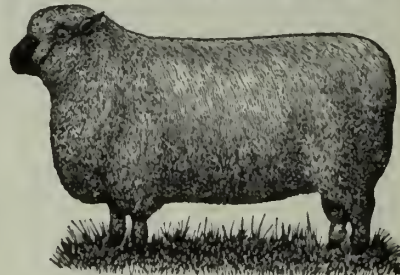
We have 200 head of Full Bloods and Crossbreds on Devone. Bulls and Heifers for sale. Address communications regarding Cattle to **MECHAM & FRITSON**, Petaluma, Cal.



MECHAM & HINKLE.

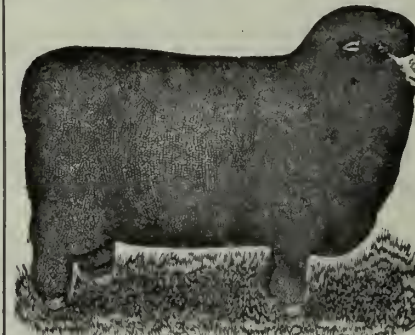
Importers & Breeders of Shropshire Sheep.

The flock was imported or bred direct from imported stock. The Shropshire excels all mutton breeds for a cross on the merino—giving more wool and mutton than that from any other breed. Pure and Crossbred Rams and Ewes for sale. Direct inquiries regarding Shropshires to **MECHAM & HINKLE**, Petaluma, Cal.



H. MECHAM,

Breeder of American Merino Sheep Without Horns. The only flock in the United States. When we bought our sheep East 24 years ago, among them was a ram without horns. He grew to be a fine large sheep, shearing at 2 years old, a 12-month's fleece, 55 lbs. of long white wool.



I have bred from him and his get ever since and have never made an out-croes and never used the same ram but one year on the same flock. My rams at two years old weigh from 160 to 180 lbs., have a strong constitution, without wrinkles, and will shear on an average about 25 lbs., a 12-month's fleece, of long white wool. Rams and Ewes for sale. P. O. Address Stony Point, Sonoma Co., Cal. R. R. Station, Petaluma.



CHOPPERS ATTENTION!

ASK FOR THIS AXE. USE NO OTHER.

Wood-choppers, try the

Kelly Perfect Axe

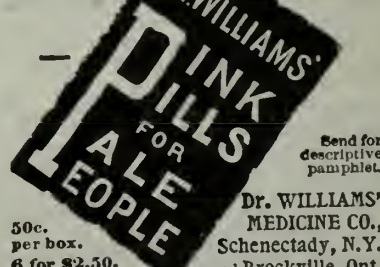
It will cut more wood than any other axe.

The scoop in the blade keeps it from sticking in the wood, and makes it cut deeper than any other axe. Ask your dealer for it. Send us his name if he don't keep it. It is the Anti-Trust Axe.

Kelly Axe Mfg. Co. LOUISVILLE, KY.

Nerve Tonic

Blood Builder



50c. per box. 6 for \$2.50.

Dr. WILLIAMS' MEDICINE CO. Schenectady, N. Y. and Brockville, Ont.



J.I.C. DRIVING BIT

STILL LEADS THEM ALL.

IT WILL CONTROL THE MOST VICIOUS HORSE.

75,000 sold in 1891.

100,000 sold in 1892.

THEY ARE KING.

Sample mailed N.C. for \$1.00

Nickel, \$1.50.

Stallion Bits 50 cts. extra.

RACINE MALLEABLE IRON CO. J. P. Davies, Mgt.

S. H. MARKET REPORT

Market Review.

SAN FRANCISCO, August 30, 1893.

Although ruinous prices have prevailed in the wheat market during the past week, there has been a heavy movement, due to the fact that holders have been compelled to sell for what they could get. There is every prospect that the financial situation will soon brighten up and absolute certainty that wheat prices will be better later on, but this is small comfort to a man who must have ready money to meet his obligations and who has no way to raise it but to sell his crop, whether the price be good or bad. The tonnage situation co-operates with the necessities of holders to keep the market down to bedrock. Yesterday there was 73,900 tons of tonnage on the engaged list for grain, as against 60,500 tons on the corresponding date last year. But the disengaged tonnage in port was only 26,000 tons, against 107,600 tons a year ago.

Wheat States.

The August report of the Agricultural department at Washington estimates the Wheat crop in the principal States for 1893 as follows:

Ohio, bushels.....	41,777,000
Indiana.....	35,482,000
California.....	30,357,000
Michigan.....	22,344,000
Kansas.....	21,325,000
Missouri.....	18,903,000
Illinois.....	16,257,000
Kentucky.....	10,036,000
Wisconsin.....	9,043,000
Tennessee.....	7,631,000
Texas.....	5,226,000

Total winter.....218,381,000

Minnesota.....	31,299,000
North Dakota.....	28,635,900
South Dakota.....	22,964,000
Nebraska.....	10,386,000
Oregon.....	10,334,000
Washington.....	9,537,000
Iowa.....	7,007,000
Other States.....	43,938,000

Total spring.....164,094,000

Grand total.....382,475,000

The crop of 1892 was 515,949,000 bushels. The leading State for that year was Kansas, which contributed 70,831,000 bushels. The average of that State from 1880 to 1892 was 28,266,000 bushels. Its product for 1892 was therefore something phenomenal. The best annual average for the thirteen years of 1880 to 1892 was furnished by Indiana, say 37,246,000 bushels. That State produced 39,885,000 bushels in 1892, but the product this year will be 4,400,000 bushels less. California produced 39,157,000 bushels last year, while its average for 1880 to 1892 was 34,790,000 bushels. Many think the crop this year will be as large as last year, but the Government authorities at Washington place us 8,800,000 bushels less than last year. The carry-over stock from last year, exclusive of flour, was 7,467,500 bushels, so that we shall have nearly as much for export if the crop this year should not be in excess of the quantity allowed us by the Agricultural department.

Oregon and Washington are classed as spring Wheat States. For the thirteen years ending with 1892, the average of the former was 13,016,000 bushels and of the latter 8,559,000 bushels. In 1892 Oregon produced 9,779,000 bushels and Washington 9,005,000 bushels. Both States are credited with a slightly increased yield this year, amounting in each case in round numbers to a gain of 500,000 bushels. The quantity available for export from the three Wheat States of the Pacific will be fully as large this year as last year. Ship-owners will make a note of this and also of the small amount of free tonnage suitable for Wheat now on this coast, as well as the comparatively small number of vessels on the way here.

Barley.

The export trade for Brewing keeps up well and the shipments this month have been large, though at low prices. There has been a moderate inquiry for Feed, both on local and shipping account. The market has been steadier yesterday and to-day, with a tendency to advance.

Other Cereals, Etc.

A better demand for large yellow corn was noted yesterday, but prices were unchanged. Oats move slowly at weak prices, concessions having to be made to effect sales of any note. Beans continue on the down grade, as there are offerings of new crop. Hay is in very good demand, considerable shipments having been made of late. A vessel now loading for the Hawaiian Islands will take a large quantity. Hops are quiet at unchanged prices. New mustard seed is arriving in small quantities, but the market is rather unsettled as yet. Rye attracts very little attention and is weak.

OATS—New, red, 90¢@95¢ cwt; black, 85¢@91.05; white, 80¢@81.15. Old crop; Common to fair, \$1.10 to \$1.15 cwt; good to choice, \$1.15 to \$1.20; fancy, \$1.25 to \$1.30; milling, \$1.20 to \$1.30; Surprise, \$1.30 to \$1.35; gray, \$1.10 to \$1.15 for feed.

CORN—Large yellow, 95¢@97½¢ cwt; small do, 97½¢@91¢; white, 90¢@95¢.

BEANS—Pea, \$2.20 to \$2.30 cwt; Pink, \$2.75 to \$3; Bayo, \$1.65 to \$1.75; Small White, \$2.10 to \$2.25; large do, \$2.20 to \$2.30; Butter, nominal; Red, \$2.50 to \$2.75; Lima, \$2.25 to \$2.35.

SEEDS—Rape, 2¢@2½¢ lb; Hemp, 3¼¢@4¼¢; Canary, 4¼¢@5¢ for imported; do California, nominal; Flaxseed, 2¼¢@3¼¢; Alfalfa, 8¢@9¢; Caraway, 7½¢; Mustard, 2¼¢@2½¢ for yellow and 2¼¢@2½¢ for brown.

HAY—Wild Oat, \$8.50 to \$10 ton; Wheat and Oat, \$9 to \$11; Barley, \$7 to \$9; Wheat, \$9 to \$12.50; Clover, \$7 to \$9; Alfalfa, \$8 to \$10; Compressed, \$8 to \$11.

STRAW—Quotable at 35¢@45¢ per bale.

HOPS—Quotable from 18¢ to 20¢ lb for new.

RYE—Quotable at 95¢@91¢ cwt.

DRIED PEAS—Nominal.

BUCKWHEAT—Nominal.

MILL Products.

The exports of flour have been on a good scale, and the present month will show a considerable gain. Bran and middlings were marked down during the week. No other changes of note were reported.

BRAN—From \$16.50 to \$17.50 per ton.

MIDDINGS—From \$19 to \$22 per ton.

GROUND BARLEY—From \$16.50 to \$17.50 per ton.

ROLLED BARLEY—From \$16.50 to \$17.50 per ton.

CHOPPED FEED—From \$17.50 to \$18.50 per ton.

FEED CORNMEAL—From \$22 to \$25 per ton.

OILCAKE MEAL—From \$32.50 to \$35 per ton.

FLOUR—Family Extras \$3.65 to \$3.75 per bbl.; Bakers' Extra, \$3.50 to \$3.60; Shipping Superfine, \$2.60 to \$2.90.

VARIOUS—Cash prices per 10-lb. sks.: Cracked Wheat, 3¼¢ per lb.; Rye Flour, 3¼¢; Rye Meal, 3¢; Buckwheat Flour, 5¢@5½¢; Oatmeal, 4¼¢@5¢; Oat Groats, 5¢; Hominy, 4¼¢@4½¢; Rice Flour, 7½¢; Farina, 4¢@4½¢; Pearl Barley, 4¢@4½¢; Split Pea, 5¼¢@5½¢; Rolled Oats, 5¢; Buckwheat Groats, 8½¢; Graham Flour, 3¢; Normal Nutrient, \$3 per case 1 doz. 1-lb. tin cans; Breakfast Delight, \$3.25 do. 2 doz. 4-lb. pkgs.

Vegetables.

Onions were higher, the receipts being very small. Potatoes were without any change. The receipts were 3843 sks. Green Corn was in better supply and cheaper. Tomatoes were plentiful and weak. Other articles were abundant.

ONIONS—Yellow, 75¢@80¢ cwt.

POTATOES—Early Rose, 35¢@40¢ cwt in sks.

Burbanks, 35¢@50¢ for river; do San Leandro, 50¢@75¢; do Salinas, 75¢@81¢; Sweet, 90¢@91.12½¢.

Various—Green Peas, 2¢@2½¢ lb; String Beans, 1½¢@2¢; Lima do, 1½¢@2½¢; Cucumbers, 20¢@30¢ box; Summer Squash, 20¢@30¢; Green Peppers, 25¢@50¢ box for Chile and 25¢@50¢ for Bell; Green Corn, 50¢@75¢ for small crates and \$1.175 for large; Tomatoes, river, 25¢@35¢ box; Vacaville, 10¢@15¢; Garlic, 1¢@1½¢ lb; Green Okra, 25¢@50¢ box; Eggplant, 25¢@50¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

almonds, soft, 15¢@16¢; do, paper shell, 16¢; hard —; Walnuts, California, soft shell, 13¢@14¢; paper shell, 13¢@14¢; hard, 8¢@9¢; do, Chile (new), 9¢@10¢; pecans, 10¢@12¢; Peanuts, California, 4¼¢@5½¢; do, Virginia, 7¢@9¢; Filberts, 10¢@11¢; Pinenuts, 12½¢@15¢; Cocoanuts, 55¢@50¢ per 100.

Butter, Cheese and Honey.

The situation was unchanged yesterday. Butter was weak and cheese steady.

BUTTER—Fancy creamery, 26½¢@27½¢ lb occasionally higher for special dairies; fancy dairy (rolls and squares), 23¢@25¢; other grades of fresh, 20¢@23¢; pickled roll, 20¢@22¢; firkin, 18¢@21¢; solid packed creamery, 23¢@25¢.

CHEESE—California, 8¢@10½¢ lb; Young America, 9¢@11¢; New York cream, 12½¢@13½¢ for new.

HONEY—New; comb, water white, 10¢@12¢ lb in 1-lb frames; extracted, 5¼¢ for water white and 5½¢ for amber.

BEESWAX—From 22½¢@25¢ lb.

Poultry and Eggs.

The recent arrivals of Eastern Poultry have depressed prices of California. The market has been overstocked. Eggs rule very firm for choice.

POULTRY—We quote California: Hens, \$5.00 @6.00 per doz; Broilers, \$2.00 to \$3.00 for small and \$3.00 to \$3.50 for large; Roosters, \$5.00 to \$6.00 for young and \$5.00 to \$6.00 for old; Geese, pair, \$1.25 to \$2.00; Ducks, \$3.00 to \$5.00 per doz; Turkeys, live, 16¢@18¢ lb; Pigeons, \$1.25 to \$1.50 per doz.

EGGS—California, 27¢@30¢ per doz for general offerings of ranch and 32½¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 17¢@21¢.

Provisions.

The overland receipts reported yesterday included 79,000 lbs Hams and Bacon. The market continues firm for Hog products.

CURED MEATS—Hams—Eastern, sugar-cured, 14¢@15¢ lb; A—1-C, 14¢; California, 13¢@14¢.

Bacon—Eastern, extra light, 18½¢ lb; medium, 14¢; light do, 14½¢@15¢; light, 16¢@17

Formation of Coal.

Nature is still making coal, though, unfortunately, not at a rate anything like fast enough to make up for the consumption of this product. The processes may be watched from beginning to end. For this purpose one must first go to a peat bed, which is simply an accumulation of the remains of plants that grew and decayed on the spot where they are now found. When the upper layer of this material is removed one finds peat with 52 to 66 per cent of carbon, and the deeper one goes the better in quality it gets. It may be cut out in blocks with sharp spades, the water may be pressed from the blocks, and they may be stacked up, covered and dried and used for fuel. There is a certain kind of moss, called "sphagnum," which in large part makes up the peat-producing vegetation. Its roots die annually, but from the living top new roots are set out each year. The workmen who dig peat understand that if this surface is destroyed the growth of the bed must stop; so commonly they remove the sod carefully, replacing it after they have taken out a stratum of peat. There is little doubt that if these beds of peat could lie undisturbed and covered over through many ages they would take on all the characteristics of mineral coal. The substance of coal has been so compressed that the forms of the plants composing it cannot usually be seen. But when a piece of it is made so thin that it will transmit light, and is then subjected to a powerful microscope, its vegetable structure may readily be distinguished. Immediately under every separate seam of coal there is a stratum of what is known as fire-clay. This stratum is always present, and contains in great abundance the fossil impressions of roots and stems and twigs, showing that it was once the soil from which vegetation grew luxuriantly. It is common, also, to find fossil tree stems lying mashed flat between the layers of black slate which form the roofs of coal mines, as well as impressions of the leaves, nuts and seeds which fell from these trees while they were living. In some beds of cannel coal whole trees have been found with roots, branches, leaves and seeds complete, and all converted into the same quality of coal as that by which they were surrounded. Geologists are of the opinion that bituminous and anthracite coals were formed during the same period and under like conditions. Originally they were all bituminous, but during the violent contortions and upheavals of the earth's crust at the close of the carboniferous age the bituminous coals involved in that disturbance were changed by heat and pressure and the consequent expulsion of volatile matter from bituminous to anthracite. Cannel coal is a variety of bituminous which burns with great freedom, the flame of it affording considerable light. It was called "candle coal" by the English people who first used it, as it often served as a substitute for candles. The name became corrupted to "cannel" and has so remained. It is more compact than ordinary bituminous coal and it can be wrought in a lathe and polished.—Black Diamond.

What Zero Means.

The word zero is from the Spanish and means empty, hence nothing. It was first used on a thermometer in 1707 by a young Prussian named Gabriel Fahrenheit, then but 19 years of age. From a very small boy he had been a close observer of nature, and in the years mentioned above, while experimenting by putting snow and salt together, found that it produced a degree of cold equal to the coldest day in the year. The young discoverer was struck with the coincidence of his little scientific discovery, and hastily concluded that he had found the lowest degree of temperature known in the world, either natural or artificial.

He called the degree "zero," and constructed a thermometer, or rather weather glass, with a scale graduated up from zero to boiling point, which he numbered 212, and the freezing point 32, because, as he thought, the mercury contracted the thirty-second of its volume on being cooled down from temperature of freezing water to zero, and expanded to the one hundred and eightieth part on being heated from the freezing to the boiling point. Time showed that this arrangement, instead of being truly scientific, was as arbitrary as the division of the bible into verses and chapters. Fahrenheit's thermometer became widely adopted before any one adopted a better scale, and those who now use it cling to it as Englishmen cling to their difficult and cumbersome fractional money. The three countries which use Fahrenheit's scale are

England, Holland and America. Russia and Germany use Baumer's, in which the boiling point is counted 80 above freezing, zero. France uses the Centigrade, so called because it marks the boiling point 100 degrees from the freezing point.—Carriage World.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos., \$1 10 mos., \$2; 15 mos., \$3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Commission Merchants.

ALLISON, GRAY & CO.,

501, 503, 505, 507 & 509 Front St.,
And 300 Washington Street, SAN FRANCISCO.

—GENERAL—

Commission - Merchants,
GREEN and DRIED FRUITS,
Poultry, Eggs, Game, Grain, Produce and Wool.

P. STEINHAGEN & CO.



404 & 406 DAVIS ST. S.F.

MOORE, FERGUSON & CO.

WOOL, GRAIN, FLOUR

—AND—

General Commission Merchants,

310 California St., S. F.

Members of the San Francisco Produce Exchange.

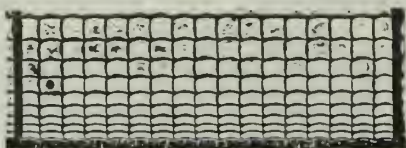
Personal attention given to sales and liberal advances made on consignments at low rates of interest.

LINDSAY & CRAIG,

Crocker Building.....San Francisco.

Mortgages Bought, Loans Negotiated.

Several buyers on hand for desirable Fruit and Grain Ranches.



Reformation or Annihilation?

Many farmers are prejudiced against all "middle men" and of late the cry has been "abolish them." We have a better plan, **reform them.** We find farmers make splendid middle men; the better the farmer the better middle man he makes. Knows how to temper his "wind" to the "shorn lamb," as it were.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Gentleman Having Practical Experience

In fruit-growing in Fresno, with office in Glasgow, Scotland,

Is Open to Represent Good Cannery

For EXCLUSIVE SALE OF THEIR CANNED CALIFORNIA FRUIT IN SCOTLAND.

Address PATON, 138 Renfrew St., Glasgow, Scotland.

TREE WASH.

"Greenbank" Powdered Caustic Soda and Insecticide.

T. W. JACKSON & CO.,

Sole Agents,

No. 5 Market Street, San Francisco, Cal.

JAMES M. HAVEN. THOMAS E. HAVEN, Notary Public.

HAVEN & HAVEN,

ATTORNEYS AND COUNSELORS AT LAW

No. 590 California Street,

Telephone No. 1746. SAN FRANCISCO, CAL.

Educational.

Bowens Academy,

University Ave., Berkeley.

BOARDING AND DAY SCHOOL For Boys and Young Men.

Special university preparation, depending not on time but on progress in studies.

T. S. BOWENS, M. A. Head Master.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,

Surveying, Architecture, Drawing and Assaying, 728 MARKET ST., SAN FRANCISCO, CAL. Open All Year.

A. VAN DER NAILLEN, President.

Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. ESTABLISHED 1864. Send for circular

ACTUAL BUSINESS PRACTICE.

PACIFIC Business College,
320 POST ST. SAN FRANCISCO.

LIFE SCHOLARSHIPS, \$75.

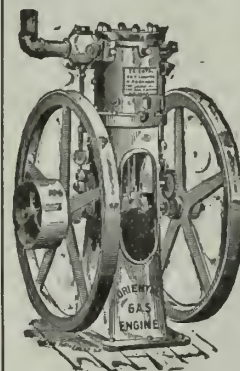
Bookkeeping, Penmanship, Shorthand, Typewriting, English Branches, etc. Graduates aided in getting positions. Send for circulars. T. A. ROBINSON, Pres.

HEALD'S

BUSINESS COLLEGE.
24 POST STREET.....SAN FRANCISCO.
FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR. E. P. HEALD, Pres. C. S. HALEY, Sec.

THE ORIENTAL GAS ENGINE



IS THE BEST, because it combines simplicity of construction with power and economy in space. It can be run with natural or manufactured gas or gasoline at a cost of 20 to 25 cents per horse power per day.

It can be used for pumping purposes, as well as for all purposes where a perfect engine is required, with the advantage of lessening the risk of explosion. No licensed engineer at a high salary needed to operate it.

Send for circulars and prices if a good safe engine is what you need.

The Oriental Launch is Perfection.

M. A. GRAHAM,
Inventor and Manufacturer,
105 BRYANT STREET, SAN FRANCISCO.

A BEAUTIFUL PLACE

Comprising 4½ acres, within the town limits of Santa Rosa, well improved, has nursery of 50,000 trees, fine orchard, well stocked poultry yard (fancy varieties), house furniture, horse, carriage, etc. Everything in good order. Price reduced from \$10,000 to \$8000. Must be sold. Apply early.

JOHN F. BYRNEE,

42 Market St., San Francisco.

ORANGE CULTURE IN CALIFORNIA,

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued "Orange Culture in California" was written by Thos. A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St., San Francisco

Treatise on the Horse and His Diseases.

By B. J. KENDALL, M. D.

85 Fine Engravings showing the positions and actions of sick horses. Gives the cause, symptoms and best treatment of diseases. Has a table giving the doses, effects and antidotes of all the principal medicines used for the horse, and a few pages on the action and uses of medicines. Rules for telling the age of a horse, with a fine engraving showing the appearance of the teeth at each year. It is printed on fine paper and has nearly 100 pages, 7½x5 inches. Price, only 25 cents, or five for \$1, on receipt of which we will send by mail to any address DEWEY PUBLISHING CO., 220 Market Street, San Francisco.



Seeds, Plants, Etc.

AN INVITATION

IS EXTENDED TO ALL INTERESTED TO VISIT THE SAUSAL FRUIT FARM DURING THE FRUITING SEASON, WHERE ALL VARIETIES ARE TESTED THAT ARE GROWN AT

NAPA VALLEY NURSERIES.

AN INSPECTION OF THE NURSERIES ALSO SOLICITED. CLEAN STOCK, UNIRRIGATED, PROPAGATED FROM BEARING TREES.

LEONARD COATES, NAPA, CAL.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrabalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

ORANGE, LEMON & CITRON TREES.

If you have a Lemon or Orange grove, or wish to start one, remember that the success of your grove depends on the trees you plant. Common seedlings will give you a poor crop. Remember now that you are in time! If you will get your plants from this island, which, in point of fact, is the real citrus producing region in the world, in the course of time you will have a very prolific grove of the best Sicilian varieties. We only ship trees three years old, budded on the sour stock. Real trees and not common seedlings. Our leading varieties are: ORANGE:—Mountain, Etna, Aderno, Paterno, Blood, Oval and Mandarin. The LEMON:—Messina, Mountain, Etna. The CITRON:—Citrus Medica, Spadafara, Diamante, Perettone, Lemnecella Turk's Head, Lemsuziana, Paradise, Etc. The fruit of the above-mentioned varieties is the one largely exported in boxes to the American markets from this island. We have made several successful shipments of plants to California, Florida and Louisiana. Special care in packing. Give us an order for one case containing 100 or 200 assorted trees. Remember that every dollar you lay out on Sicilian trees is a one hundred dollar bill you have gained in future. Apply:

G. SGROI & CO., Catania, Sicily.

OLIVE TREES.

ALL KINDS OF

Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,

Pomona, Cal.

OAK LEAF NURSERIES

—AND—

APIARIES.

Trees, Plants, Flowers, Seeds, Bees, Honey, Etc.

The best varieties of Strawberry Plants furnished at lowest rates, such as the Australian Everbearing, Honey, Triomphe De Gand, Sanders, Jessie, Iowa Beauty, Gandy, Eureka, etc., besides all the native wild varieties of California.

To induce new customers to try some of our wonderful varieties of Strawberries we make this remarkable offer: For 10 cents, in stamps, to pay for postage and packing, we will mail you, free, a start of three very valuable varieties.

Seeds of native trees and plants furnished in their proper season.

A great part of the stock that we advertise cannot be purchased of any other dealer in the world, as we are the first to advertise and introduce such trees and plants. Send for Price List.

S. L. WATKINS,

Grizzly Flats.....California.

BACK FILES of the PACIFIC RURAL PRESS (unbound can be had for \$2.50 per volume of six months. Per year (two volumes) \$4. Inserted in Dewey's patent binder 50 cents additional per volume.

California Crops.

[Summary of Report of Observer James A. Barwick, for Week Ending August 26, 1893.]

The average temperature during the week ending August 28th was for San Francisco 58°, Eureka 55°, Red Bluff 82°, Sacramento 74°, Fresno 80° and Los Angeles 70°. As compared with the normal temperature, San Francisco was found to be 3° below normal, Eureka 1° below, Red Bluff 4° above, Sacramento 1° above, Fresno normal, and Los Angeles 2° below the normal. The highest temperature reported was 103° at Gridley, Butte county, and the lowest 45° at San Ardo, Monterey county.

Lassen County (Susanville)—The farmers of Honey Lake valley are nearly through haying and are busily engaged in harvesting their crops.

Shasta County (Anderson)—D. Hill sold his fruit crop to the cannery at \$20 per ton. Tehama County (Corning)—There will be more wheat brought to the warehouse than at first expected.

Lake County (Upper Lake)—The warm weather will help corn, which is very late. Grapes will be late, as they have not begun to color. Hops are very good, and picking will soon commence.

Butte County (Biggs)—A field of 150 acres which was planted in Egyptian corn will yield a total of 2250 sacks, and will readily bring \$1 per sack.

Sutter County (Yuba City)—Fruit drying and fruit shipments continue. Almond gathering begins this week; the yield in the county will be very good. Yield of corn at Niclaus will be extra good this season.

Yuba County (Wheatland)—Mr. Wood is baling hops at the rate of 70 bales a day and will ship as fast as carload lots are got out. D. P. Durst is running his press at its full capacity. Over 90 bales are turned out daily. He has already shipped over eight carloads.

Placer County (Newcastle)—Weather favorable for fruit crop but prices are low.

Sacramento County—Hop men are very busy at the present time, picking, drying, curing and baling hops, which are turning out first-class in both quantity and quality.

Yolo County (Davisville)—Captain Hillman of the Briggs vineyard says: "The grape crop, which is very large, will not be ready to pick for ten days. The prune crop will be ready to pick about the same time, so that the prospects of a large force of men being employed here soon is very good. The pear crop now being dried will be finished in a few days. It was a large one, the bulk of it being shipped East. (Dunnigan)—The grape crop will be ready for picking the coming week. (Yolo)—Over 5500 tons of wheat is stored in our warehouses waiting a rise in the market.

Sonoma County (Sonoma)—The grape crop of this valley will be quite large and fine in quality. So far no price has been offered. It is thought by some that the prices will be about the same as last year. (Petaluma)—Hop-picking will begin in earnest in this county about the last of August. It is estimated the grape crop in the vicinity of Healdsburg will be between 1500 and 2000 tons. (Forestville)—Corn is filling out better than at first anticipated. Peach crop about harvested. Prunes are ripening; grapes turning; the yield will be heavy. Hop-picking will commence September 1st. (Cloverdale)—Mr. Kleiser began irrigating his fruit trees in July. Prunes from these trees will run 12 to the pound, green, while those from trees of the same age, same soil and same cultivation, but unirrigated, are hardly one-third the size. Peaches show the same variation.

Mendocino County (Ukiah)—A few growers will put on limited crews of hop-pickers next week, but none of the yards will be in full operation before September.

Marin County (San Rafael)—The potato crop now bids fair to be only from a pot to two-thirds of the regular crop usually raised in this county.

San Benito County—From present indications, it looks as though hay would touch a very high figure this fall. All the principal hay dealers of San Francisco are laying in large stocks on their own account.

Fresno County—Wine grapes are sugaring slowly. They now contain 20 per cent of sugar. Labor trouble about settled and raisin-picking begins this week.

Kern County—Orange Cling peaches are being offered in the home market for one cent per pound. They are now ripe, but owing to the condition of the market will not be shipped. Most of the crops will be dried.

Santa Barbara County (Santa Maria)—We have heavy fogs and cool summer days. Beans doing well and grain still thrashing, and a good deal yet in sight. Fruit crop

generally poor as to yield. (Carpinteria)—Several farmers have already cut their beans. In some places the crop is not very promising. Corn is the best it has been in years.

Ventura County (Hueneme)—The cutting of beans has begun, and the crop, like that of barley, promises to be the best ever harvested here. There will be nearly 100,000 bags.

Los Angeles County (Downey)—The cool, foggy mornings which have prevailed for a month past are just what are needed for the perfect development of the walnut crop. Should this weather continue a little longer, we shall have the finest quality of nuts ever produced in this section.

San Bernardino County (Chino)—The week has been a very lively and successful one at the beet-sugar factory. The output of sugar for the week was 1,109,567 pounds, a daily average of 158,509 pounds, or 79 tons. This makes the total for the season 3,106,213 pounds—considerably more than the entire output of the factory for the first year of its operation. Just four weeks of the present beet harvest is now past. The weather was excellent for maturing beets up to the first of last week, when several foggy mornings ensued, which noticeably retarded ripening. This week, however, the mornings are again clear and the sugar contents of the beets will no doubt increase. One marked feature of the crop this year is a tonnage heavier than usual, and throughout the heavier tonnage the percentage of sugar is keeping well up to a satisfactory average. Some fields are turning out 20 tons and more per acre of 16 per cent in sugar.

Riverside County (Banning)—Grape-picking will begin next week. The crop is a very large one.

Three and One-Half Days to the World's Fair.

We take pleasure in advising the readers of the PACIFIC RURAL PRESS that the UNION PACIFIC is the most direct and quickest line from San Francisco and all points in California to the WORLD'S FAIR.

It is the ONLY LINE running Pullman's latest improved vestibuled Drawing-Room Sleepers and Dining Cars from San Francisco to Chicago without change, and only one change of cars to New York or Boston.

Select Tourist Excursions via the UNION PACIFIC leave San Francisco every Thursday for Chicago, New York and Boston in charge of experienced managers, who give their personal attention to the comfort of ladies and children travelling alone.

Steamship Tickets to and from all points in Europe. For tickets to the World's Fair and all points east and for Sleeping-Car accommodations call on or address D. W. Hitchcock, General Agent Union Pacific System, No. 1 Montgomery street, San Francisco.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California street, San Francisco.

Hay Pressing.

If you are interested in pressing hay write Truman, Hooker & Co., San Francisco. They will save you money.

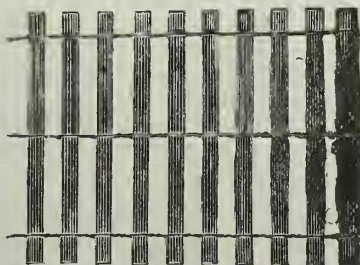
RABBIT-PROOF STOCK FENCE.

Cheap, Durable and Effective.

Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2½ ft., 4 ft., 4½ ft., and 6 ft. high. Send for circulars and price list to

JUDSON MFG CO.,

12 & 14 Fremont St. San Francisco.



The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.

ROOFING

GUM ELASTIC ROOFING FELT costs only \$2 per 100 square feet. Makes a good roof for years, and any one can put it on.

GUM ELASTIC PAINT costs only 60 cents per gal. In hbl. lots or \$4.50 for 5 gal. tubs. Color red. Will stop leaks in tin or iron roofs that will last for years. TRY IT.

Gum Elastic Roofing Co.,

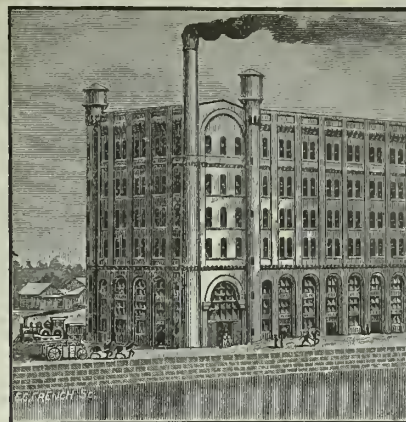
39 & 41 West Broadway, NEW YORK.

Local Agents Wanted.

Almond Hullers FOR SALE!

—BY—

A. O. RIX, Irvington, Alameda Co., Cal.



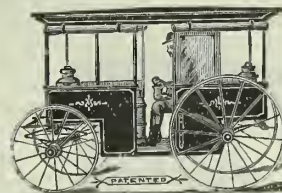
OUR BRAND.

Stocktonia.

Try it. It makes light, sweet and delicious bread. You can have 1500 barrels every day.

Farmers' Union & Milling Co.
STOCKTON, CAL.

UNION FLOUR MILLS



MILKMEN

Who ride in those famous

"LOW-DOWN" WAGONS

are protected from the storm. They never have lame backs. They never slip or fall getting in and out. Their milk is not churned. **THEY LIVE LONG AND THEY PROSPER.** You can get full particulars by writing the

PARSONS "LOW-DOWN" WAGON CO., Earlville, N. Y.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG.

DEWEY & CO.'S

Scientific Press



Patent Agency.

ESTABLISHED 1863.

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class Agency. We have able and trustworthy Associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 220 Market St. S. F.

THE RAISIN INDUSTRY.

A PRACTICAL TREATISE ON THE RAISIN GRAPES, THEIR HISTORY, CULTURE AND CURING.

By GUSTAV EISEN.

This is the Standard Work on the Raisin Industry in California. It has been approved by Prof. Hilgard, Prof. Wickson, Mr. Chas. A. Wetmore and a multitude of Practical Raisin Growers.

Sold only by the DEWEY PUBLISHING CO. or its Agents at the uniform price of \$3.00, postage prepaid. Orders should be addressed:

THE DEWEY PUBLISHING CO.,

220 Market St., San Francisco.

GRANGERS' BANK OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 800,000
Dividends paid to Stockholders.... 720,000

OFFICERS.

A. D. LOGAN.....President
I. C. STEELE.....Vice-President
ALBERT MONTELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on wheat and country produce a specialty. January 1, 1893. A. MONTELLIER, Manager.

CALIFORNIA FRUITS

—AND—

HOW TO GROW THEM.

A MANUAL OF METHODS WHICH HAVE YIELDED GREATEST SUCCESS; WITH LISTS OF VARIETIES BEST ADAPTED TO THE DIFFERENT DISTRICTS OF THE STATE.

BY EDWARD J. WICKSON, A. M.

PRACTICAL, EXPLICIT, COMPREHENSIVE.

Embodying the Experience and Methods of Hundreds of Successful Growers, and Constituting a Trustworthy Guide by which the Inexperienced may Successfully Produce the Fruits for which California is Famous.

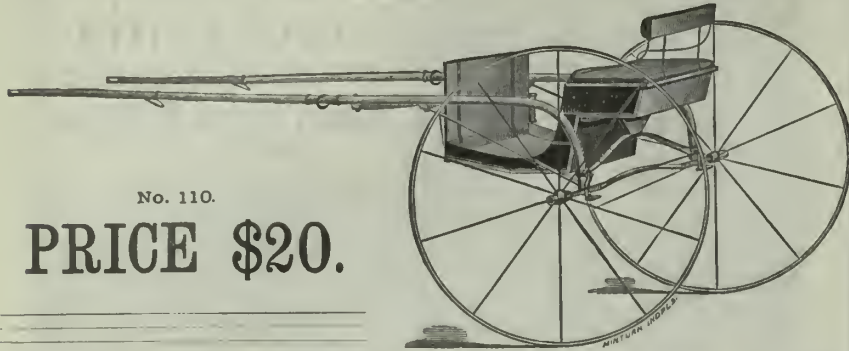
SECOND EDITION, REVISED AND ENLARGED.

Large Octavo—599 Pages, Fully Illustrated.
PRICE \$3, POSTPAID.

FOR SALE BY

THE DEWEY PUBLISHING CO.,
PUBLISHERS PACIFIC RURAL PRESS,
220 Market Street, Elevator, 12 Front Street,
SAN FRANCISCO, CAL.

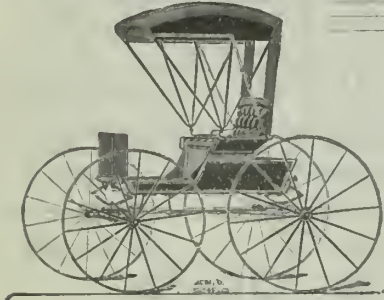
50% SAVED.



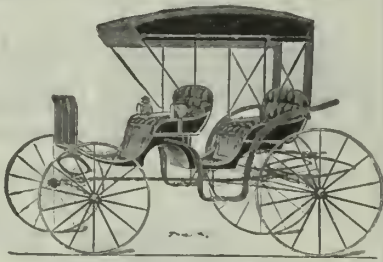
No. 110.

PRICE \$20.

HARNESS, \$7. BUGGIES, \$75. SURREYS, \$130



No. 60. Price \$80.



No. 201. Price \$195.



No. 10 Cal. 4 Spring,
1 1/2 Concord Axle,
1 1/2 Steel Tires,
This wagon is made here by us
of Select Timber.

PRICE, \$110.
TOP, Extra, \$30.

WRITE FOR
CATALOGUE
OR CALL.

CALIFORNIA WAGON & CARRIAGE CO.,

36 1/2 to 44 1/2 FREMONT STREET,

SAN FRANCISCO, CAL.



RIFE'S AUTOMATIC HYDRAULIC ENGINE

THE PELTON WATER WHEEL CO.
GENERAL WESTERN AGENTS,
121 MAIN STREET, SAN FRANCISCO, CAL.

Works
While
You
Sleep.

THE RIFE HYDRAULIC ENGINE is the most simple and efficient machine yet devised for elevating water for irrigation, filling railroad tanks, supplying mills, factories, dairies, stock yards, country residences, small towns, and for various other purposes. This ram is self-operating, constant in action, and is not only much more efficient than anything of the kind ever put upon the market, but from absence of wearing parts, more durable and every way reliable. Many may be referred to that have run for years, elevating water in some cases from 100 to 300 feet without any attention or expense in the way of repairs.

These machines have already come largely into use in all parts of the country, and are rapidly superseding every other device for the purpose. They will work effectively under a head as low as two feet and for every foot of fall will elevate 20 feet. By means of an adjusting lever the capacity of any of the various sizes can be reduced 50 per cent or more, as may be desired, to provide for a variation in water supply, without disadvantage or loss in efficiency.

WATER RAISED AND WASTE.—The fall from the spring, stream or other source of supply to the engine determines the height of which the water can be elevated, as well as the relative proportion between the water raised and wasted, the quantity raised varying according to the height it is carried and the distance conveyed. For ordinary purposes it is sufficient to say that with a discharge pipe 1000 feet in length, one-sixth of the water can be raised and discharged at an elevation five times the height of fall or one-twelfth ten times the height of fall.

Parties writing for information should give the quantity of water that can be supplied to the engine, either in gallons, cubic feet or miners' inches; the head or fall from source of supply to point where the engine is to be located, length of drive pipe, height to which the water is to be raised, distance from engine to place of discharge and the quantity of water it is desired to elevate. No reliable information can be afforded without an explicit answer to these inquiries.



GEM STEEL WIND MILL WITH GRAPHITE BOXES.

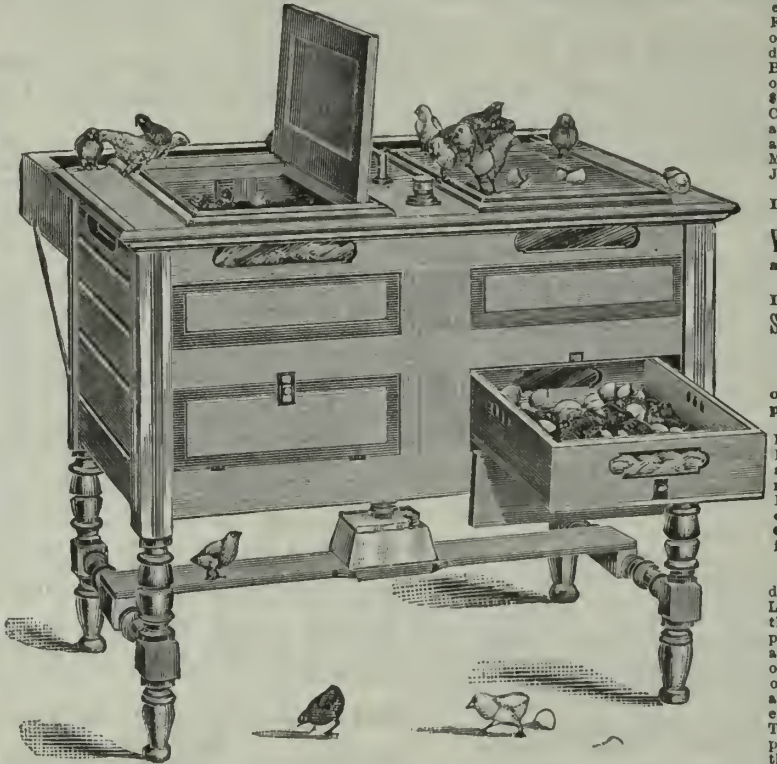
Never Requires Oiling or Climbing of Towers.

Guaranteed more durable without oil than other mills that are oiled. Practically, these mills require no attention. Truly a Gem, and worth its weight in Gold. It combines beauty, strength, durability and simplicity. Governs itself perfectly, is easily erected and is sold on its merits; in fact, it is the best mill on earth. They are geared back three to one—the wheel making three revolutions to one stroke of pump—making them run in the lightest wind or breeze. The mill is made entirely of Steel and Cast Iron. Each one of our Gem Wind Mills is warranted. If not satisfactory, freight will be paid both ways and money refunded. We also carry Pumps of all kinds, Tanks, Pipe Fittings, Hose, Etc. **WOODIN & LITTLE, 313 MARKET ST., San Francisco, Cal.**

"An Ounce of Practical Common Sense is Worth a Pound of Theory."

Atkinson's Practical Incubator and Brooder Combined

IS THE BOSS MACHINE FOR HATCHING AND REARING CHICKENS. It is Simple, Safe, Reliable, Practical and economical. Was awarded every Prize offered on Incubators and Brooders at the State Fair held September 5th to 17th, 1892, as follows: For the best display of Incubators in operation, \$25; for the Incubator hatching most chickens during Fair, \$10; or the best display of Brooders in operation, \$10. Also, Cash Prize at Stockton and Silver Medal at San Jose.



Does Not Need Watching at Night.

Does Not Spoil Eggs from Extremes of Temperature.

Does Not Require an Experienced Electrician to Operate it.

No Accidents from Lamp, as the principle of the application of heat overcomes all danger of explosion. The principle by which the water is heated is

entirely new. The large Double Brooder Attachment reduces the cost of rearing chicks to the minimum. Patented January 19, 1892. Send stamp for circulars and price list. Address

M. L. WISE, Manager,

1029 J STREET..... SACRAMENTO, CAL.

A SUBSTITUTE

Advantages of this Paper for a Drying Surface.

ABSOLUTELY ODORLESS.

WATER, ACID AND ALKALI PROOF.

WILL IMPART NO TASTE NOR ODOR TO FRUIT.

CHEAP AND DURABLE.

ITS BRILLIANT BLACK SURFACE, which absorbs the heat, drying both sides of fruit at the same time, and rendering the labor of turning unnecessary.

E. G. JUDAH, Agent, 221 South Broadway St., Los Angeles.

FOR TRAYS!

Unequaled for DRYING GRAPES.

Write for SAMPLES AND CIRCULAR.



Paraffine Paint Co.

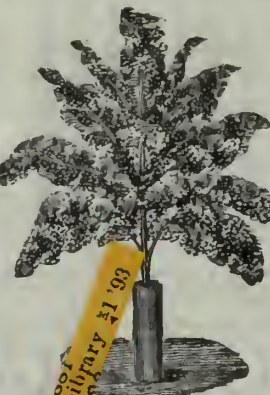
116 Battery St. SAN FRANCISCO.

PROTECT YOUR TREES

— WITH —

Gilman's Patent Tule Tree Protector

Patented Aug. 1, 1893.



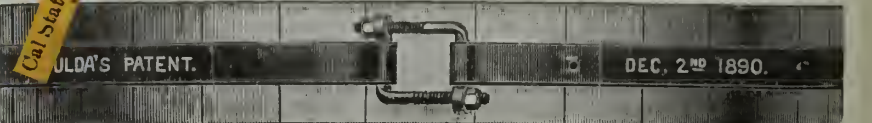
Cheapest, Best and Only One to Protect Trees and Vines from Frost, Sunburn, Rabbits, Squirrels, Borers and Other Tree Pests.

For Testimonials from Parties who are using them send for Descriptive Circulars.

B. F. GILMAN,

Sole Manufacturer of Patent Tule Covers,

420 NINTH ST., SAN FRANCISCO, CAL.



FULDA'S PATENT BAND AND HOOP COUPLING.

The Best, Simplest and Cheapest Coupling for Tank Hoops. sufficient lap of hoop renders it unnecessary to rivet the hoop. It will fit the circle of any tank, regardless of sizes. Made in sizes to fit any width of iron. Prices, \$1.00 to \$1.50 per Pair. For sale to the trade. Liberal discount in quantities.

FULDA BROTHERS,

30 TO 40 SPEAR ST., SAN FRANCISCO,

MANUFACTURERS OF MINING AND WATER TANKS

Send for Catalogue.

PACIFIC RURAL PRESS

Vol. XLVI. No. 11.

SAN FRANCISCO, SATURDAY, SEPTEMBER 9, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market Street.

Scenes in Golden Gate Park.

The location of the Midwinter Fair within the borders of the Golden Gate Park will do much to spread the fame of this great recreation ground of San Francisco. Fortunately the park, in extent, in natural and acquired beauties and in embellishments, is a possession of which the metropolis may well be proud, and will serve as a most

The area of Golden Gate Park is 1040 acres, and it was secured by the city for park purposes in 1870. Naturally the work of reclamation of the shifting sands was slow and expensive, but finally it was in great measure enchaind by creeping grass brought from the seashore of Europe, and by lupines, and the planting of trees was made possible. Good roads were made; next followed lawns, flower beds and shrubberies, and recently many

where on certain afternoons fine music is discoursed to listening thousands. The upper right-hand view shows the vicinity of the Lick-Crocker conservatory, a fine structure, 250 feet long by 75 feet deep, which is divided into many apartments all filled with choice exotics. The left upper-corner view gives an idea of the main driveways of the park, margined by footpaths from which sloping lawns extend to the forest or shrubberies. The central view is of



MIDWINTER SCENES IN GOLDEN GATE PARK, SAN FRANCISCO.

fitting environment for the excellent exposition which it is planned to install within its limits.

The engraving shows a few striking and characteristic scenes of the park, but only five of the hundreds of such glimpses of the picturesque and beautiful which await the visitor. As he contemplates them it is almost impossible to realize that the whole realm of beauty has been wrought out of an arid waste, and that at every step in their advance the park-makers have had to battle with the drifting sands which the tide freely brought up for the winds to sport with. In fact, the Golden Gate Park of San Francisco is one of the most significant instances of victory over sand dunes in the world.

architectural features, and statuary and charming water effects have been secured. Recently, too, there have been a number of liberal gifts to the park which have greatly facilitated its extension and improvement.

The engravings on this page show some of the most popular features of the older portion of the park, which is its eastern end, nearest to the city. In the lower left-hand corner is Alvord lakelet, named for Mr. Wm. Alvord, one of the first board of commissioners, who rendered notable services during his administration. Over the bridge in the background is seen a corner of the main building of the children's quarter, endowed by the late William Sharon. The lower right-hand view shows the bandstand,

Strawberry Hill, upon and around which most notable improvements are now being constructed, including lakes and waterfalls in gorges shaded by rich growths of ferns and climbing plants. Near this, grading is now in progress for the structures of the Midwinter Fair.

From these views the distant visitor can learn what is to be the environment of an exposition held in San Francisco during the winter months. Except during actual rains the air is mild, the sun bright and the aspect charming. The distant one might think it a thing incredible that Golden Gate Park could be more delightful in midwinter than in midsummer, but to the Californian it is merely a matter of common experience.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING Co.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half inch (1 square).....	1.00	2.50	6.50	22.00
One inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, September 9, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—Midwinter Scenes in Golden Gate Park, San Francisco, 181. Manufactures and Liberal Arts Building of the Midwinter Fair, 184.
EDITORIALS.—Scenes in Golden Gate Park, 181. The Week; Wheat Growing in California; Miscellaneous, 192. From an Independent Standpoint, 183.
MISCELLANEOUS.—Mr. Ostrom Explains the Prison Bag Situation, 183. Another California Record Breaker; The Midwinter Fair, 184. California Crops, 186.
HORTICULTURE.—Wrongs by Nurserymen; Myrabalan and Mariana; Root Knots; Treatment of Berries; Mr. Thatcher Disclaims; Restoring Gnawed Trees, 185.
FLORIST AND GARDENER.—Growing Auratum Lilies, 186.
FRUIT PRESERVATION.—An Exhaust Fan Drier at Hanford, 186.
THE FIELD.—What Wheat-Growers Say About the Situation; Growing Corn by Irrigation, 186.
SHEEP AND WOOL.—The Wool-Growers' Association, 186.
RURAL IMPROVEMENT.—How to Improve Our Agricultural Fairs, 187.
TRACK AND FARM.—The Great Ormonde, 187.
SWINE YARD.—Swine Plague and Precautions Against It, 187.
THE HOME CIRCLE.—Miscellaneous, 188.
YOUNG FOLKS' COLUMN.—Miscellaneous, 189.
PATRONS OF HUSBANDRY.—The Master's Desk; From Mr. Ohleyer, 190.
AGRICULTURAL NOTES.—190.
MARKET REPORTS.—193-194.

The Week.

In looking about for the causes of the disgruntled condition of affairs, one might go farther and fare worse than if the whole unfortunate business should be charged up to the weather. By reference to his report on another page, it will be seen that Sergt. Barwick figures out that we haven't had as much heat as belongs to us this year—in fact since January 1st we have been kept 400 degrees too cold. It strikes us this may be the secret of the whole situation, and in the absence of a better theory of the trouble we commend it to the attention of President Cleveland.

But come to think of it, this state of the temperature is all the more surprising in view of the western feeling over the President's anti-silver and anti-tariff notions. If it had been reported that we had gained 400 degrees of heat since March 4th, the records would seem more credible.

Nevertheless, hot or cold, the State Fair has made due headway this week and has succeeded in creating much of a stir in spite of the hard times. It will be open all through next week and will be interesting both for points of industrial progress and amusement. There are a few welcome indications that affairs are rising a little above the level of depression. The labor troubles seem to be adjusting themselves and the superiority of white labor is being vindicated. It is even reported from Santa Rosa that a Chinaman who owns a hop ranch is employing white pickers because they are better workers than yellow. Possibly he is color blind, or else he considers the safety of his hop house of more importance than the interests of all his first wife's relations.

The rains have made a show of beginning in several places, but it is too early for rain to be of benefit except possibly to some grape-growers who figure that if half the crop is spoiled, the balance will be worth more than the whole could be. These computations are always unsafe, for in such cases the rain always falls on the just, and the unjust save their crops.

AFTER being so roundly scolded for sending eastward fruit too near the blossom, it is a change at least to be scared for sending ripe fruit. The last week in August, Bartlett pears reached New York "in a highly colored condition and consequently failed to realize what they otherwise would." In fact, such pears sold for as low as 70 cents per box, while green pears sold up to \$2.10 per box. Plums, too, reached New York ripe and sold low. It is worthy of note that this was not the shipper's fault, for it is shown that trains which last year were sent from Sacramento to New York in nine days are strolling in this year 12 to 14 days from starting. This is a great evil. We shall hear more about it at the January meeting of the Fruit Union probably.

Wheat-Growing in California.

We alluded last week to conditions involved in the world's wheat product which could possibly affect the present low range of values and seemed to render a speedy return to profitable rates unlikely. While the showing was true from the point of view then taken, it is also true that conditions there outlined may change and the outlook for this important item of field produce become brighter. It is also possible, of course, that market fluctuations, which do not always rest upon broad statistical foundations, may at any moment take an upward turn. In fact, this is likely upon the common principle of market changes—that there is but one course left for prices which have touched bottom, and that is upward. This is sure to come, either quickly from improved speculative demand, or slowly, as excessive supply is always checked by prices which leave no profit.

We have always held aloof from the extreme views which hold that California should abandon wheat and give the land indefinitely to fruit. We do not believe that this course should be urged too far. It will advance itself fast enough by the logic of its own facts. That choice fruit land should not give its fertility to small crops of cheap wheat is true, and that it is not likely to long waste its substance in this way is certain. But there is rather more danger that indifferent lands will be covered with poorly-kept and unprofitable orchards than that deep, rich, fruit lands will remain too long in wheat. For this reason we have always claimed that general crusades against wheat, armed with glorification of the fruit product, are likely to spread disappointment.

We are quite sure that we should have a propaganda in favor of better wheat-growing as well as one favoring fruit extension. The wheat product deserves well of California. A product which in 1892 amounted to about 40,000,000 bushels and was worth perhaps something like \$25,000,000, must yield sustenance at least to a large fraction of our population. Even if it costs the value of a bushel of wheat to produce it, there is still an important public service rendered by the crop. It is sometimes figured that it has cost California a dollar to produce every dollar of gold of her output and yet, barring the injury by mining debris, this gold output has been a most important factor in our prosperity and progress.

It seems to us that in its present downcast condition the wheat industry needs encouragement rather than condemnation. So loud is the popular outcry against the great cereal that it takes a brave man to make acknowledgment of his loyalty to Ceres. It is not, however, sentimental encouragement that is needed so much as a frank and outspoken criticism of the ways in which the wheat-grower comes short of his possibilities in the growing of this crop. From such an exposition of the practice of wheat-growing all may learn something, and possibly be enabled to do something, to widen the margin which separates profit from loss in wheat production. Probably no individual can accomplish this, but a conference of many who can speak from experience may yield marked benefits. It was by this means that summer-fallowing was brought to public attention a score of years ago, and that practice has perhaps done more than any one thing to carry California wheat-growing down to the present day.

What we need now is a means to largely increase the average yield of wheat per acre in this State. It is true that our average is still above some of the Western States, but there are other States considerably in advance of us. They have not so good a climate as we. Drouth does not affect them usually, but they have a host of ills, from seed-time to harvest, which do not fall to the lot of the California wheat-grower. Their dangers, too, are for the most part insidious, and many of them beyond prevention. We have fewer and more constant evils which due intelligence and adequate provision should overcome. For short rainfall we have irrigation or the conservation of moisture by summer-fallowing. We do not believe that half is being done that might be, in rolling out large crops from irrigated wheat lands. There is room for much discussion and truer work in this line. As for summer-fallowing, it is notably poorly done as a rule. The plowing is often ill timed and generally insufficient. There seems to be a notion that summer-fallow has so much in its name that the soil will be content to receive half payments in culture. It is a great mistake. The general average return from summer-fallowing ground is much less than it should be and than it might be if well done. Probably every wheat-growing neighborhood would show striking instances of the truth of this claim. We would publish with much interest a full discussion of summer-fallowing: how it should be and how it should not be done.

Probably we have gone nearly as far as we can in the line of cheapening the wheat crop through capacious and labor-saving devices. Our plows, harrows and harvesters are unequaled in the world for space-killing qualities.

Perhaps we have gone too far in this direction and sacrificed something we might get from slower, better work, but it is not necessary to give much thought in that direction. It will be more in harmony with the spirit of the age to study how better work can be done and the speed and cheapness retained. But there is a direction of cheapening the product to which adequate attention has never been paid in this State, and that is how to get more bushels between which to divide the cost of handling the field. The average wheat-grower will be appalled at the suggestion that he buy something to throw on his field. He will claim that he has hard work enough to get the cost of cultivation and interest without throwing good money after bad by buying fertilizers. And yet, appalling as the thought may be, that is just what we shall be doing before we shall make good profits on wheat again in this State. And the point is that it is just at the time when the yield seems least to warrant investment in fertilizers that such investment produces most startling and satisfactory results. We do not mean that the wheat-grower shall buy a shipload or trainload of fertilizers and scatter them right and left over his fields. The chances are that he would lose nearly the whole of his investment by such a course. But to purchase enough for an experiment and apply it so that accurate comparative knowledge can be had of its results is safe and wise and will yield suggestions for profit. We cannot expect to make much greater yield of wheat on ordinary lands without paying something for it, and as soon as we learn what to use and how to use it the money spent for fertilizers will be the best-paying investment on the place.

Much can also be done, doubtless, by attention to newer and more productive wheat varieties than are now grown in this State. We are really standing aloof from the world's progress in this matter. Hardly a man in a township, perhaps in a county, gives a thought as to whether there is not a better producing wheat than he is sowing.

All these things and many more like them must receive attention, and the wheat-grower should be encouraged to believe that by some one or other of such progressive acts and thoughts, or by combination of all of them in a more enlightened system of culture, it may be possible to produce more wheat from less land, and thus the greatness of the wheat output be maintained, while half the land now in wheat may yield another profit in another branch of farming. These things are worth thinking, talking and writing about, and we commend them to our readers.

CALISTOGA already has a reputation for large prunes, and evidence that the region is maintaining it is seen by a sample brought down to the city this week by P. R. Schmidt, who has been largely won from city pursuits by his interest in horticulture. His exhibit of French prunes is as handsome and large as any we ever saw of this fruit, and we are glad to know that some of the fruit will be preserved for the Midwinter Fair.

RABBIT-HUNTING for the scalp bounty in San Bernardino county has been active of late. A series of hunts closed at Ontario on Sept. 2d, during which about 4000 rabbits have been slaughtered. Ontario and vicinity are pretty well cleared of the rabbit pest. Since the county bounty of 20 cents on rabbit scalps went into effect, there has been a great deal of hunting by individuals, and some have made as high as \$9 a day.

INVESTIGATIONS made by Special Agent Isaac of the Board of Horticulture show that the almond crop of the State for this year will be very light. At Davis there are acres of trees bearing but a dozen or fifteen nuts to the tree, and at Biggs the yield is the lightest for a number of years. The cause is laid to the late frosts, which chilled the blossoms just as they were beginning to set.

THE Elberta peach sent us by J. T. Bogue of Marysville convinces us that this variety is likely to have a prominent place at least in some of the peach regions of this coast. The fruit is exceedingly handsome, large, fine fleshed and rich. For a splendid yellow freestone it will make a record here as it has in the Southern States.

THE meeting on Saturday in Petaluma for the organization of a dairymen's association was well attended, and dairymen were present from widely distant portions of the State as well as from the bay region. We will present the leading transactions of the meeting next week.

THE wine men who are not satisfied with the arrangements for wine-judging at the World's Fair have sent C. A. Wetmore to Chicago to secure the judging of California exhibits by a jury of foreign experts.

INSPECTION and analysis of milk from city delivery wagons is now in operation under the auspices of the San Francisco Board of Health.

From an Independent Standpoint.

It took the House of Representatives, working under the five-minute rule, three weeks to come to a vote on the Repeal bill; and it has been expected that the Senate, which, though smaller is a more loquacious body, and whose superior dignity does not submit to limitation of debate, would consume an equal amount of time in preliminary pawing around. This would put off the Senate's vote to the 18th inst.—one week from next Monday—a drawing out of the agony which the country is in no temper to endure. Since uncertainty as to the outcome is one of the elements of our present stress, there is a universal wish to have the matter settled one way or the other without further waste of time. If it were possible for debate to bring out anything fresh in the way of information or argument, it would be quite another thing, for the country could well afford to wait if time would develop more light; but as a matter of fact everything that can be said has already been said over and over again. While the country languishes the senators are amusing themselves by interchange of sharp personalities which have no bearing upon the public interest. For example, Senator Sherman occupied a whole afternoon last week in explaining that he was not responsible for the legislation of 1873 and in showing that Senator Stewart of Nevada not only voted for "demonetization," but made a speech in advocacy of the gold standard. To-day (Tuesday) Stewart is to have the floor, and it is understood that he will give Sherman a "roasting" by way of getting even. Now this sort of thing is worse than absurd; it is almost criminal; for while the senators are gratifying their vanity or spite by banter and recrimination business is going to the dogs for the want of definite legislation. The emperor who fiddled while Rome burned seems wise when compared with our fiddling senators, since he could not put out the fire, while they, if they will, can restore confidence and stop the panic.

Two repeal propositions are before the Senate, namely, the House bill, which provides practically for repeal without conditions, and what is known as the Voorhees bill, a measure originating in the Senate and which, after providing for repeal of the Sherman law, declares as follows:

And it is hereby declared to be the policy of the United States to continue the use of both gold and silver as standard money and to coin both gold and silver into money of equal intrinsic and exchangeable value, such equality to be secured through international agreement or by such safeguards of legislation as will insure the maintenance of the parity in value of the coins of the two metals and the equal power of every dollar at all times in the markets and in the payment of debts.

And it is hereby further declared that the efforts of the Government should be steadily directed to the establishment of such a safe system of bimetalism as will maintain at all times the equal power of every dollar coined or issued by the United States in the markets and in the payment of debts.

This will probably be substituted for the House bill and there is little doubt that it will pass. Before Congress met there was some talk on the part of free coinage men about filibustering to defeat anti-silver legislation and Senator Jones of Nevada is reported to have said that himself and his associates would hold the Senate to a policy of inaction until "hell froze over," but there is no such foolish talk now and doubtless the silver senators will follow the discreet example of the silver representatives and attempt nothing in the spirit of mere obstruction. Nothing is more certain than that in the present situation of the country filibustering tactics would be resented by the people at large and would damage rather than help the silver cause.

Senator Voorhees, the author of the bill above quoted, is in reality an old friend of silver, but he believes just as the *RURAL* does, that the only way to accomplish bimetalism is through international agreement—in other words, that international bimetalism is the only possible bimetalism. He proposes his measure in the faith that it will lead the way to a stable and fair financial system under the bimetallic principle and therefore, in the end, do more for silver than any mere tentative plan like coinage at an increased ratio, or further purchase of bullion by the Government. Upon this (Voorhees') measure it is now hoped that the Senate will come to a vote early next week, and there is scarcely a doubt that it will carry. The President would much prefer unconditional repeal to repeal accompanied by an enactment binding the Government to the bimetallic policy which he does not approve, but he cannot refuse to sign the Voorhees measure if it shall—as we believe it will—be presented to him as the will of Congress.

With the Repeal measure out of the way, Congress will have still another serious problem to solve before the financial question can be considered settled. By this time it ought to be evident to everybody that the volume of our currency—that is, the amount of money in the country—is not sufficient for the necessities of business. Even

the banks, whose interest lies in keeping money scarce and dear, have been forced at last to admit this fact. Their inability all the country over to meet the present emergency, and their resort in New York to the illegal expedient of a clearing-house issue (explained in last week's *RURAL*) is practical and positive confession that more money is essential to business safety and convenience. What the seller and the creditor have all along contended for is now—thanks to the instruction of bitter experience—universally admitted. Even President Cleveland, if we may trust an unofficial report, admits the necessity, and is preparing to meet it. His plan, so it is reported, is to remove the present prohibitory tax upon the issues of State banks and to rehabilitate the old State bank system under certain restrictions. We quote from a newspaper report:

The methods of establishing these State banks, and getting the benefit of the proposed law in the way of decreased taxation, is in general outline as follows: Any national bank or any other concern can go to the State Treasurer and deposit securities, railroad bonds, Government bonds, industrial bonds or any kind of such collateral possessing value, and get certificates that such securities are held by the State.

First, however, the constituted fiscal agents, presumably Federal officers, must pass on these securities and approve them. Armed with his certificate, the prospective banker will come to Washington and give it to the Secretary of the Treasury, who will thereupon issue notes or greenbacks or whatever it is decided to call them to the proper amount. The Government agrees to print this money and protect it from counterfeiters.

It is not yet decided to what proportion of the face value of the bonds notes will be issued, and many other details are in a nebulous state.

This plan would unquestionably increase the circulation, but at first glance it does not strike us favorably. There would be constant liability of abuse or fraud in adjudicating the values of the miscellaneous bonds to be deposited as collateral security; and we doubt if a paper issue thus supported would go current without discrimination unless the Government guaranty should be back of it. And if the Government has to be finally responsible, why should it not issue the circulation directly? We have a prejudice which amounts almost to conviction, that the National Treasury should be the sole source of issues of paper money, since it seems to us inevitable that the value of such money must in the last resort rest upon the credit of the Government. Why allow the banks to reap the profits of putting forth paper money, when such profits may just as well or better be saved to the people by making the Government the sole source of issue? These points suggest themselves as we write, and are put forth casually. We do not wish to appear as condemning Mr. Cleveland's plan before it is formally given to the country; and while we have no better statement of it than a correspondent's synopsis made up from reports current about the streets of Washington.

It is gratifying to know that a plan is being formulated at the White House. It will emphasize the necessity for increasing the volume of money, and give a basis to work on, but it is hardly to be expected that any plan will come from Mr. Cleveland that will not require radical emendation at the hands of Congress.

[LATER.—Since the above paragraph was written, the report upon which it was based is denied by a telegram from Washington. Mr. Cleveland, it is declared by authority, has no plan of any kind, has taken no steps to formulate one and does not admit the necessity of doing anything. He awaits the action of Congress upon the Repeal question and will have nothing to recommend until repeal is accomplished and possibly not then.]

It is not likely that Congress will adjourn when the financial question is out of the way, since another matter equally important, namely the tariff, demands immediate attention. The tariff uncertainty is, to borrow a word from the divorce court, a "co-respondent" with the financial matter in the hard times indictment. The woolen mills all over the country have shut down; wool is a drug in the market; sheep are going unshorn, and a large body of our rural population is suffering—all on account of anticipated changes in the tariff. Factories of all kinds are idle or running on short time from the same cause. No manufacturer dares buy raw materials affected by the tariff, or to make up goods whose prices may be affected by the tariff, because nobody can foretell what the conditions will be six months ahead. No merchant dares lay in his customary supply of imported goods, because tariff changes may leave him with his warehouse full of over-priced stock. In innumerable ways, direct and devious, production, trade and commerce are hurt by these conditions whose natural accompaniments are enforced idleness for laborers and mechanics and pitiful want in thousands of homes. The tariff paralysis has gone hand in hand with the financial blight, and nobody can fairly charge one more than the other with the stress of the times.

The *RURAL* believes in the Protective Tariff upon broad grounds of public expediency. While, as the free traders

assume, Protection may have no basis in abstract philosophy, it has, we hold, absolute justification in the necessities of this country at this time. We are not as yet so devoted to abstract philosophy as willingly to sacrifice the public prosperity in its interest. We would rather see our valleys bright with blooming orchards, we would rather see the olive waving, we would rather see the vineyards of Fresno and Napa and Sonoma purple with their harvest, we would rather see our ten thousand hills covered with flocks, we would rather hear the whirr of the mill and the creaking of the wine press—in brief, we would rather see our State populous and fruitful with its people busy, prosperous and happy—than to be in fellowship and accord with all the long-haired devotees of abstract philosophy that ever have lived or ever will live. It will be time to apply the laws of abstract philosophy when the Millennium shall have established ideal conditions; but until then mankind, if it chooses to make the best of things, will have to enforce the dictates of horse sense and common discretion.

But as a matter of fact free trade or even a moderate degree of tariff reform is out of the question. The Government requires close up to five hundred millions of dollars each year and the tariff (as it now stands), with the internal revenue, scarcely yield this sum. How in the name of sense, let us ask, shall this money be provided if the main source of supply is cut off? This, really, is out of the question; for the present, the tariff must stand practically where it is to-day; and if the dominant political power would frankly admit this necessity, it would be better for the country. It is the indefinite prospect—the uncertainty—that is now making deadly mischief; and this it is the immediate duty of Congress to correct. The direct and easy way to quiet apprehension and restore business to its normal conditions would be a resolution of Congress postponing tariff revision say till 1896 or 1897, in the meantime putting the whole matter in the hands of a commission with instructions to study the problem and to recommend a new scheme. This would allow the producing, commercial and manufacturing world to catch its breath and get to work again. Of course there is the smallest chance that this or anything like it will be done, since party promises are in the way and since, as politics are now organized, no party has the true courage to subordinate its own hasty resolves to the dictates of public expediency, however plain they may be. It is too much to expect straightforward dealing from the political managers. We shall see nothing done with the tariff, not through timely, frank and manly renunciation of foolish resolves, but with the elaborate and mischievous subterfuges of political trifling.

Mr. Ostrom Explains the Prison Bag Situation.

Hon. D. A. Ostrom publishes in the *Examiner* of September 6th a reply to the current comments in the daily papers upon the alleged hardships which have arisen under the Act of the last Legislature known as the Ostrom law. We quote the following paragraphs:

The law was designed for two purposes: First, to fix a reasonable profit to the State for the labor of its convicts and also by so doing fix, as it were, the price of bags to the consumers of the State, and largely prevents the formation of pools and combines which have notoriously raised the price of bags during harvest time far above the normal price of the article, and by limiting the number to each applicant to his own individual necessities, not to exceed 5000 to any one, the 5,000,000 bags manufactured at the prison will go a long way to meet the wants of the average farmer or consumer. It should be noted that the average consumer would need less than the 5000.

In connection with these objects of the law I would call attention to an opinion that the law is unconstitutional, given out by a deputy of the Attorney-General's office, Mr. Oregon Saunders. Now, there are some very good lawyers on the prison board, but they don't seem to think much of this distinguished gentleman's opinion. I admire their judgment in not doing so.

The second object of the measure was to compel the prison board to sell to consumers direct, and to prevent the bag combine from securing the output of the State jute works, and making it the duty of the prison board to sell to consumers only, and, as said before, "at a fair profit to the State," to wit, \$1 per hundred above actual cost.

It has happened heretofore, by accident of course, that the price of bags to the consumer has been practically the same for prison bags as the outside price of the combinations, with the result that farmers could get the Calcutta bag with less trouble and at no greater cost. It is in sworn testimony before a legislative committee of the State that hundreds of thousands of prison bags were sold to dealers at 6 and 6½ cents, when the same season quotations sent out to the farmers were for 8 and 8½ cents. The writer hereof happened to be one of that committee.

As to all this noise about its preventing the directors from selling to the poor farmer on time is pure rot, and of the rankest kind. When, pray, has the farmer, poor or otherwise, been offered bags on credit? Never. And I venture nothing in asserting that the poorer an applicant and the more needy he might be the less his chance to secure bags on time from this or any other Board of Prison Directors. It is true there might be, and probably are,

avored ones who have secured bags on credit. Who knows? But in the nature of things the State cannot be a creditor of the people from the fact that their financial standing is unknown.

The bag dealers have no love for this law, as it prevents to a very great extent practices, heretofore usual, of forming a combination for the purpose of charging the grain-producers much more than a legitimate price for their goods, particularly during harvest.

I shall not attempt to answer all of the attacks on this measure. They all came from the same inspiration, and the desire is to get it set aside by the courts, or, failing in that, to have it repealed at the next session of the Legislature.

It is true this has been a hard year on our farmers. I know it, for I am one. But it is the safest thing on earth to assert that if a man could not get his bags at the prison under the conditions imposed, his financial standing would, as a rule, be such that he could not get them of the merchant. But in all that has been printed in denunciation of this act, not one word of criticism comes from the farmer or other bag consumer; it is the muzzling of the animal that is causing it to snarl.

In answer to the allegation that this statute is class legislation, it is sufficient to say it was not so intended by its author or so understood by the Legislature, or, I venture to

Another California Record Breaker.

California proposes to have the greatest horses of the world either by purchase or breeding. The world-famed Ormonde, of which a review is given on another page, reached San Francisco in good shape this week, and while this prince of the turf was lolling away the hours in an equine palace car on his way to California another prince, native born, was carrying records by storm on the Eastern race tracks. This later victor is Directum, of whose life and victories a *Chronicle* writer gives the following interesting account:

Directum was bred by John Green, of Dublin, a little town six miles from Pleasanton and ten from Haywards.

Twenty years ago Mr. Green purchased from Martin Mendenhall, of Livermore, a race mare known to fame as Quien Sabe. She was by Langford, and could run a half in 50 seconds over the half-mile tracks which were in the majority in those days. Quien Sabe was retired from the turf and was bred to St. Lawrence, a trotting stallion owned by L. B. Anway, who lived near Haywards. St. Lawrence was quite a good-looking horse, but his breeding could not be called fashionable. In fact St. Lawrence was called upon to do plebeian work, such as pulling the plow. At all events the result of the union was a filly, which was given the ordinary name of Kate. She was used

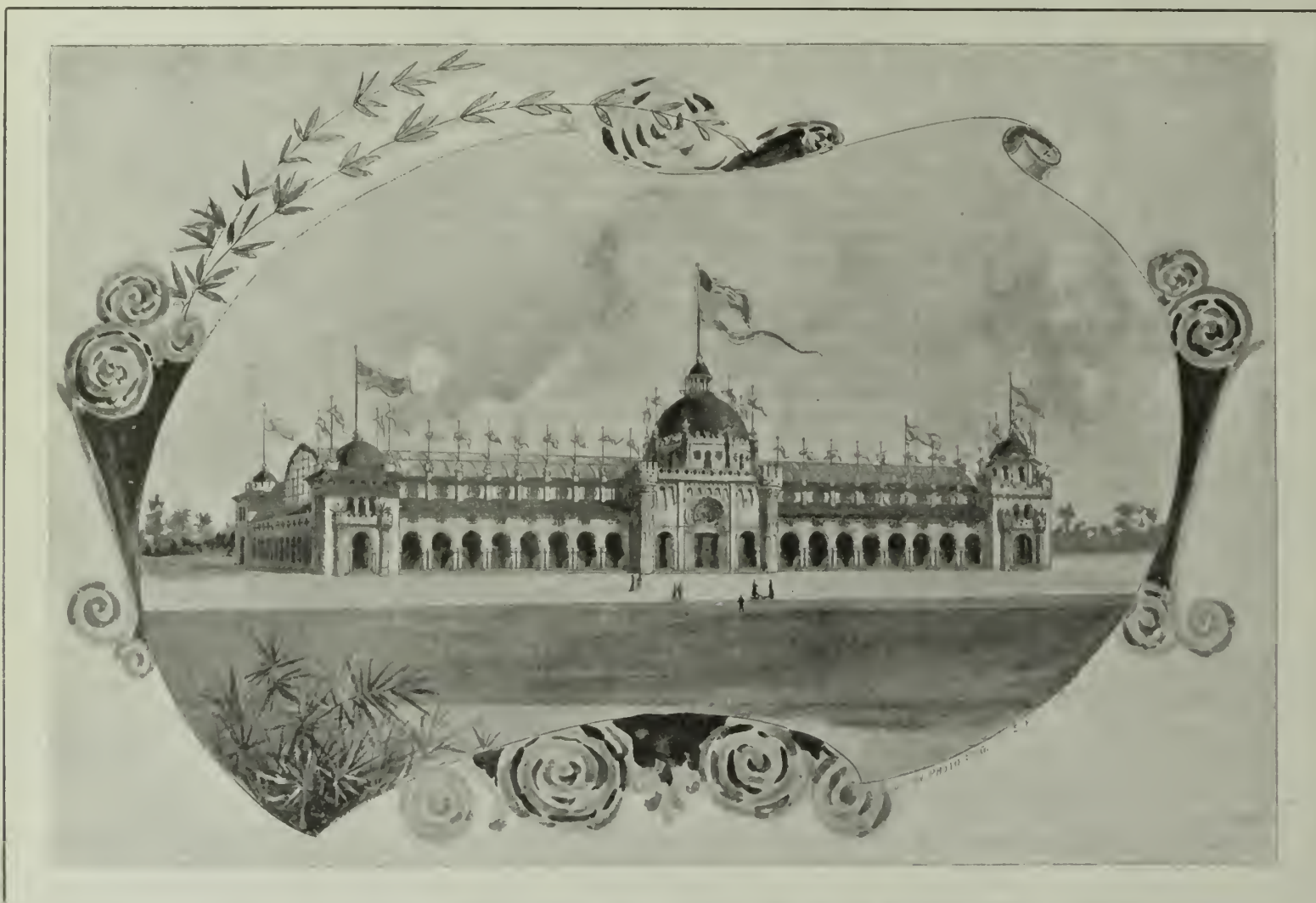
ever known in the history of trotting. Walter E. won the first two heats in 2:11 and 2:12. Directum now took a hand and he won the third heat in 2:10, the fastest heat ever trotted in a race by a stallion. The third quarter was made in 32 seconds—2:08 gait. The best previous stallion record was 2:10¾, held by Lobasco. Directum had taken Walter E's measure and won the fourth heat in 2:10½.

The distance was waived in the fifth heat, and the association offered \$500 to any horse beating 2:10. Walter E. led to the half in 1:04½, but Directum drove the old war-horse off his feet and captured the heat, race and \$500 extra, as the mile was trotted in 2:09¾.

Directum was again started last Saturday. He won the 2:12 class in three straight heats in 2:11¾, 2:11½ and 2:09½, thus beating his previous record. The time by quarters in the third heat, the fastest ever made by a stallion in a race, was 0:32, 1:03¾, 1:36¾ and 2:09½. Notwithstanding that Directum had been sent eight of such wonderfully fast miles inside of four days, he was sent against the record on Monday, and scored a wonderful triumph by establishing a new stallion record of 2:07¾.

The Midwinter Fair.

It is announced this week that the funds are coming in so freely that the contracts for the Midwinter Fair build-



MANUFACTURES AND LIBERAL ARTS BUILDING OF THE MIDWINTER FAIR.

assert, by the Governor who signed it. The word "farmer" occurs but once, and that in the provision where the board is permitted to sell unlimited numbers of bags on and after the 15th day of June of each year to all consumers.

It would be wonderful if this law was perfect in all its details. Doubtless it has defects, but they can be amended. It is in the right direction; its aim is to suppress pools and combinations.

THE PRISON WILL OBEY THE LAW.

The prison directors, at a meeting on Sept. 5th, decided that they would obey the requirements of the Ostrom Act and leave the question of the constitutionality of the law to the courts. The board has now agreed to maintain the selling price at 6.04 cents, at which rate they may be obtained, no matter how high the quotation for Calcutta bags.

The Warden reported that there are now on hand 1,050,000 bags. The total sale to date this year amounted to about 1,000,000 sacks.

Stanford Mares at Auction.

The auction sale by Killip & Co. at the State Fair next Wednesday, of forty "gilt-edge" brood mares from the Palo Alto stock farm, will be an interesting and notable event. It is on the programme to sell off most of the Stanford stock during the next few months, and this State Fair auction will be the opening sale. It is understood that by way of starting off in good style, an extra choice lot of mares will be offered on Wednesday; and persons looking for bargains in this line would do well to be on hand. In the present situation of the things some very good horse-flesh is likely to go for very little money.

as a road mare, and was eventually sold to ex-Supervisor Smith, of Oakland. Before being sold Kate had a foal by the thoroughbred horse Venture. The newcomer at the Dublin ranch proved to be Stemwinder, the dam of the now famous Directum.

Stemwinder was a resolute little trotter and was campaigned for several seasons. She was a coal-black mare, with not a white hair on her body. She never got a very fast mark, but in a trial showed her ability to trot in about 2:22 with good handling. Mr. Green, however, decided to keep Stemwinder for a brood mare. She was first bred to Richard's Elector six years ago, and the result was a black filly, Electrina, which last week took a record of 2:20 at Woodland. The following year Stemwinder was bred to Director, and this mating gave to the world the wonderful little stallion Directum.

Something about the performances of Directum will not be out of place. He was turned over to Monroe Salisbury as a two-year-old. The youngster was noted for his level-headedness. Directum was campaigned in the East as a three-year-old and made a wonderful record, winding up the season with a mark of 2:11¾, which was the fastest three-year race record for the world and mighty close to the stallion race record.

Directum's first appearance this year was at Cleveland, where he trotted to the old high-wheel sulky to beat the 2:08¾ record of Maud S. The black fellow went to the half in 1:01½, but got scared of the high wheels and bolted across the track. Kelly finally got him going again, but all chance of beating the record was lost. Although entered at all the grand circuit cities, Directum was not started until August 30th at Fleetwood, where he probably trotted the most remarkable race on record.

He was opposed by the greatest free-for-all campaigners

ings will be let in a few days. Expressions from coast cities have been of a most encouraging nature; and have shown that interest and sympathy have been excited among people of all classes. The East, too, looks on the project with an approving eye, and promises to send large numbers of visitors across the continent to visit the exhibition and incidentally to enjoy the charms of climate and scenery California will extend them. Intending exhibitors have applied for space in such large numbers that the management is already confronted with a serious question as to what shall be done to accommodate all.

It is proposed to erect five buildings in Golden Gate Park. The plans of four have already been chosen from a competitive display of architects' drawings. The illustration on this page is of the Manufactures and Liberal Arts building, reproduced from the first number of the *California Midwinter International Exposition Illustrated*, the authentic journal of the fair. It is the largest of the five structures and was designed by Mr. A. Page Brown, who was the architect of California's attractive building at Chicago. It is of Moorish design, 450 feet long and 250 feet wide, its height being 55 feet. It has all the picturesque quality that is so readily obtainable in this style of architecture, and with the colonnade which surrounds it, and its towers, will introduce the various forms so popular in the mission buildings. Roof gardens will be found in the loggias of the towers. The roof will be covered with curled metal tiles, and a skylight, and the building will be lighted as well from the sides. The building will be constructed of wood, plaster and cement. The exterior will be a creamy white, with the red roof in striking contrast, and in the corridors more glowing colors will be introduced. The estimated cost of the building complete is \$105,000.

HORTICULTURE.

Wrongs by Nurserymen.

We expected that our remarks upon the credit due the nurserymen would excite discussion and probably bring forward instances of wrongs by nurserymen. We have no idea that nurserymen are a race of saints, nor did we thus characterize them. We spoke of them as a class as honest, and enterprising and as having rendered an inestimable service in the building up of the fruit interest. Thus they are and this they have done. And this does not deny that they may all be liable to mistakes, or that some may be careless and others dishonest. In all probability all these things are true.

We welcome discussion of these, as of other matters, but we shall not often publish a letter which attempts to pervert our meaning and to charge us with views we have not expressed and do not hold. We propose to make an exception of this letter, and insert the true statement in contrast with the correspondent's falsification to show how unfair and untrue a writer can become when his spleen gets larger than his brain and conscience. This is the letter:

TO THE EDITOR:—In your paper of August 19th appears a notice of the meeting of certain nurserymen to find means of protection against excessive damages for trees not true to name, and to combine on some form of contract to prevent such (just) claims [The article said "to prevent excessive damages," not just claims.—ED.]; also notes the habit of certain *careless planters* to blame all mishaps and diseases to the nurserymen, who import and introduce the trees and pests. [This protection was stated to be against careless planters who plant healthy trees and afterward allow pests to invade the orchard. This is not uncommon.—ED.]

There is also a fulsome editorial laudatory of the nurserymen, and the fairness noted in your paper, and condemning as *blackmailers* those who seek proper compensation [We said "blackmailed, or menaced or sued for damages a hundred times greater than any possible loss which could have occurred." We stated expressly that he "should be held to a fair responsibility for the wrong he does," and yet this righteous champion of integrity makes such perversion of the words.—ED.] for the *swindling practices* of some nurserymen, who sell trees untrue to name, etc., knowing their customers must wait for years to find it out.

That yourself, the nurserymen, their customers, your subscribers, may judge of the fairness you boast of, and that we may hear something from the other side, representing only one of many who have been defrauded and lost years of time by trees untrue to name, I forward to you a sample of one each from 32 trees that were bought for Coe's Golden Drop 12 years ago. There were 50 trees in the order. Of the balance 18, two are not bearing this year, and I cannot send the fruit, but they bear a common blue plum of no market value; 16 died owing to poor roots, after living a sickly existence for a year.

At your request I can send hundreds of other samples, from my orchard, from trees untrue to name and worthless. I could also add that of one lot of 100 expensive Japanese plums purchased a few years since, and of which some have fruited this year, *not one is true to name*, but are mostly Yellow Egg. Is it reasonable to suppose that the "careless planter" will order a lot of worthless trees to mix in with others of value? The nurseryman must have had them on hand. Is it possible, finding no sale for them, he mixes them, *a la Pinafore*?

I send you these samples to put on exhibition in your office or say at the World's Fair or the San Francisco Fair to be, as a sample of the honorable dealing (?) of those you seek to defend against their customers. Why do these men need defending? Is it because their acts are so honorable? [We have not undertaken to defend nurserymen against their customers. They can do that themselves if they see fit. As for why they need defending, possibly an answer could be found in the misrepresentations of the writer who arraigns them in this letter.—ED.]

The nurseryman's bills are here, the trees are here, all for your inspection, or that of any one, to prove what I claim dishonorable practices on the part of nurserymen who sell trees untrue to name and worthless.

Will you now have the "fairness" to state *what* should be the damages—blackmail you call it—for such dishonorable treatment?

[We did not call fair damages "blackmail," we called excessive damages by that name, and what we mean by excessive damages would be for this writer to let things drift carelessly along, allowing for worthless trees to encumber the ground instead of grafting them over years ago, and finally, after such a term of years, bring a suit against the nurseryman to recover a lump sum of money which is made up by figuring the greatest possible crops at the greatest price ever paid, and informing the nurseryman if he does not pay that money he will write a letter to the RURAL PRESS showing him up as a fraud and destroy his trade. That is what we call blackmail, because every one knows that damages thus figured are many times more than the man could ever have realized had his trees been true to name, and to threaten a business man with exposure to secure a sum of money from him is what the courts call blackmail.—ED.]

There is too much of this rascally work, and there should be some better protection from it. Suppose you request every one who has planted trees to forward to you the number that have been true to name and those that have not. You will hardly find a planter but has just cause for damages against nurserymen for trees *untrue to name*, and too many of them.

WM. H. HILTON.

Glen Elen.

[We know as much about trees untrue to name as our

correspondent does, and fully appreciate the evil. It should never occur. A nurseryman or tree-seller who sells falsely named trees intentionally, or perhaps even carelessly, should be put in the penitentiary. It is the nurseryman's business to exercise the utmost diligence to keep his stock true to name. Fortunately the great mass of the trees planted are true. The energetic planter, when he occasionally gets false trees, grafts them over at once. He does not allow them to bear worthless fruit for years, so that he can be growing when he should be grafting. We are quite desirous that the discussion of this subject should go on, if it can possibly spread knowledge and suggest remedies for evils which exist, but we do not desire any more letters either in the spirit or the manner of the one we have before us.—ED.]

Myrabalan and Mariana.

TO THE EDITOR:—Under the above caption I discover, in the last issue of your paper, some suggestions from Messrs. E. A. Bonine and A. Kamp of much interest to every fruit-grower who wishes to be well informed as to the proper root-stock for fruit trees.

More failures have occurred in orchard development in consequence of ignorance in the selection of proper roots than in the variety of fruit scions grafted or budded thereon.

In my first experience in orchard-planting, in Alameda county 33 years ago, my greatest concern was to select varieties of the most vigorous nursery growth, with but little knowledge or regard for the value of the varieties chosen, and absolutely without any inquiry or thought as to what class of roots sustained the young trees. This, I suppose, is largely the experience of every novice in tree-planting, hence the chief reason for the many failures and discouragements.

Year after year, in my long experience, I have come nearer and nearer to the definite conclusion that "like begets like;" that the nearer the affinity and granular texture, the nearer perfection is reached in merging one life into another, and that where the conditions are very dissimilar, such assimilation long continued is impossible of satisfactory results. I believe you had as well expect a pig's tail, grafted on a "sheep's shaker," to grow good wool as that a plum or quince root would make good stock for an apple, pear, peach or apricot. In fact, so far as my experience goes, I will say that I consider it unwise and unsafe to set an orchard where the blending of root and top is not perfect, and this can be only where the texture and grain of the woods united are identically the same.

Peaches and almonds are so nearly akin that there is no difficulty in their blending. Prunes and plums on almond or peach are considered by many experienced growers a success. From my own experience and that of others, they appear to be, but the texture of the woods when microscopically examined appears so different that I feel assured time will show the fallacy of such unions.

I have within 30 feet of my front door an almond tree nine years old, 20 feet high, now full of nuts, which was budded on Myrabalan roots. Within the last few months it is beginning to lean badly—so much so, in fact, that it had to be propped up to prevent it falling. In looking for the cause, I find that the roots are diseased to such an extent that there is no strength in them. They are fungus-grown and knotty.

I substantially agree with Mr. Kamp in his estimate of the Mariana and Myrabalan. He, among other good points, says: "The true imported French Myrabalan succeeds in any soil, sending its roots down like an oak, and will, when better known, supersede all other stocks for prune, plum or apricot." As a base for the prune and plum, it certainly has no equal. As a base for apricots, my experience is very much against it. Eight years ago, when planting my orchard here, I set out some six acres of Blenheim and Royal apricots with Myrabalan roots. They never prospered; all are now dead and gone, with the exception of half a dozen which are not healthy. They are always gumming badly and never yielding a full crop of fruit. About half of them were on fine alluvial bottom land; the other half on light, rolling land adjacent. Their growth was larger on the valley than on the rolling land, but all alike were diseased and unsatisfactory.

I also agree with Mr. Kamp in his statement that the "Mariana is the hog plum or swamp plum of the South, on which prune dwarfs and knots badly, yet its resemblance to the true Myrabalan is so close that dishonest nurserymen have imposed it upon the public under the latter name." I have had vexing experience with some of this stock, received from a Napa valley nursery and set out here eight years since. There are only two or three left of the 60 trees planted, and they, although having the best of care, are not larger than my wrist, and not more than five feet high. After three or four years experience with them, they were all dug up but the samples mentioned. Upon examination I found many hard knots on the roots, and in every way unsatisfactory. It is true the trees did not prove to be the French prunes which I paid for, but a rough mazard, like unto the yellow gage plum; but whatever conditions apply to the prune apply to the plum also. They were planted on dry rolling land, which may in a measure account for their doing so poorly.

Mr. Bonine, in his communication, says: "I tried Myrabalan as stocks twice on my ranch. Their growth was not satisfactory, and one I dug up had knots." The chances are that Mr. Bonine did not have the *true French Myrabalan*. By chance, some 30 years ago, I set out a Myrabalan scion in my Fruitvale orchard in Alameda county. It grew finely. From this tree I procured my cuttings for a small nursery, which stock I have ever since continued to propagate. All my plums and prunes on my place here were budded on this stock. It is most satisfactory. The

trees are all thrifty. They never throw up sprouts from the roots, and grow well on any kind of ground.

W. B. West, the old-time nurseryman of Stockton, visited my Fruitvale place some 15 years since. Seeing and examining this tree, he declared it the finest stock he had ever seen. So well pleased was he with it that he took numerous cuttings home with him. These experiences convince me that there is more than one variety of plum stock called Myrabalan, and I believe that there is only one safe and sure variety, and, when found, it is invaluable as a base for plum and prune trees.

Last winter, wishing some young prune trees, I purchased a small lot from a nurseryman in Arroyo Grande. They were budded on apricot roots. I was afraid of them. I had never had any experience with the blend. The reverse order I had fully tested, but prune trees on apricot roots, never! He assured me that they were the very best base for prunes. I planted them on good strong soil last January. They have been since carefully tilled. About one-third of them are "as dead as a door nail," the remainder puny and unpromising. This confirms me in my opinion, and I wish to repeat, with double emphasis, that every novice in the art of planting and tree-growing should look well to the base on which his trees are budded or grafted. Improper tree roots inevitably must result in failure of your planting.

There may be conditions of soil, climate or planting where prune on peach or apricot, or apricot on Myrabalan or plum, may do fairly well, but my experience is that these unnatural crosses are dangerous experiments, in which the novice is not justified. No more can a tree, built upon uncongenial roots, withstand the elements than can a house built upon a foundation of sand.

J. V. WEBSTER.

Creston, Aug. 27, 1893.

Root Knots.

TO THE EDITOR:—In regard to root knot I must say I have seen more of it the past year than in all the previous 19 years of my orchard experience. It has shown itself altogether on almond trees two and three years out on almond root. My attention was first called to trees dying which were planted on quite heavy land, but with good drainage. To the land I gave credit for the knot, but soon I found trees dying on land adjacent—the trees being apricot on peach roots, out 12 years and perfectly sound. This dying went on until the rains ceased and warm sunny days came. Some trees I dug about and exposed the crown, where the knot had taken good hold, to the air and sun. I would cut off what I could get at easily and wash the part with I. X. L. compound. None have died since, and some that had already shaded down in color recovered and are now doing well.

I was told by a tree man that while the trees were in the nursery grasshoppers came along and denuded them of their foliage, which caused the knot. Hence the reason of my loss, which may continue until the disagreeable foe is dug up and cast out. How does the grasshopper theory strike you?

JOSEPH HOBART.

Nordhoff, Ventura Co.

[One trouble with the grasshopper theory is that the knots are found where grasshoppers have made no visitation. As a theory it is about as good as many others in which the exceptions are more numerous than the affirmations.—ED.]

Treatment of Berries.

Strawberry beds should be kept free from weeds, and the soil loose and mellow. Where hill culture is practiced all runners should be cut off, and if it is not desirable that the plants shall fruit, cut off all blossoms as fast as they appear. This, of course, can only be done in small plots, but it will pay to do it in the larger crops of better fruit later on.

If new plants are wanted they can be easily obtained by placing the runners from the mother plant at eight to ten inches distant and fasten with a clod of earth. Keep the ground moist, and the runner will take root readily, and in a few weeks be strong enough to transplant.

Beds of good, strong plants set next month will bear a good crop in February next. Strawberries in southern California need a great deal of water, and it is best not to let them get dry at any time. Blackberries and raspberries should also be thoroughly free from weeds, the exuberant growth cut back, and the soil stirred to the depth of three or four inches. Deep cultivation, unless practiced from the beginning, breaks up the surface roots and induces a great deal of sucker growth, which is exhaustive and injurious to the mother plant.—San Jacinto Register.

Mr. Thacher Disclaims.

TO THE EDITOR:—Will you kindly allow me to disclaim responsibility for a statement about expenses and profits of orange-growing, copied from the *Venturian*, in a recent number of your paper, and purporting to be made or directly authorized by me.

E. S. THACHER.

Nordhoff, August 25.

[We give our readers Mr. Thacher's disclaimer for immediate use. Inasmuch, however, as the figures have gone to our readers and attracted interest, will not Mr. Thacher give us a correction or revision or some other statement which does represent his experience?—ED.]

Restoring Gnawed Trees.

Many of our readers, says the Hanford *Sentinel*, will remember the affliction that befell Mr. Camp's prune orchard when it was one year old, by some pet goats that wandered through it girdling nearly every tree, by gnawing the bark off about one foot above the ground. Mr. Camp thought it

ruined, but by making a paste out of fresh cow dung, flour and water, he plastered up the lacerated trees and wound them with pieces of old grain sacks. This proved a saving treatment, and the trees healed and made a substantial growth, the branches growing up to a height of 15 to 20 feet. The trees are now six years old, and the long branches under their weight of fruit have bent over toward the ground and so interlaced that a man cannot walk straight through between any two rows of trees.

FLORIST AND GARDENER.

Growing Auratum Lilies.

Those who have lost *auratum* bulbs will read with profit the following experience of W. A. T. Stratton of Petaluma:

Lilium auratum is usually dug in Japan before being fully ripe. Exposure to the air invites the attack of a minute fungus of a reddish rust color, that does not injure them in their native soil, but in soils that have but a slight degree of alkali in their composition, this fungus develops and usually destroys the bulb the second year; indeed, often the first season, and as the bulbs were not fully ripe when dug, their vitality is impaired and their susceptibility to succumb to the disease increased.

When planting we always encase the bulb with a liberal amount of common moss, so plentiful on rocks, the heavier the covering the better, placing the moss side next to the bulbs, and tying it securely, taking the precaution to leave a very small opening on the top of the bulb, where the stem may easily grow out. We plant them not exceeding four inches deep in well-drained, sandy loam. When the flower stalk is well developed we mulch liberally with dry forest leaves—to protect from heat, and to retain moisture.

In preparing the ground for our lilies we dig out a hole nearly 20 inches deep, and therein we put two shovels full of well-rotted cow manure, and over this we place about one foot of loam, and we often mix in through this loam moss, similar to that we have encased the bulb in—then when placing the moss-covered bulb in position, we use a still greater proportion of the moss mixture. They will grow in this with the greatest vigor, and increase very rapidly, till the moss is decayed, so that the soil comes in contact with the bulb, when they must be dug and replanted as before. For our own use we nearly always take refuse bulbs cankered and wilted so that they appear worthless—but just take these apparently worthless bulbs and pack them in damp moss, place them in a cool place for two weeks, then inspect them.

Accidentally we discovered this way to grow *auratum* by first using large tubs, using a rich camellia loam and moss, and mixing very freely the refuse of the packing table. The bulbs were thrown away because we considered them worthless. Imagine our surprise to see growing *auratum* lilies fully six feet high, with flowers of regal proportions! We still use these tubs for some worthless bulbs, for very late planting after the selling season is past, and we frequently have them in flower as late as November 1st. Growing from seed is too slow. When we have the time, we plant the scales that are knocked off in handling and digging, planting them in mossy loam, in the shade, not more than one and one-half inches deep, allowing them to remain till the third year, when we have from them quantities of small flowering bulbs. Our methods may not prove successful in the East, but as nothing succeeds like success, it might be worthy of a trial.

FRUIT PRESERVATION.

An Exhaust Fan Drier at Hanford.

John W. Lewis gives the Hanford *Journal* the following account of a drying-house on the exhaust fan principle which he has in operation:

The heating apparatus does not differ from many found in the neighborhood of Hanford, which is as follows: There is a basement under the drier the full size of the house. This is not necessary, but by having the basement one is able to have the floor on a level with the surrounding ground. A furnace is built of brick at one end of the basement. In the furnace is an iron cylinder, the use of which will be apparent later on. The smoke from the furnace passes out by two flues, one at each side near the back end. These flues or pipes are carried out at an angle until they are near the side. Then they pass along, one on each side, to the rear of the basement. There they enter a large drum, through the ends of it. A larger pipe carries the smoke and heat from the center of the drum, and through the center of the basement, back to where it passes into the stack, near the furnace. This is all there is to the average drier.

The improvement referred to was suggested through long experience with drying-houses, but where the effects of steaming were of little moment. In addition to the heating apparatus there is a large pipe, the opening of which is in the ceiling. From the ceiling it passes down to where there is an exhaust fan of a capacity of over 1400 cubic feet of air per minute. The pipe is inside the building, to prevent as much loss of heat as possible. From the fan the air is conducted to the iron cylinder in the furnace. The fire surrounding the cylinder effectually dries the air. From the cylinder the air is carried through the basement and by a system of pipes discharged evenly all over the basement. It does not require any explanation to observing persons, that heated air and steam will rise if they have a chance, and continue to rise as long as the heat remains. The moisture in air or steam only falls when it is condensed by colder air, as is evidenced by the dews of an evening. The air or steam caused to rise by the heat under the fruit, remains in the dry-room unless it can pass out through the roof, but this causes the loss of considerable heat. To overcome this, many men allow cold air to enter into the

basement through ventilator openings. The consequence of this action will be to condense the moisture in the room, and the driest place would be the top of the room, where the heat is. Then the fruit will dry on top, of course, but the fruit at the bottom, or near the floor, is simply spoilt and made tough. It is difficult to see where there can be any economy where cold air is admitted to a dry-room. To rid the building of steam, others open the doors and let the cold air blow through occasionally.

The drier improvement is made to overcome this defect. The exhaust fan draws the damp air or steam from the room at the rate of over 1400 cubic feet per minute. It forces it through a nearly red-hot cylinder, extracting the moisture from it and sends it on its mission under the dry-room floor. The moisture is drawn from the room and replaced by dry air. The economy of re-using the air is marked and self-evident. For, suppose the air discharged from the distribution pipes must be at a temperature of 300 degrees, or whatever would be needed, with out-door air at 50 to 80, it clearly makes a difference whether the temperature is raised from the temperature inside the building to the temperature of the discharged air, or from the outside temperature of 50 to 80 to a good drying temperature.

That it is expensive to thoroughly ventilate, must be admitted, and science clearly proves that to admit cold air under hot, damp air or steam, simply precipitates the moisture. It is a well-known fact that large dry-houses for drying lumber allow the damp air and steam to escape through ventilators in the roof. Where this hot air comes in contact with the cold air, everything is as wet as it can be, the moisture from condensation gathering in large drops of water.

The exhaust fan is to be run by a horse with a horsepower, or by a small steam or gasoline engine of equal power. If an engine, one of the style owned by Mr. Newport is the best, as the cost of operating it is said to be under ten cents per hour. The engine practically takes care of itself. A horse-power suitable for running the blower can be built out of an old mowing machine. The cost of the addition of the exhaust fan and apparatus is small, comparatively, while the time, expense for fuel and difference in quality of the product will be large. The second crop of grapes, if it is dried at all, must be dried by a dry house; but if it is steamed, I, for one, do not want any of it, one trial of the same being sufficient.

THE FIELD.

What Wheat-Growers Say About the Situation.

The following interviews with leading wheat men are published, and we give them as current comment upon the course of affairs:

"On what we call the West Side, west of the San Joaquin," said D. R. Moody, of Modesto, one of Stanislaus' big grain-growers, "the crops are better than they have been for years; yet the farmers will undoubtedly clear less than ever before."

"The advance in wheat will not benefit the majority of farmers in any county to any great extent. Most of them had to sell for what they could get. The great majority of farmers never have any money ahead, and as the crop last year was light, many of them borrowed money to put in this year's crop. The banks are now drawing in every dollar they can get, thus forcing debtors to sell."

"Some, of course, have not sold yet, but this is mainly because buyers are slow. I do not know of any money being loaned on wheat in any part of the State. Even when we sell we have to wait a week or two until the grain gets to the coast before we get our money."

"The high price of grain bags has been another hardship on the ranchers. I paid 8½ cents for sacks at Berenda when I harvested my grain. Sacks have come down some now, but it is too late to help many. I think the prison authorities should sell sacks at cost. The farmers have to pay a good part of the expense of that institution and ought to have some return."

"I think many of the farmers will be forced into insolvency if money does not become easier, and that pretty quickly. One bank alone at Modesto drew in \$60,000, which is now lying in the vaults."

H. T. Epperson, of Willows, is also in town. He reports splendid crops in Colusa county. Had prices been even moderate, it would have been a great year for the grain-growers of that section.

"However, few of the farmers will be able to take advantage of the fall in the price of sacks," he said, "as nearly all of the grain is harvested. In fact, I didn't hear much talk about grain bags. Everybody was too busy kicking about the hard times. It has been very hard to get money to pay harvest hands and the other expenses of taking care of the crop. There has been very little, if any, money loaned on wheat. Even men in good circumstances find it hard to meet their obligations, and a great many have been compelled to sell. I think, however, that the majority of the ranchers have held their wheat for higher prices, and will be able to take advantage of the late advance. On the whole, the outlook is brighter than it was."

W. R. Thomas, the Fresno rancher, says the greatest grievance is the tightness of the money market.

"Fresno is not a money center," he explained. "We have always depended on the San Francisco banks to help us harvest our crops. If they don't let out some of their money before long, there will hard times in Fresno—harder than ever before—especially among the fruit men. They have a big crop and it will take a great deal of money to take care of it."

"The grain crop is good, better than usual, and I think better than it is in the North."

"No, harvesting is not over. Everyone who was able has held off on account of the high price of grain bags. The feeling seems to be general that prices will be better before long. Hardly any of the farmers have sold except

those who were compelled to do so. Banks are lending no money and are collecting wherever they can."

"Grain will probably be brought forward faster now that a shipload of sacks has come in and brought down the price. As it is, grain-growers are hardly making expenses. They have been netting not more than 78 or 80 cents a hundred in Fresno county. It is about the same in Tulare and Kern. We have already settled the labor trouble in Fresno, and all we want now is money enough to take care of the grain and fruit crop."

"It is quite a question whether there will be grain bags enough to hold the crop of the coast or not," said a man who probably knows as much about the situation as any one in the city.

"There is one thing certain, there will be no such surplus as there has been in recent years, nor anything like it. The farmers of the North cannot keep their grain in the field much later than the first of October, or it will be ruined by rain. The number of sacks brought in by the Harland and the Celtic Chief is not nearly so great as was first reported. The Harland had on 2,100,000 in round numbers, while the Celtic Chief carried only 500,000."

"The action of the State Prison authorities will of course affect both the price and the supply. They have already raised their price from 5.73 to 6.04. They will hold another meeting in a few days, when a further raise will be considered. They will also decide whether to act upon the Attorney-General's decision that the law forbidding the sale of jute bags to dealers is unconstitutional or not."

"Nothing can be said with certainty about prices in the future until it is seen what action the prison authorities will take."

Growing Corn by Irrigation.

While many thousand bushels of corn are annually grown in California without irrigation, many thousand bushels are also grown off soils which are too dry to ripen a crop that is such a gross feeder as corn. In the Los Nietos valley, Los Angeles county, it is quite a common custom to grow corn between the young walnut trees, which are generally planted 40 or 50 feet apart. Though this valley contains a semi-moist soil, it is found that the corn produces more abundantly with one or two thorough irrigations than otherwise, and crops of 80 to 100 bushels to the acre often result from this practice. Many stalks grow to a height of 14 feet, and nearly always contain two long ears of most excellent corn. Along the foothills, in the strictly fruit-growing settlements, it is found that corn grows amazingly when irrigated, and could not be grown at all without an artificial water supply. The rainfall being confined entirely to the season from December 1st to April 1st, the young plants, usually only getting a good start when the rains cease, have no opportunity to grow in the dry climate of the foothills section. But a little water, run in a furrow opened between the rows with a single cultivator, soon puts the plants into shape to ripen a good crop of grain, besides furnishing a succulent forage for cattle in its stalks.

The International Irrigation Congress, to be held in Los Angeles, October 10, 1893, is expected to confine its discussions entirely to such larger questions as irrigation engineering, irrigation securities and irrigation laws, but many of the delegates attending that congress will be interested in seeing what can be done in the way of growing so humble a plant as corn by the judicious use of water on a dry soil.—Escondido Advocate.

SHEEP AND WOOL.

The Wool-Growers' Association.

The Livermore *Herald* gives a further account of the organization of wool-growers to which allusion has already been made in the *RURAL*, as follows:

A meeting of representative wool-growers was held in the Town hall last Saturday afternoon to perfect the organization of the Alameda Wool-Growers' Protective Association.

This was accomplished with Mr. P. Callaghan president, Mr. P. Connolly treasurer and Mr. M. Callaghan, secretary.

Letters were read from others in outside counties, making inquiries and pledging their support to the association.

Questions of importance pertaining to the sheep and wool industries were discussed to some length by those present and it was finally determined to draft a set of by-laws, etc., and to meet once a month.

A strong effort will be made to induce sheep men in all the other counties to organize and co-operate and then select representatives to a State convention, to meet at some city to be decided upon hereafter, and there formulate plans for erecting one or more warehouses and then market their own wool without the assistance of the middlemen and thus save the commission, which, at the present rate, ½ a cent per pound, absorbs about all the profit in the business.

Stockton was favored as a shipping point by those present at the meeting, on account of its being centrally located and the competition in freight rates afforded by the river.

The business has arrived at that stage that something has to be done to wrest it from the control of unscrupulous commission men in San Francisco who are bringing on a state of bankruptcy by their exorbitant and unjust demands.

We are informed that a large number will store their fall clip at their camps and in barns and sheds and hold it until the market takes a change for the better and the commission men make some concessions.

The next regular meeting of the association will be held in the Town hall on the last Saturday in September.

RURAL IMPROVEMENT.

How to Improve Our Agricultural Fairs.

It is timely now to present in our columns some suggestions for the improvement of our agricultural fairs. We find the following in the annual address delivered by Judge Bridgeford last week at the fair in Woodland:

I have been an attendant at fairs, and have taken greater or less part in them from early boyhood. When a boy, and even after reaching manhood's estate, I looked forward with eagerness to the coming of the fairs. I have always encouraged them in every proper way, and hence I know that what I may say by way of criticism of the manner of conducting our fairs is not said in a spirit of fault-finding but with a view to lending my help as a citizen of this commonwealth to the correction of the evils that have crept into their management.

Our fairs are more largely encouraged by public appropriation than those of any other State in the Union, and yet, pardon me for so saying, they are less of a success than any, so far as I know. Of course this does not apply to the fortieth district, for its success or failure must depend upon the future.

The primary reason for their failure of success financially is the limited attendance. There is a controlling reason for this short attendance somewhere. If I can in a measure point out to you so that it may lead to a correction of the evil which is the cause of this lack of attendance I shall be satisfied with this effort.

In my judgment the causes are two-fold: First, the gamblers are permitted to dominate. There is now a disposition on the part of the legislatures of most of the States to prevent pool-selling altogether. The time will come when it will be prohibited even at those meetings which are devoted exclusively to contesting for speed purses. If it were done altogether, even on such occasions, it would, in my judgment, tend to the greater development of that, the noblest of all the lower animals, the horse. There are hundreds of people who love the horse and who would in all proper ways and under proper conditions encourage the development of the speed of this noble animal, who do not now, under existing conditions, take the least active interest in this industry.

There is no man or woman who has any soul for the beautiful but that admires a beautiful horse; there is no man or woman who has the least ambition who does not desire to be the possessor of a good horse. When thinking of what class of horse we would like to possess, we always have in mind one that can go by our neighbor when we meet him on the drive. These traits in the human make-up are praiseworthy. Thousands of people who have these qualities developed to a high degree would, under present conditions, even be ashamed to have it said that they were the possessors of tracks and were spending a reasonable amount of time and money in the development of the speed of young animals. Why is this so? Is it because there is anything wrong *per se* in the development of the speed of this one of his companions of nature. Not so! There is nothing wrong abstractly in the development of the speed of the horse. It is a thing to be encouraged. The speedy horse is both useful and ornamental; he conduces to the happiness of man—an end to be desired. Neither is there anything wrong *per se* in contesting for a premium or purse offered by societies for speeding animals; no more so than in contesting for premiums offered for the best Durham bull or Jersey cow. They are intrinsically and abstractly on a level. But under existing conditions the practices at our fairs are vastly different. It is this difference that causes so many lovers of the horse to refrain from the breeding and training of the trotters and runners.

The policy of the legislative enactments of every civilized country is to discourage gambling. Every statute book is full of enactments making gambling in various forms a penal offense. We are continually enlarging and extending our statutes to meet the devices of gamblers. This is because all civilized people recognize it as an evil—an evil that conceives and brings forth greater evils.

The great mass of the people are a moral and law-abiding people—a people who would observe the spirit as well as the letter of the law. They realize the evil tendencies of the associations of the horse race at our fairs. Strip these speed contests of these evil associations and you put them upon a plane where all moral and law-abiding people will feel like saying they are a source of innocent amusement, and will encourage them with their presence and their children's presence.

Some say if you take away the speed programme that you will have a much smaller attendance. Do not take it away, but take away these evil surroundings; rid it of this incubus which makes it disreputable; make it respectable and you will see the gang of spring-bottom pants and long sack-coat hangers on hunting other haunts and their places filled tenfold by respectable people.

The tendency of the associations of these races is certainly to encourage gambling and gamblers. This is a misappropriation of the public funds. The legislature never made any appropriation to any of these societies for the purpose of promoting gambling. It is contrary to public policy and against good morals. It should not receive the encouragement of the management of any of our agricultural societies.

The speaker concluded with the following eloquent peroration:

Let California be not behind any of the progressive States of this Union. She is in many respects the grandest and brightest in the galaxy of stars. We have all the natural elements which conduce to place her in the very front ranks of progressive States. Her thousand miles of sea-coast, her harbors, her beautiful lakes and rivers, her mountains and valleys, her products of mine and field, her

fruits and flowers, her genial climate, all combine to make her the coming Eden of the world.

The great Ruler and Director of destiny has placed us amid these beautiful and valuable surroundings. We are making valuable use in many ways of these talents committed to our care. We are spending more money perhaps than any other people on the continent in the education of the youth of the land. Our public schools are a living monument to the devotion we entertain for our children. Let us at all times and on all occasions prove that devotion by surrounding them with those elevating influences that will tend to educate them in proper channels and take away from them those environments which will tend to educate them in the vices of the land. In other words, let us use these institutions which the State is fostering and which it has committed to our keeping in such a way that they will prove a means to the proper education of our children in the lines designed by their organization.

TRACK AND HARM.

The Great Ormonde.

Last week we gave an item about the shipment of Ormonde from New York to his new owner in this city. A fuller account of this famous animal, which E. C. Powell prepared for the *American Agriculturist*, will be read with interest:

The mighty Ormonde is called in England "The horse of a century," and rightfully so, for horses of his excellence are seen but three or four times in a century. What makes Ormonde of interest to our readers is not so much the fact that he was never beaten, but that he has brought the highest price ever paid for any horse, and his purchaser is a young Californian. Every one remembers the surprising news of last October, that Ormonde had been sold for \$150,000, and was to come to America. His sale forms a very interesting story in itself, for two wealthy turfmen were interested in seeing who could outbid the other. Chas. Reed of Tennessee, who startled everybody by bidding \$100,000 for St. Blaise and out-bluffing every one else when this horse was put up at auction about two years ago, was in Buenos Ayres while Wm. O'B. Macdonough was in California negotiating by cable through the Tattersalls of London. Mr. Macdonough felt like spending the most money and outbid Mr. Reed \$15,000, and secured Ormonde for \$150,000, the highest price ever paid for a horse. From Buenos Ayres he was shipped to England, where he rested for a time before being shipped to New York, and thence overland to California.

A horse without a flaw, is Mr. Reed's generous way of expressing the quality of Ormonde. Certain it is he is a grand type of horse. He is a solid bay in color, with a white off hind heel. His conformation is ideal and the look of legginess which he had while young, and which is so often seen in thoroughbreds, has entirely passed away, and he is as strong and stout as any one would wish. Standing sixteen and one-fourth hands high and weighing 1100 pounds in racing condition, yet he is beautifully proportioned. In blood lines Ormonde has all that can be asked for. He began his career on the turf when two years old by winning the Post Sweepstakes, following it up by capturing the Criterion Stakes and the Dewhurst Plate. At three years of age, he started and won nine times. At Newmarket, he won the 2000 Guineas, Minting second; at Epsom, the Epsom Derby of one and a half miles, the Bard second; at Doncaster, the St. Leger of one and three-fourths miles. He started and won four times the next year, and finished up his racing career with the Imperial Gold cup, six furlongs, which he won easily from Whitefriar and Lovegold. Ormonde always carried good weight. In his two-year-old form he started with 124 pounds, when three, from 120 to 134 pounds; and the next year as high as 139 pounds, carrying six pounds more than any other horse in one race. The unbroken line of victories were not due to the fact that Ormonde met poor horses. Indeed, he met more and better horses in his career than are often seen on the turf in such a short time. The Bard, for instance, was never beaten until he met Ormonde. Minting was a wonderful horse, and so was Bendigo, and with Ormonde out of the way, no others could compare with these two. Then there were Milton and Paradox, and a score of other fast horses, but Ormonde downed them all and fairly established his claim as the greatest racehorse of the Victorian era. Unfortunately for Ormonde and the English turfmen, the horse developed roaring in his fourth year. He was, however, put in the stud for one season and then sold to go to Buenos Ayres at a reported price of \$60,000. He was bred to but eleven mares, and produced the great two-year-olds, Llanthony, Goldfinch, and the great Orme, whose misfortune of last year was probably the only cause that could have prevented him from winning the triple crown attained by his sire.

Though \$150,000 is a high price to pay for a horse, it is easy to see that the purchase of such a great sire as Ormonde, regarded from a strictly business standpoint, is likely to yield very handsome profits to an owner of sufficient capital. Twenty-five broodmares of the highest grade could be bought at an average of \$3000, making the total cost of the stud \$225,000. From this collection an annual return of twenty yearlings would not be too much to expect, and the sale of yearlings from St. Blaise, a horse of much lesser fame than Ormonde, has averaged \$6000 each. This would make an annual return of at least \$120,000. Twenty-five mares could be booked at a stud fee of \$1500, possibly \$2500, which would add \$37,500 to \$62,500. Should the owner of such a ranch decide to race his horses, he could be pretty sure of making at least \$150,000 per year from stakes and sales, and retain the best sons and daughters to continue his stud. The public is not generally aware of the great amount of money put up at different race-courses in this country during the year.

The Futurity, Produce and Matron stakes in the vicinity of New York alone amount to \$150,000. There are half a dozen of \$17,000 each, and at least thirty of \$5000, which makes about \$400,000 for two-year-olds alone. Then there are numerous large stakes for three-year-olds and aged horses, besides nearly \$1,000,000 of added money put up by the racing associations; so that the annual prizes open to horses in the vicinity of New York exceed \$1,500,000. About as much more is put up in different parts of the country, principally at Chicago, New Orleans and Louisville, Ky. From this huge sum, a string of two-year-olds, and older horses, from such a great sire and race horse like Ormonde, could be easily counted on to gather in \$125,000 in a year.

SWINE YARD.

Swine Plague and Precautions Against It.

TO THE EDITOR:—Under the heading of "Lessons of Experience with Swine Diseases," in a recent issue of the PRESS, Mr. H. W. Woods relates a loss similar to my own, and, in fact, to almost all the hog-raisers in this locality. I have recently buried \$50 sows at the rate of three a day, and out of a herd of 50 thoroughbred Berkshires I have saved but eight. The disease is *not* cholera, though many breeders who should know better, insist on calling it cholera on the prevalent idea that cholera is the only disease that kills hogs.

The disease is infectious pneumonia or swine plague, which latter term, however, is rather a general term, embracing many diseases fatal to swine and as distinguished from hog cholera proper. To the ordinary observer almost all diseases fatal to the hog present much the same external symptoms, and even the most experienced may often be misled in forming a diagnosis from the external appearance and condition of the hog.

A post-mortem examination is the only means of arriving at correct conclusions. In a case of infectious pneumonia one need not be a veterinary surgeon to detect the seat of the difficulty by a post-mortem examination. He needs but to know the normal condition of the lungs of a hog and to compare this with the case in hand, to know that he has found a sufficient cause for disease. Infectious pneumonia is highly contagious and very easily disseminated by means of water, and even through the air. There have recently come under my observation outbreaks where the isolation of the animals was so complete as to apparently exclude all theories except that of spontaneous origin. Mr. Woods may or may not have brought the disease from "butcher-town," but it seems to me a very unwise thing for a careful breeder to go to such a place to select animals for breeding purposes. One of the most dangerous characteristics of this disease is its insidious and unsuspected presence. An animal may be exposed and while yet apparently well may contaminate a whole herd. A case occurred here recently where a sow which had been exposed was carried several miles and placed in a pen of 30 well hogs. Inside of three weeks 29 died, while the sow herself was not at any time seriously sick. The germs may lie dormant and unsuspected for so long a period as six months.

From all reliable accounts the disease is new to this State, though quite common in the Central States. Prominent veterinarians intimate that they are able to trace its introduction to the State Fair at Sacramento last fall. But however it came, the great question now is to prevent and check its spread as far as possible. To *cure* it is as yet as far beyond the science of medicine as the cure of quick consumption or yellow fever. Any natural or artificial condition which in any way deranges the system of the animal invites disease, and pre-eminent among the causes inviting infectious pneumonia are dusty beds, old straw piles or dry manure. Crowded together in such sleeping places, hogs constantly inhale an irritating dust, which keeps the lungs in excellent condition for the reception and propagation of this disease. The Eastern hog-raiser has to fear cold, damp beds for his hogs, but the dry dust-heap is the veritable hotbed of disease which we must guard against. There are many other points, of course, of value in keeping our hogs in condition, but this seems to me the most important. Another equally important item in preventing the spread of the disease is the disposition of the animals which have died, and on this point I am ashamed to note that our State, and for that matter the whole country, is so far behind the demands of the hour.

Unaided as we are by severe winter frosts which might destroy contagious germs, and dependent upon an irrigation system whose very completeness only insures its death-distributing power, it seems to me exceedingly strange that any man should for a moment question the necessity of destroying every possible source of contagion by the only really safe method—that of burning. Although many of our progressive stock raisers recognize the importance and follow the practice of burning all carcasses, it is small satisfaction to them to know that their careless or indolent neighbor is leaving carcasses to decay in the canal above or covers them with a few inches of soil, to be washed by successive irrigations on to all the lands below.

It is encouraging to know that our stock-raisers are realizing the importance of united action in these matters, and are bringing a pressure to bear on our supervisors that is resulting in a system of rigid inspection, condemnation and disinfection of all infected localities. We have had enough of the folly of concealment of facts and of individual neglect in matters pertaining to the general welfare of our business.

JAS. M. HUNTER.

Home Ridge, Bakersfield, Kern Co., Cal.

[We are exceedingly glad this discussion of swine interests has arisen. It is of the highest practical importance, and we hope it will continue until our pork producers get the fullest possible benefit from exchange of knowledge.—ED.]

THE HOME CIRCLE.

Two Ways.

"Faith without works is dead."—Bible.

Said Farmer Jones, in a whining tone,
To his good old neighbor Gray,
"I've worn my knees thro' to the bone,
But it ain't no use to pray.

"Your corn looks twice as good as mine,
Though you don't depend to be
A shinin' light in the church to shine,
An' tell salvation's free."

Said Farmer Gray to his neighbor Jones,
In his easy, quiet way,
"When prayers get mixed with lazy bones
They don't make farming pay.

"Your weeds, I notice, are good and tall
In spite of all your prayers;
You may pray for corn till the heavens fall
If you don't dig up the tares.

"I mix my prayers with a little toil
Along in every row,
An' I work this mixture into the soil
Quite vigorous with a hoe.

"An' I've discovered, though still in sin,
As sure as you are born,
This kind of compost, well worked in,
Makes pretty decent corn.

"It's well to pray both night and morn,
As every farmer knows;
But the place to pray for thrifty corn
Is right between the rows.

"An' so, I believe, my good old friend,
If you mean to win the day,
From plowing, clean to the harvest's end,
You must hoe as well as pray."

—Leisure Hours.

Sweet and Twenty.

Sweet and twenty and fair as the day;
Plenty of lovers are bound this way.

Sweet and twenty, with eyes that shine,
And lissome curves that are rare and fine.

Dimples that play at hide-and-seek
On the tender mouth and the rounded cheek.

Never had maiden a lily-white hand
Softer and queenlier to command.

Never had maiden a foot more light
To dance a measure at morn or night.

Sweet and twenty can row and ride,
Over the rippling wavelets glide;

Harness and drive and climb and fish;
Make you many a dainty dish;

Talk in English and French and German,
Which the sweetest, you'll not determine.

Sweet and twenty has life before her,
And all who meet will of course adore her.

But what shall come to her after all—
Queen to reign, or to serve, a thrall?

Only the stars above can tell,
Dumb stars that hide their secrets well.

—Harper's Bazar.

The Private Secretary.



SINGULAR place! Singular people!" said old Doctor Morrison to his daughter, as he shook the water from his overcoat.

"Baxter's?" she said, her tone less inquiring than affirmative.

"Yes. That white-faced housekeeper is sick—well, very sick—and has sent for a daughter. Never knew before she had a daughter. And who do you think was taking care of the old woman? The secretary!"—with sarcastic emphasis.

"Mr. Black?" said Sadie Morrison, with the same tone she had used before.

"Yes, Mr. Black, Mr. Baxter's private secretary. Now," asked the doctor, taking his place at the tea-table, "I would like somebody to tell me what old Tom Baxter wants of a private secretary! He spends his entire time mousing about in his library, reading and taking notes, but I never heard that he had any great literary work in preparation."

But if the old doctor had ever questioned Mr. Black, he might have found that his position was a more important one than he imagined. Old Tom Baxter, as he had denominated Mr. Black's employer, was a retired merchant whose hard face and crusty manner were supposed by the good people of Staunton to be a natural infirmity, but which in reality covered a bitter disappointment and an aching heart.

He had come alone to the beautiful house he had built at Staunton, and his curt answer to inquiries about the family was always the same.

"I have lost my wife and my child."

To cover this wound he became a student and as the love of books grew upon him, it annoyed rather than pleased him to find the investments made of his money requiring attention, and proving profitable.

The one good that seemed to him worthless was money, beyond very simple needs,

and the care of his increasing property was a burden to him.

Hearing that the son of an old business friend was trying, with a very small salary as a clerk, to save sufficient money for law studies, he offered him a position as confidential secretary, and gradually allowed him to take full control of his entire property, an occupation that Godfrey Black soon found would render useless all attempts to study during its continuance.

So, with a sigh, he gave up his entire time to his duties, and laid by his liberal salary until it should be a large enough sum to take up the legal studies upon which his hopes rested.

There was a full corps of servants at Mr. Baxter's under the care of the housekeeper, Mrs. Rand, whose peculiar appearance had startled him when first he met her, but whose kindness and care for his comfort had won his respectful affection very soon.

That Mrs. Rand was a lady of refinement was evident at once, in spite of her severely simple dress and the share she took in domestic occupations. Small pox had scarred her face and given a permanent stare to her large dark eyes by shrinking the lids. But more conspicuous than this was the set, ghastly pallor of her face, framed in snow-white hair. Her dress of dark-colored woolen or chintz, with linen cuffs and collar, heightened the effect of this colorless face, and made the dark, staring eyes painfully startling.

Mr. Baxter being of an unsociable disposition, time would have hung very heavily in the hours of leisure, after the day's duties were over, if Godfrey Black had not found in Mrs. Rand a companion and friend, whose cultivated intellect, varied reading and rare musical gifts made the hours spent in her society speed by only too swiftly.

Nearly two years had passed since Mr. Black's arrival at Staunton, when Mrs. Rand's sudden and dangerous illness first led her to mention the existence of a daughter, a teacher in a seminary, who was sent for at her request.

Why Godfrey Black should have imagined Miss Rand an angular, middle-aged woman I cannot explain unless it was the appearance of age prematurely imparted to her mother by the snowy hair and ravages of illness. Not yet fifty, Mrs. Rand looked as if she might be seventy years of age.

Tom Baxter's housekeeper was panting for breath, raised up by the strong, gentle arms of the private secretary, when her door opened to admit a small, slender girl of twenty-two or three, whose fair, sweet face, framed in short, golden curls, looked scarcely beyond childhood. It was a startled face, with a mute terror in its soft brown eyes lifted to Godfrey's in questioning appeal.

"What is it?" she asked.

"Pneumonia!" he said, briefly. "She will speak to you presently. You are Miss Rand?"

"Yes, I am Lena," she said simply.

"Ah!" with a quick sad smile, "she knows me now; do you not, mother?"

"Lena!" the mother whispered, and lifted her hand feebly.

"Dear mother, I came by the first train," the girl cried, embracing her mother; and seeing that the spell of oppression was over for the time, Godfrey put the invalid tenderly back upon the pillows and left her to her child's care.

But all the chivalry of his nature was soon called into play by the young girl's trying position.

It was no small task for an inexperienced girl to take charge of the housekeeping cares, the direction of servants, over whom their master exercises no authority, leaving even the gardeners and the stable-men to Mrs. Rand. In addition to these employments was that of nurse to an invalid whose illness was dangerous and requiring active nursing.

"What should I do without you?" was the grateful story on Lena's lips a dozen times a day, as Godfrey untangled some domestic knot, reduced some impertinent servant to submission, or gave his tender devotion to the invalid.

It may have been that, had he met her in the usual routine of society friendship, Godfrey Black would have considered Lena Rand as a quiet, insipid girl, too shy to be interesting.

It required just such intercourse as they had to develop the latent power of will, energy and industry that lay under the genial manner, the low, timid voice and the soft smile.

Little by little she gathered the domestic reins into her tiny hands, and managed them with a quiet skill that was every day a fresh wonder to Godfrey.

She was soon instructed in the nursing duties required, and had a self-command at times of emergency that was wonderful to see, with her child-like face and manner.

As the immediate danger passed away,

Mrs. Rand's room became the household sitting-room in the evening. Mr. Baxter made two brief daily visits, evidently much concerned at the prospect of losing so valuable a housekeeper. But Godfrey and Lena made the invalid their companion and protection in such a charming love-making, that neither for a long time realized how firm a hold the other was taking of heart and brain.

Winter snows kept Mrs. Rand a prisoner in her room from October until April, and when, at last, she was triumphantly escorted to her old place at the dinner-table, Godfrey Black knew that if Lena went back to her seminary, the sunlight would be gone from his life; while Lena, child-like and innocent as she was, knew that into her life had come a love that must make or mar her whole future happiness.

Mr. Baxter was grave as usual, as he greeted his housekeeper, but the shadow of death that had rested so long upon the house had softened his curt speech, and given a new gentleness to his manner. In the place of his housekeeper there had been for months a pretty child, who, by her very youth and timidity, had called out all the dormant tenderness of his nature.

It was not in any man, that was not actually brutal, to be stern or sarcastic to Lena, and Mr. Baxter overlooked shortcomings in the culinary department that Mrs. Rand would have shivered to contemplate.

"I hope," that lady said, "my little girl has made you comfortable."

"Your little girl is second only to her mother as a model housekeeper," said the old gentleman graciously. "I hope you will persuade her to remain here. Mrs. Rand. Her face lights up the house!"

Godfrey's eyes seconded this motion, though he wisely kept silence until Mr. Baxter returned to his library, and the trio of friends to the drawing-room.

But there, in the presence of her mother, he told Lena his love, and begged for hers.

"I am a poor man now," he said, "but I am young and strong, and will win a home for you, Lena, if I have your promise to share it."

"I love you," she said, frankly; "but mother is my first care now."

"To-morrow!" Mrs. Rand gasped, trembling violently, as Godfrey appealed to her. "Ask me to-morrow. Go now, go!"

Never had Godfrey seen her so agitated; and, wondering a little, as there had been no proposal of immediate change, he left her with Lena.

But, for the first time, Mrs. Rand turned from her child's caresses.

"Let me alone, dear," she said. "I must see Mr. Baxter."

She staggered, rather than walked, to the library, and Godfrey, writing in his private sitting-room, heard the voices of his employer and Mrs. Rand in earnest and excited conversation for nearly two hours.

It was twilight when a sharp stroke of Mr. Baxter's call-bell told his secretary he was needed in the library.

To his surprise, he found Mrs. Rand alone there. She motioned him to a chair near her own, and said, in a voice whose very quiet spoke of suppressed agitation:

"Mr. Black, your proposal to Lena has thrust upon me a painful knowledge. It shows me that my child is now a woman, and has a right to question me about her father. Years ago, when Lena was but a babe, and I was as young and fair as she is now, I quarreled with my husband. He was a man twenty years older than myself, and, taking me from a happy home—a life of careless gaiety—expected me at once to fall into ways that were suited to his age and disposition, utterly at variance with mine.

"There was no force used to make me marry him; but I was very young, and the advantages of the match were presented to me, and fascinated my imagination. Unlimited control of money, pleasure without stint, were what I anticipated.

"A stern seclusion, a common-sense economy, a total absence of all excitement, were what I realized. I do not blame my husband; I was greatly at fault; but one day, after a fierce quarrel, I took my baby and ran away. In a country home I had an old aunt who worshiped me and really believed my exaggerated stories of domestic tyranny. She petted me, and in her home, utterly heedless of the misery my absence was causing in my old home and to my husband, I lived for three years absorbed in my child.

"Then came the terrible illness that took my beauty from me, which ended fatally with my aunt, who left me her home and small income. Disfigured beyond recognition, I ventured back to the city two years later, in order that Lena might enjoy the advantages of education I could not obtain for her in the country. She was fifteen years old when an unfortunate investment deprived me of my income, and I was compelled to

seek employment. I sent Lena to the H— Seminary, and answered Mr. Baxter's advertisement for a housekeeper.

"Godfrey, do you anticipate what I have to tell you? Do you guess the truth I have hidden so long—that I am in the home where I should have taken my place as Mr. Baxter's wife years ago? He has forgiven me, and is telling Lena the story I have told you. He has found a daughter he is already prepared to love, and he bids me welcome you to a son's place in our hearts and home."

"But," said Mr. Baxter, a little later, when the family met in the drawing-room, "though I consent to the marriage that takes my newly found child into a husband's care and love, I expressly stipulate that I am to lose neither my housekeeper nor my private secretary."

Mr. Riley.

James Whitcomb Riley, "The Hoosier Poet," is a somewhat short, singularly unpoetic looking man, of genial manner, with a strong, long, angular face, smooth shaven, sharp-set gray eyes, a prominent Roman nose, wears eye-glasses, and acknowledges to five and thirty years. His father, a well-to-do business man, intended him for a professional career; but while yet at school he good-naturedly kicked over the traces and adopted the trade of a traveling sign-painter. In this role he acquired all the phases of the streets, the woods and the field, and laid up a store of homely knowledge and philosophy, upon which he draws with never-failing success. He started in literature the master of two languages—English and Hoosier. It was about 1875 that his verses began to attract attention, and since 1880 he has been accounted the leading dialect poet of the country. Many good stories are told at his expense. He once traveled through Indiana as "the celebrated blind sign-painter." A companion who acted as his manager would exhibit him before a plate-glass window, handing his brushes to him as he needed them. The poet would measure off the glass carefully with his hands, and after much preliminary "business" would dash off a sign while the country folk looked on in amazement. But perhaps the most elaborate joke he ever perpetrated was a poem in imitation of Edgar Allan Poe, which went the rounds as a newly-discovered production of that poet, and which deceived so accomplished a critic as William Cullen Bryant. He has amassed quite a comfortable competence out of his poems, having lately purchased the old family homestead, his birthplace, at Greendale, Ind., where he will live hereafter. It is a handsome structure of the modified Greek style of architecture so fashionable in the south a generation or two ago, and is surrounded by a fine grove of "whispering maples." An original-minded, unbusiness-like man of immoderate modesty, his personality is quite as remarkable as his poems. —M. Crofton, in September Lippincott's.

A Witty Answer.

Those whose mission in life it is to entertain the public are always pestered by friends and acquaintances for free seats at their entertainments. There probably never was a singer, or an actor, or a pianist, who was not bored nearly to death by these people, many of whom had not the slightest claim to ask the courtesy they demanded.

A pianist who was pre-eminently successful in his day, and that day was not so far back, either, was Rubinstein, who traveled nearly the whole world over, delighting people with his genius. He, like all others, was very much annoyed by requests for complimentary tickets, but most of the time he maintained his composure even though justly irritated. It is told of him that just before one of his recitals in London he was accosted by an old lady in the entrance hall and thus addressed:

"Oh, Mr. Rubinstein, I am so glad to see you! I have tried in vain to purchase a ticket. Have you a seat you could let me have?"

"Madam," said the great pianist, "there is but one seat at my disposal, and that you are welcome to, if you think fit to take it."

"Oh, yes; and a thousand thanks! Where is it?" was the excited reply.

"At the piano," smiling replied Rubinstein.—Harper's Young People.

A Female Commander.

A much better proof that the emancipation of woman is at hand than the prominence of the Woman's Exhibit at Chicago was afforded to the Listener the other day. Down in the Broad and Well street district—that queer little fragment of a slum left by the redemption of Fort Hill, and very nearly

deprived now of its slummy character by the great number of respectable business houses which hem it in—the Listener saw a queer and impressive sight. A juvenile military company was parading there—a ragged, somewhat dirty squad, armed with sticks and brooms, and consisting in about equal measure of boys and girls; and by whom, think you, was this company commanded? By a girl, not a whit bigger than one or two of the boys in the company. She had no military toggery, and she was bareheaded and ragged; but she had a glittering eye and terrible look on her face, and she commanded her motley squad like a Napoleon. Every urchin was as straight as a ramrod, and the slightest deviation from the line brought a sharp command from the captain which put him instantly into his place. The boys in the army seemed to see nothing out of the way in being commanded by a girl. This incident seems to indicate a great change in the ordinary view of the lower classes as to what a girl is good for. But perhaps it is only an effect of the example set by the Salvation Army.—Boston Transcript.

There Is Some Hope In the Fashions of the Future.

The male half of the civilized world in the nineteenth century is dressed on English models. These are shaped and controlled by a utilitarian spirit; they are seldom deformed, never picturesque, but generally useful. The ladies have by no means recovered from the love of deformity. They are a couple of centuries behind the men in matters of costume. While they have never again quite equalled the extravagance of 1780, they have, within the last 50 years, distorted their natural shapes in many ways and in many directions. Hoops here and bunches there, swollen heads and high shoulders, short waists and long waists, bustles and chignons, have succeeded each other rapidly and senselessly. It is true that some women have managed to look charming in spite of all these horrors—some women would look charming in anything—but an ugly costume is ugly for all that.

What is the probable development of dress in the future? There are plenty of signs that the women are following the men into utilitarianism. Good, sensible clothes and no nonsense, heavy cloth, tailor-made and but little trimmed, sailor hats and pot hats are gaining ground. Silks and laces, bright colors and flowing lines are more and more reserved for the dinner party and the ballroom. It was bound to be so. Women's fashions never fail to follow men's fashions in a modified shape. This time we may expect to get rid of the bustle, with all its kindred deformities, and we may surely hope that nothing will be evolved by women so hopelessly hideous as the trousers.—From "Clothes, Historically Considered," by Edward J. Lowell, in the September Scribner.

Automatic Bed.

A Bombay man has constructed a bedstead priced at 10,000 rupees, and I append the description for the benefit of my Birmingham readers: "It has at its four corners four full-sized gaudily dressed Grecian damsels, those at the head holding banjos, while those at the right and left foot hold fans. Beneath the cot is a musical box, which extends the whole length of the cot, and is capable of playing twelve charming airs. The music begins the moment the least pressure has been brought to bear from the top, which is created by one sleeping or sitting, and ceases the moment the individual rises. While the music is in progress the lady banjosts at the head manipulate the strings with their fingers and move their heads, while the two Grecian damsels at the bottom fan the sleeper to sleep. There is a button at the foot of the cot which, after a little pressure, brings about a cessation of music, if such be the desire of the occupant."—The Ironmonger.

The Human Ear.

Few people realize what a wonderfully delicate piece of mechanism the human ear really is. That which we ordinarily designate as the "ear" is, after all, only the mere outer porch of a series of winding passages which lead from the world without to the world within. Certain of these passages are filled with liquid, besides having membranes stretched like parchment curtains across the corridor at different points. When a sound wave strikes these they are thrown into vibrations and made to tremble like the head of a drum does when struck with a stick or with the fingers. Between two of these parchment-like curtains a

chain of minute bones extends, which serves to tighten or relax the membranes and to communicate vibrations to them. In the innermost place of all, a row of white threads, called nerves, stretch like the strings of a piano from the last point from which the tremblings reach, passing thence inward to the brain.—Hall's Journal of Health.

Statistics of Thirst.

There is, at first, something very appalling in the record of the drink consumed in large cities. For instance, the statement was lately put forward at the London Mansion House that the city of London drank every year 45,000,000 gallons of malt liquor, 8,000,000 gallons of wine and 4,500,000 gallons of spirits. The announcement startled the public until an optimistic mathematician brought a little arithmetic to bear on the figures, and forthwith altered their significance.

He found that London has a population of close upon 6,000,000. About 2,000,000 of these are children, who, for the purpose of argument, may be classed as taking no alcohol at all. Also, for the purpose of argument, it may be assumed that of the remaining 4,000,000 2,000,000 are total abstainers, leaving the drinkers of the city numbered at 2,000,000. This would give an annual consumption per head of 22½ gallons of malt liquor, 4 gallons of wine and 2½ gallons of spirits. Twenty-two and one-half gallons a year is almost exactly half a pint a day; 4 gallons a year would be a very small wine-glass daily; 2½ gallons a year would barely suffice to fill the smallest liqueur glass 365 times. So that the inquiring statistician reached the conclusion that the terrible drink bill of London resolved itself into the fact that the average Londoner takes one glass of beer with his dinner and a very small glass of wine after it, and that before he goes to bed he takes the merest toothful of whisky or some other spirit as a night-cap.—Chicago Record.

He Was Used to It.

The hopelessness of combating individual stupidity with the most enlightened sanitary measures which the authorities can provide was evidenced the other day on a Grand-street ferryboat. A woman came into the cabin carrying a baby of perhaps nine months and leading a little toddler of about two and one-half years old. Both children, as well as the mother, were comfortably clad, but the children's faces were pasty and unhealthy looking, as if unwholesome food and ill ventilated sleeping quarters were their portion. The former undoubtedly was, for each child was munching a large slice of not too ripe nor too clean watermelon, bought from one of the peddling fruit-stands which abound in that locality. The baby in arms kept at his piece with his toothless gums until he had secured several bits, which he swallowed with gusto.

Alarmed for the effect upon his tender, or at least youthful, stomach, a passenger, another woman, approached the mother.

"Aren't you afraid to let your baby eat that?" she asked, pointing to the fruit.

The woman looked mystified. "Oh, he likes it," she said.

"But it may make him sick, he is such a young baby," persisted the other.

"Oh, no," answered the mother good-naturedly, "he's used to it and peaches," she added, with an air of pride at his digestive prowess.

And the other woman could only return to her seat vanquished, while the watermelon pursued its colicky way.—New York Times.

The Opal.

There are three varieties of this famous gem. Ranking first comes the oriental; as second in value, the fire; and, lastly, the common opal. The affection for this treasure, as expressed by the ancients, can hardly be believed. Nonnius, a Roman senator, absolutely preferred exile, to parting with a brilliant opal of the size of a filbert, which was earnestly coveted by Marc Antony. An opal ranking as third among the finest in the world is described as having three longitudinal bands of the harlequin kind, from the uppermost of which rose perpendicularly the most resplendent flames. It measured nine inches by six.

In the last century a very round and brilliant opal was the property of the amateur Fleury. Another, said to be fascinatingly vivid, was owned by a noted French financier. These two were regarded as marvels of beauty among gems. On account of the thousand fissures of the stone, engraving is always difficult and often impossible. A head of Sappho engraved upon a "presumable opal," an antique, has been

highly valued and carefully studied by experts in gem lore. It is catalogued, so we read, among the treasures of a princely home.

YOUNG FOLKS' COLUMN.

Home Etiquette.



THE word "etiquette" is hardly liked when the question is that of being kind and lovely in one's own family. Yet if members of the same household used a little more ceremony toward each other, no harm would be done. What true gentleman would treat his mother or his sister with less courtesy than he would a chance acquaintance? No one would greatly respect a boy whose custom it was to let his sister trot about on his errands, run upstairs for his handkerchief, fly hither and thither to bring his hat or his jacket. I well remember the surprise of a young lady when, in a certain family, the brother sprang up to light the gas for his sister, and, when the latter attempted to put some coal on the fire, quickly took the hod from her hand and did the work himself.

"You wouldn't catch my brother being so polite to me," she said.

"So much the more shame to your brother," I thought.

Every boy ought surely to feel a certain care over his sister, even if she be older than he. As a rule he is physically stronger, and consequently better able to bear the burdens of life than she. There is nothing more charming than the chivalrous protection which some boys lavish on their fortunate "woman folk." And nothing is so attractive to other girls as to see a boy gentle and tender to his sister.

As for you, dear girls, you would never be so rude as to fail to acknowledge any courtesy which your brother paid you. If you would deem it extremely unladylike not to thank any person who gave up his seat in the car to you, you would blush to be less grateful for a similar kindness on the part of your brother. If he is ready to place a chair or to open a door for you, to make sure that you have an escort after dark, to take off his hat to you on the street, to ask you to dance with him at a party, surely you are eager to please him. To sew on a stray button, to mend a rip in his gloves, to thank him for taking pains to call for you and bring you home from a friend's house, to bow as politely to him, and to accept him for a partner with the same pleasant smile which you would have for somebody else's brother.

A boy should learn the habit of easy politeness in all circumstances, but if there be one place on earth where one should use

freely his best manners it is in his own home.—Harper's Young People.

Obeying Orders.

An English farmer was one day at work in the fields, when he saw a party of huntsmen riding about his farm. He had one field that he was specially anxious they should not ride over, as the crop was in a condition to be badly injured by the tramp of horses, so he dispatched a boy in his employ to this field, telling him to shut the gate and keep watch over it and on no account to suffer it to be opened. The boy went as he was bid, but was scarcely at his post before the huntsmen came up, peremptorily ordering the gate to be opened. This the boy declined to do, stating the orders he had received, and his determination not to disobey them. Threats and bribes were offered in vain. After awhile one of noble presence advanced and said in commanding tones: "My boy, do you know me? I am the Duke of Wellington—and I command you to open the gate."

The boy lifted his cap, then answered firmly: "I am sure the Duke of Wellington would not wish me to disobey orders. I must keep this gate shut. No one is to pass through but with my master's express permission."

Greatly pleased the sturdy old warrior lifted his own hat and said: "I honor the man or boy who can be neither bribed nor frightened into doing wrong. With an army of such soldiers I could conquer the world."

Betrayed by the Parrot.

Some years ago, when the editor of this paper was a boy and lived on Sea street, a very intelligent and talkative parrot belonged to the family of the late Benjamin Clark. Among the boys who played in that vicinity at that time were the writer of this, C. E. Weeks, John McGrath and Hezekiah Crockett. The parrot knew the names of all of these parties very well, and amused himself during the day by calling them over. "Charlie Weeks" was a favorite slogan of the bird.

One day an orchard in the neighborhood was invaded by boys, and the crowd above mentioned were cornered by the enraged orchardist in a corner near the Clark residence, the bird being perched on his cage on the step, watching proceedings.

"Which of you boys stole my apples?" queried the owner of the apples, flourishing his cane.

No answer,

"Which of you young rascals stole those apples?" continued the man in wrathful tones.

"Charlie Weeks! Charlie Weeks!" croaked the bird.

And that's where the cane fell!

University of California.

Your committee have made a very careful examination of the **ROYAL BAKING POWDER**, and are satisfied that it fulfils all the requirements which the public can make of a baking powder. For purity and care in preparation it equals any in the market, and

Our test shows that it has greater leavening power than any other of which we have any knowledge.

H. B. Rising

Prof. Chemistry, University of California, and State Analyst.

W. J. Genselee

Prof. Chemistry, College Pharmacy of the University of California.

All other baking powders contain either alum or ammonia.

PATRONS OF HUSBANDRY.

The Master's Desk.

Attend the State Grange!

Merced Grange has done well for the National Grange Temple. Thanks, brothers and sisters of Merced!

Two Rock Grange won the first prize at the Sonoma and Marin Agricultural Fair. Petaluma Grange was a close second. There was no unfriendly rivalry, just a friendly contest of which could best work and best agree. These are the same granges that have undertaken to entertain the coming session of the State Grange. Come along and see how well they can and will work together.

If you are a Patron of Husbandry, you don't want to miss the excursion to be given the State Grange on Wednesday afternoon, October 4th, when the thrifty town of Sebastopol is to be visited. Sebastopol Grange is preparing to feed the multitude of patrons, and we know there will be more than the proverbial number of loaves, fishes and fruit remaining.

As an officer of the State Grange, have you filed your annual report? Now is the accepted time. Be sure to have it ready soon. What line of work have you done during the year? Have you done all that in you lies for the good of the order? Tell us all about it in your report.

The Midwinter Fair will no doubt be a success in a moderate way, provided the good people of San Francisco contribute the necessary money to build and equip all the buildings. This seems no more than right, since San Francisco is to have the fullest amount of benefit. No doubt the interior counties will do their full share when their time comes, but they will not, in many instances, be willing to do anything in the line of preliminary work. When the proper time comes, there can be little doubt of the position of the members of the Grange. They will do their full share of work and furnish any amount of splendid exhibits, but the truth is that the farmers have no money on hand to devote to any enterprise or to anybody. "Hard times" has hit the farmer a terrible blow.

If you want to be right successful in business, if you want to be one of the best conversationalists in your neighborhood, if you want to have hosts of friends, if you want to have influence, if you want to have self-respect, then be, or become a great reader. "Reading maketh a full man." Be precise, be particular in what and in all you read. Take time to digest the thoughts of the writer. Admit nothing. Test everything. Controvert every proposition. Assume it is not correct unless there is some proof. Reflect on all you read. Study data, and be able to apply it to the case on hand. Get the cloth and fit the person afterward. Knowledge is power if properly applied. Education broadens, strengthens and dignifies man. Then read, study and apply. Don't put your intellectual light under any bushel. Have good thoughts and impart them.

Farming is hard work; so is blacksmithing. Farming is intellectual work, so is the profession of medicine. Go where you will, find whom you may, if he is making an honest living he must do it in the sweat of his face. No calling need be more honorable or less honorable than another, if it is honestly conducted. Most men honor any vocation; some men dishonor every vocation. It is the man and not the calling. An honest, industrious, sober and progressive husbandman is as highly respected and as much trusted as any man on earth. All honor to the man who honors his trade, his profession, his vocation, his family and himself. There is no station too good for him, no compulsion too high, no honor too great. Let us have more men who think and who live honorably; men, who, knowing they are right, dare say so to a nation, to the world if need be.

See that good manners and good morals are taught the children, both at home and in school.

There are rivers of water, and there ought to be rivers of thought. Each patron should be a livid stream of ideas; these ideas should run through the entire neighborhood, county, State and nation. It is a great pleasure, as well as a great honor, to see your thoughts in a paper published in another State away across the Union. It makes one feel somewhat important; it gives strength to your individuality. It causes two blades of grass—ideas—to grow where but one grew before. The human brain is a wonderfully fertile field; the more it is cultivated the more it

yields. Test it; try it; use it. Abundant harvests of golden ideas will be yours. Cultivate the human brain! E. W. D.
Santa Rosa, Sept. 4, 1893.

From Mr. Ohleyer.

TO THE EDITOR:—Our grange held its regular meeting yesterday, notwithstanding the numerous side attractions. The attendance was not large, but it was zealous in the work, which largely made up for lack of numbers. The approaching meeting of the State Grange was discussed, and the questions that are likely to be brought before it. Alternate delegates were chosen, and the grange will meet again in two weeks for degree work and to consider matters relating to State Grange affairs, when a larger attendance will doubtless be had.

As I see nothing in the RURAL from Roseville Grange I desire to extend my regrets for not being present at their meeting on the 19th of August. I had fully determined to be present and had so informed the worthy master, but at the last moment business of unusual importance intervened, which robbed me of the anticipated pleasure. I had been there before and knew the consequences. However, Bros. Berry of Wheatland and Frisbie of Yuba City were there and reported a grand time. Just my luck.

Roseville is a handsome little burg nestled in the woods at the foot of the Sierras, where the Oregon railroad leaves the overland for the north. In the immediate vicinity the land is owned in small tracts, and is inhabited by material of which the most progressive granges are composed. When the outlying grants are also reduced to small holdings, the town will put on city airs and become an important center of population and trade. Besides being well adapted to the growth of cereals, hay and stock, it is one of the best fruit sections of the State. All the known varieties do well here, including the citrus family. The soil is rich, undulating but not hilly; has excellent irrigating facilities if wanted, and the best of natural drainage. Altogether, the locality merits a more extended notice than can be given on this occasion.

In the start I said something about the side attractions that prevented a fuller attendance; possibly you may wonder what it could have been to detract from the interest we all take in the grange; well, just across the river from us is situated the metropolis of northern California, the handsome city of Marysville. There was in progress there all the week the Thirteenth District Fair. It began in a timid manner, the attendance I mean, the exposition at the pavilion being in many respects the best ever seen in northern California. The lack of attendance was at first ascribed to the want of "free coinage," but as the days waxed on the attendance increased, which culminated on Friday and Saturday with a grand rush that fairly lined every avenue to the town. I will enumerate a few of the special attractions for Saturday:

There were the races, the ladies' equestrian tournament, sometimes called horseback riding; then there was a circus and theater in town taking up a collection for the heathen both in the afternoon and evening. Then there were parades and brass music and all sorts of street fakirs. Couple all these with the magnificent display at the pavilion of the handiwork of our artists, production of our fields, orchards and vineyards, and the presence of the handsomest and most charming of all creation, our ladies, and can you wonder that anyone remained at this end of the long bridge to tell the story; but there was, at least two dozen of them, and the handsomest of the lot, the writer being one of them.

Duty called me in another direction the greater part of the week, hence unfitting me to speak of the exposition in detail. I presume the RURAL had a "special" on the ground from whom we may learn how others see us.

I may be permitted to remark, however, that it is just possible the exhibits can and will be duplicated at the State and other expositions, but cannot be outside of our own State. I think it a safe assertion that the production of field, orchard, vineyard and garden covers a wider range here than anywhere else. This being so, who shall say it will not ere long be the central figure to attract the whole world's attention even to a greater extent than did her gold fields 40 years ago.

But, dear Editor, all this is commonplace and uninteresting possibly, but what else can be expected under the circumstances. An able editor in describing one of these fair weeks once said, "It was a week's relaxation of morals," and I thought it very appropriate. We may frown upon

the circus but all hands and the cook turn out to see the parade. Fraternally yours,
GEORGE OHLEYER.

Yuba City, Sept. 3, 1893.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

Jas. T. Bogue, the nurseryman, has already sold this season over 150,000 trees. The greater portion of the same go to Glenn and Contra Costa counties.

The crop of winter apples on the Mountain House ridge is the biggest that has ever been known in the history of the county. Every tree from Canyon Creek to Buckeye is breaking down with the largest, finest and most delicious fruit that is produced in the State.

Oroville Register: As an illustration of what the World's Fair is doing for advertising people, we saw a letter this week from Catania, Sicily, addressed to C. E. Kusel, and the writer had learned that Mr. Kusel was planting olive trees, and he desired to sell to our California grower a large quantity of olive trees. Mr. Kusel received another letter from a bottle firm of Pittsburg, Pa., soliciting an order for bottles. He also got one from a Boston firm engaged in making machinery for crushing olives. All the letters originated from seeing a few bottles of oil in the World's Fair at Chicago. The oil had been made from olives grown by Mr. Kusel near Oroville.

Chico Chronicle-Record: From private sources we learn that the Vina ranch will close down to-day and all hands be discharged except those absolutely needed (cattle, hog, fence men, etc.). As it stands now, wages have been cut down 20 to 30 per cent in all branches of labor. It is claimed that the ranch is running at an enormous expense. However that may be, Mrs. Stanford, her brother and an English titled gentleman arrived in Vina in her private car Tuesday, and were driven about the ranch. Those who claim to know state that the closing down of the ranch is but a mild way of getting rid of a horde of straw bosses and drones that heretofore have been a heavy drain on the place, and that in a week or ten days a new crew of superintendents and straw bosses will be installed. Wages for grape-picking, it is stated, will be but 75 cents a day with board.

Colusa.

Colusa Sun: A well-known business man of Glenn county asked us the other day why wheat farming was not so profitable to-day with wheat at \$1 as it was in 1883 with wheat at \$1.35 per cental. He enumerated sacks at one-half; groceries at only a little more than half; nails, barbed wire, harness, plows, in fact almost everything the farmer uses at little over one-half. Wheat then had to be headed and stacked, or headed and thrashed separately, which cost nearly double for harvesting what it costs now. The rate of interest is also less. Wheat farmers were then prosperous—why not now? One answer is that the land of the valley, with the same degree of perfection in farming, and the same rainfall, does not produce as much by twenty-five per cent as it did in 1883. The necessities of the people have increased also in the last decade, so that it takes more to support a family, notwithstanding the reduced price of many articles of merchandise. There are farms on which money can be made, and there are men who make it, at \$1 per cental for wheat. A good farmer could take 1000 acres of our best wheat land that had never known the plow—if it were possible to find it—and make more clear money out of it a year like this, with wheat at \$1, than the same farmer could have made in 1883 with wheat at \$1.35, on the same class of land, farmed as long as the average land had been farmed at that time. In fact, with present prices for the articles he would have to buy, and the improved machinery now in use, a good farmer could get rich on a thousand-acre farm of such land as we once had in this valley, selling wheat at \$1 per cental. Of course, when it would come to a small farm, the family support would cut such a figure as to overcome the profit with so small a price.

Fresno.

At a meeting of vineyardists held at Fresno last week the following was adopted: "Resolved, That we, the principal vineyardists of this vicinity, assembled to consult regarding wages of labor, have agreed to pay a uniform rate of 75 cents per day and board, or \$1.25 per day without board, and that payment be made on the regular pay day of the vineyardist employing."

An orchardist writes as follows to the Fresno Examiner: Without our 10, 20 and 40-acre vineyardists and orchardists, Fresno will be naught. Most of these small holders have heretofore been able to draw checks on one or more of Fresno's banks for amounts of \$100 to \$1500 most any season of the year, until the present one, when the combined causes have left them, or the majority of them, without bank balances. Now they are friendless and, while they can secure good endorsements, cannot obtain a few dollars with which to save their crops.

Humboldt.

Times: There is an immense acreage on the Trinity and the south fork of that stream adapted to fruit-raising. The whole section is entirely free from fog and winds, and the soil is as desirable as that of any land in the southern portion of the county. Humboldt will in time be one of the greatest producers of choice fruits in the State and already attention is being directed to the berries and apples.

The creamery at Arcata seems to be a leader; it first bought milk by the butter fat, ascer-

tained by the Babcock tester, a method used altogether where creameries have been in vogue long. The next progressive step at this creamery is receiving milk once a day, which saves lots of trouble; next year they will probably collect their milk, or perhaps the cream from their patrons, setting a separator among their farthest patrons and hauling cream only.

The situation as to wool is severely felt in Humboldt county. The Watchman of last week says: "One of our prominent sheep-raisers from southern Humboldt drove into town Tuesday, and we met him as he was driving into the stable with his horse. In a short conversation he despondingly informed us that he had come in to turn over all his possessions to his creditors, that he could stagger on no longer. Three years ago he was a prosperous man, well one to the road to wealth."

Kings.

Grangeville letter: One dollar per day is what the vineyardists intend to pay for grape-picking. We do not hear of any going to pick by the tray.

Hanford Journal: Many raisin-growers of this vicinity have announced their intention of "hogging off" their second crop of raisin grapes. They say it puts an excellent fat on porkers and they sell well.

Hanford Journal: Picking grapes on the big Lucerne vineyard will begin on or about the 10th of September. It having become generally known, through the press and otherwise, that this big vineyard would need 500 grape-pickers, a large number of applications for work have been received and already more have applied than there is work for, many coming from as far away as San Luis Obispo county.

Lake.

Bulletin: Many of our fruit-growers have suffered by the sunburn of their fruit crop. Tons upon tons in this vicinity have been lost from that cause. It was caused by the heat of four or five weeks ago. This is the first instance we have ever heard of such loss from that cause.

Lassen.

In Lassen county most of the wool-growers will shear as usual this fall in spite of the bad outlook for their product. The Mail says: "The sheep-shearing season is on. Nearly all the sheep men whose flocks are now here, are shearing. A number of thousand of migratory sheep have been started for the Sacramento valley this week from the mountains to be shorn there."

Los Angeles.

A Lordsburg fruit-grower remarked last week to the Pomona Progress that so long as people think prunes should be dipped and so long as the trade demands it they will have to be dipped, but he has cured them for his own use several years without dipping and will not have them any other way. He dries them as they come from the tree, and when cured, before packing, dips them into hot salt water to kill any insect eggs that may possibly be deposited on the fruit. Treated in this way the fruit is firmer and looks brighter and does not cook to pieces as it does when it has been dipped in lye, etc. He says further, that it is not a fact in his experience that the skin of the prune is tougher when cured in this way than it is when treated by the common method. He has had comparative tests made by several persons and the undipped fruit has been pronounced superior on every occasion.

Mendocino.

A proposition is now on foot, so we are informed, for Mendocino and Lake counties to pool issues and purchase the Hopland toll road, as the proprietors are anxious to sell and make it a free road.

Ukiah Dispatch: A few of our hop-growers will put on limited crews next week, but none of the yards will be in full operation before the 4th of September. D. G. Pitner informs us that he will begin picking on Monday, Sept. 4th. A number of other yards will begin about the same time. Only three yards in the valley, we learn, will employ Chinese this year.

Monterey.

Pajaronian: Beet hauling will commence next Monday and the factory will start up about a week later. There is going to be a big crop of beets, and the handling and milling of the crop is going to make this section an extremely lively place for the balance of the year.

Orange.

At Santa Ana 301½ acres in the Rancho Los Alisos, near El Toro, were sold last week by Dwight Whiting to Mrs. Deluira Vargas de Campbell of London, England, for \$50,000. There are 100 acres of the purchase set to prunes just coming into hearing.

Placer.

Rocklin Representative: There are peach orchards in this neighborhood which are not being touched at all, and the luscious fruit covers the ground going to decay. The proprietor prefers to let the fruit rot and lose his money that way rather than to pay hard cash out of his pocket to meet the cost of transportation.

Riverside.

Press: When we planted an acre to apples in the pioneer days of the Riverside colony we experimented with a dozen or more varieties. Nearly all grew and fruited well. A few were excellent, but not equal in quality to those grown in the mountain canyons. But among them were trees bought for Gravensteins that were so infinitely superior that, when oranges were put in the place of the other apple trees, these, with a few others, were left. Every August since they have given us an abundance

of beautiful apples, firm of texture, good keepers, crisp and spicy. No such fruit is offered for sale in the markets, but we had hardly realized their superiority until the enthusiastic praise of our neighbors, to whom we have given them, suggested that possibly the superiority of this variety and its thorough adaptability to this climate are not generally understood. We are not absolutely sure that the variety is true to name, but, whether the apple referred to is the Gravenstein or not, we are sure it is the best summer apple grown in southern California.

Press: Reports of the raisin crop now maturing in the Cucamonga and Etiwanda districts are that a big crop of excellent fruit is in sight. The crop here is found to be, upon close inquiry, not near so good as was promised in the early part of the season, although there is a very fair crop of good-sized berries and clusters. The chance of making any money on grapes this season depends largely upon the judicious management of shipments as well as careful preparation of the fruit for market.

San Bernardino.

The Ontario cannery is now furnishing employment to 100 operatives, principally women and girls, to whom are paid about \$1000 weekly. Quite 6000 cans are made ready for the market daily. The output for the season will be about 7000 cases. Ten tons of fruit are being canned and dried daily.

A writer in the *Bakersfield Californian* says: "James Birch of Yucaipa valley reports on three acres of apple orchard planted from 8 to 12 years: The varieties in the orchard are Yellow Belleflower, Blue Pearmain, Rome Beauty, Winesap, Ben Davis, Golden Pippin, Newtown Pippin, White Winter Pearmain, Limbertwig, Wagner and Spitzenberg. The orchard is irrigated, but no fertilizers are used. Crop was sold in 50-pound boxes at \$66 per ton, or 3½ cents per pound. The cost of caring for the orchard is placed at \$10 an acre, and the net profit of the crop for the year 1889 was \$275 an acre. The orchard is not yet in full bearing. The orchard is located in East Yucaipa valley, 10 miles east of the city of Redlands. This apple orchard is at an elevation of about 3000 feet, and is in a locality where snow falls every winter and the ground is frozen for a considerable period. Singularly enough, too, it is but a few miles from a section which is rapidly attaining the first prominence as an orange-producing locality, and thus adds another example to the remarkable range of climate and production that exist in this State."

Santa Clara.

Los Gatos News: The cannery got in a run of 90 hours last week—an average of 15 hours a day. About 75,000 cans of pears and peaches were put up. The number of people regularly employed is 225. It is estimated that this season's pack will be nearly or quite as large as that of last.

Santa Cruz.

Pajaronian: Two carloads of apples and pears were sent from Watsonville to Denver, Colo., last week. There is a demand for Pajaro fruit in Denver even if that city is crowded with unemployed men. In this market the price for apples has slightly improved, and most of the prunes have been sold by the packers to San Jose driers at prices considerably lower than were realized last year. The sales of prunes are made on 90 days' time.

Shasta.

A goodly number of teachers have organized a hop-picking crew, and contemplate picking the Anderson valley yield.

Anderson News: The new variety of plums known as the Columbia is the handsomest plum grown. They are almost round and about as large as an egg. Mr. J. F. Wood brought in some beautiful samples to the *News* office this week. He produced a branch eight inches long which supported 25 plums. The fruit effectually concealed both leaves and branch.

Solano.

Chronicle: Many tons of hay are being hauled to town just now. It is better, as a rule, than any hay that has been raised in this section for years. This is due to the fact that the rain did not come at a time when the crops would be injured. Considerable hay is also coming in from Island No. 2.

Davisville letter in *Woodland Democrat*: "Our fruit men, notwithstanding the abundance of fruit and the low prices offered in our home market, are saving all; such as will not answer for the Eastern markets is being dried with the hope of at least some margin later in the season. Returns from the East are, in the main, satisfactory, and thus far there has been none sold at an actual loss. For this season, at least, our orchards are proving a good thing for all, since they afford employment suited to men, women and even children, and, if the wages paid are small, they are still a great help in a season of depression, such as we are at present passing through."

Sonoma.

There are between 1500 and 2000 people employed in the hop fields of Santa Rosa. One firm pays \$14,000 a year for labor, and it is estimated that 5000 people will find employment in the hop fields of this county this year.

Sonoma Democrat: Jonathan Roberts thinks a man can afford to grow prunes year in and year out for \$18 a ton, green. He thinks the price should never go above \$30 a ton, if the market is to be kept in a healthy condition.

Cloverdale Reville: The winery at the Italian-Swiss colony, near here, is assuming larger proportions every year. They are now adding six casks, of a total capacity of 110,000 gallons, and besides, making a number of improvements in the distillery.

Petaluma Courier: A number of the fruit-growers round about Sebastopol have shipped

their peaches to San Francisco and realized over \$20 a ton thereby. Thus they have the laugh on the buyers who thought they had the orchardists in a hole, and so offered them from \$10 to \$15 a ton for their crop.

Sebastopol Times: The bulk of the peach crop of Anala this season is being shipped to San Francisco. The prices rule from \$18 per ton for Muirs, to \$20 per ton for Orange Clings. Some of our fruit-growers who have visited the city markets, claim superiority for our products and their claim seems well founded, as the above quotations are the tops of the market.

The Russian River cannery is packing an especially fine quality of fruit this year, and the quantity of second and third grades is very small. Eighty per cent of all the peaches to be canned this season will be extras, averaging seven halves to the three-pound can, and quite a portion will go as low as five halves to the can. Most of these goods, which are the finest and highest-priced in the market, will go direct to New York.

Tehama.

Wong Ah Foey, the Red Bluff Chinese magnate, has a large orchard leased from J. S. Cone, situated west of his residence. He has had a force of Chinamen engaged in picking fruit, but on Saturday they struck for better wages, demanding \$1.50 a day. Ah Foey does not intend to give in to the demands of his countrymen, and will try to secure a small army of boys, to whom he will pay so much a box for picking the fruit.

Tulare.

Wages have been reduced on the Miller & Lux ranch in Kern county from \$30 to \$25 per month for ranch and canal work.

Visalia Delta: "T. L. Hannah's traction engine pulled ten wagons from Lemoore to the Kings river picnic grounds Sunday. The wagons were laden with a large number of people, and they had a jolly time."

Tulare Register: One of our fruit-growers has been taking notice that his trees which have made the finest growths have the smallest fruit on them and also bear less in quantity, but that his trees which grow more slowly bear very large fruit and much the more of it. Will some expert rise and explain the wherefore? Does too much irrigation force wood instead of forcing fruit? The trees in this orchard which got the least water have yielded the most and best fruit, and yet these trees, too, are healthy and have grown very well.

Three and One-Half Days to the World's Fair.

We take pleasure in advising the readers of the *PACIFIC RURAL PRESS* that the UNION PACIFIC is the most direct and quickest line from San Francisco and all points in California to the WORLD'S FAIR.

It is the ONLY LINE running Pullman's latest improved vestibuled Drawing-Room Sleepers and Dining Cars from San Francisco to Chicago without change, and only one change of cars to New York or Boston.

Select Tourist Excursions via the UNION PACIFIC leave San Francisco every Thursday for Chicago, New York and Boston in charge of experienced managers, who give their personal attention to the comfort of ladies and children traveling alone.

Steamship Tickets to and from all points in Europe. For tickets to the World's Fair and all points east and for Sleeping-Car accommodations call on or address D. W. Hitchcock, General Agent Union Pacific System, No. 1 Montgomery street, San Francisco.

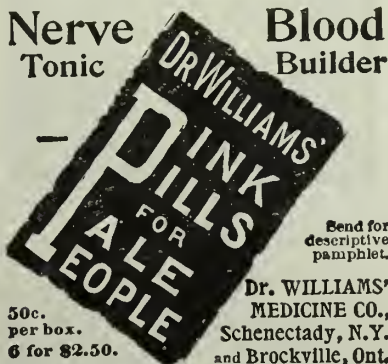
\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California street, San Francisco.

Hay Pressing.

If you are interested in pressing hay write Truman, Hooker & Co., San Francisco. They will save you money.

Nerve Tonic



DR. WILLIAMS' PINK PILLS FOR PALE PEOPLE

50c. per box.
6 for \$2.50.

Blood Builder

Send for descriptive pamphlet.

Dr. WILLIAMS' MEDICINE CO.,
Schenectady, N.Y.
and Brockville, Ont.

A BEAUTIFUL PLACE

Comprising 4½ acres, within the town limits of Santa Rosa, well improved, has nursery of 60,000 trees, fine orchard, well stocked poultry yard (many varieties), house furniture, horse, carriage, etc. Everything in good order. Price reduced from \$10,000 to \$5000. Must be sold. Apply early.

JOHN F. BYKBEER,
42 Market St., San Francisco.



FOR THE BEST IMPROVED

ARTIFICIAL LIMBS

ADDRESS
MENZO SPRING,
9 Geary St.,
SAN FRANCISCO, Cal.

OFFICE & UP STAIRS

WELLMACHY All Kinds, Water, Gas, Oil, Mining, Ditching, Pumping, Wind and Steam Heating Boilers, &c. Will pay you to send 25c. for Encyclopedia, of 1500 Engravings. The American Well Works, Aurora, Ill., also, Chicago, Ill.; Dallas, Tex.; Sydney, N. S. W.



YOLO FRUIT GATHERER.

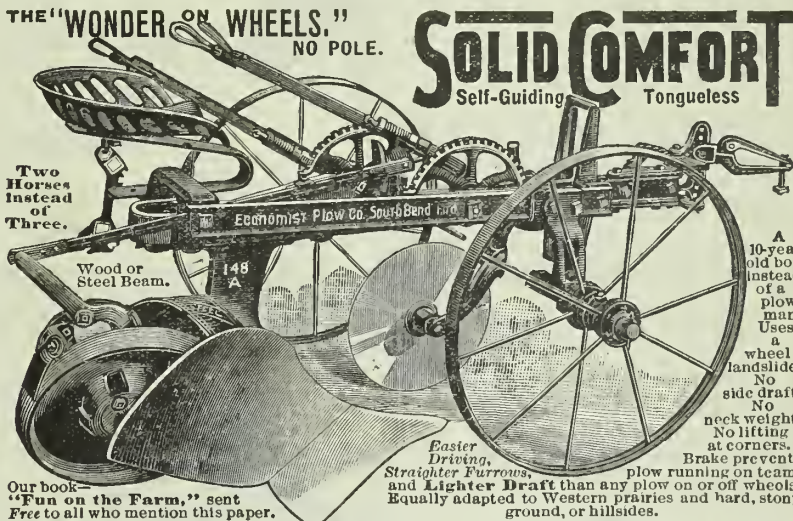
Indispensable in the orchard; two men do the work of ten. Does not bruise fruit and gathers it free from leaves, etc.

— MADE BY THE —

SAN JOSE AGRICULTURAL WORKS.

Fruit Trucks, Tray Cars and Track for Dryers. Write for circulars and prices.

THE "WONDER ON WHEELS."
NO POLE.



Two Horses Instead of Three.

Wood or Steel Beam.

148 A

Our book—
"Fun on the Farm," sent Free to all who mention this paper.

SOLID COMFORT
Self-Guiding Tongueless

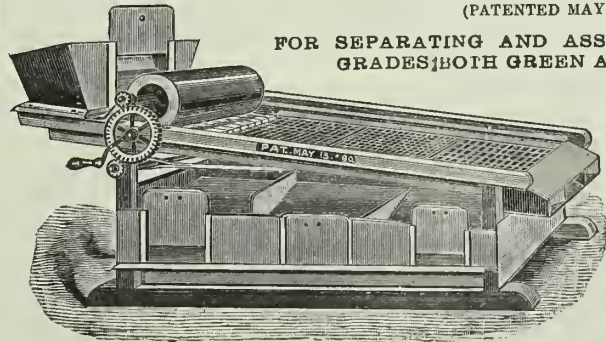
A 10-year old boy instead of a plowman. Uses a wheel-landslide. No side draft. No neck weight. No lifting at corners. Brake prevents plow running on team. and Lighter Draft than any plow on or off wheels. Equally adapted to Western prairies and hard, stony ground, or hillsides.

ECONOMIST PLOW CO., So. Bend, Ind., or Stanton, Thomson & Co., Sacramento.
Special prices and time for trial given on first orders from points where we have no agents.

HAMILTON FRUIT GRADER.

(PATENTED MAY 13, 1890.)

FOR SEPARATING AND ASSORTING IN DIFFERENT GRADES BOTH GREEN AND DRIED FRUITS.



It is Simple, Durable and Efficient.

It has become the leading Fruit Grader of California. Col. Hersey has ordered three of these Fruit Graders this season. Send for catalogue and testimonials.

— A VARIETY OF —
Fruit Cars, Transfer Cars, Turntables and Dipping Baskets
ALWAYS ON HAND.

MANUFACTURED AND FOR SALE BY

W. C. HAMILTON,

SAN JOSE.....CALIFORNIA.

A SUBSTITUTE

Advantages of this Paper for a Drying Surface.

ABSOLUTELY ODORLESS.

WATER, ACID AND ALKALI PROOF.

WILL IMPART NO TASTE NOR ODOR TO FRUIT.

CHEAP AND DURABLE.

ITS BRILLIANT BLACK SURFACE, which absorbs the heat, drying both sides of fruit at the same time, and rendering the labor of turning unnecessary.



FOR TRAYS!

Unequaled for DRYING GRAPES.

Write for SAMPLES AND CIRCULAR.

Paraffine Paint Co.
116 Battery St.
SAN FRANCISCO.

E. G. JUDAH, Agent, 221 South Broadway St., Los Angeles.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

JERSEYS AND HOLSTEINS, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. William Niles & Co., Los Angeles, Cal., Breeders and Exporters. Established in 1876.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

JOHN LYNCH, Petaluma. Breeder of Thoroughbred Shorthorns. Young Stock for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER SAKS & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS—The best A. J. C. C. Registered Prize Herd owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

BERKSHIRES & POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. William Niles & Co., Los Angeles, Cal. Established 1876.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

R. H. ORAN, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

SWINE.

OHAS. A. STOWE, Stockton, Cal., (Box 283). Breeder of Berkshire and Poland-China Hogs; Milking Strain of Durham Cattle, and M. B. Turkeys. Write for Prices.

H. J. PHILPOTT, Niles, Cal., Importer and breeder of Tecumseh and other choice strains of Registered Poland-China Hogs.

WM. NILES & CO., Los Angeles, Cal., Breeders of nearly all varieties of Poultry, Dairy Cattle and Hogs.

J. E. ALSFORD, Woodside, San Mateo Co. Breeder of Berkshire Hogs and Toulouse Geese.

P. H. MURPHY, Perkins, Sao. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, Low Prices.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.



OXFORD DOWN SHEEP FOR THE PACIFIC COAST.

W. A. SHAFOR, Middletown, Ohio,
Largest American Importer of
O. D. Sheep.

Is prepared to quote prices on the best stock of Oxford Down Sheep to be had in England. Parties wanting first-class stock should write for particulars and induce their neighbors to join them. Import will arrive about August 1st. Write at once.

BACK FILES of the PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes) \$4. Inverted in Dewey's patent binder 50 cents additional per volume.

AT AUCTION AT STATE FAIR.



GILT EDGE BROOD MARES

STINTED TO FAMOUS STALLIONS.

Being a Draft from the World-renowned

PALO ALTO STOCK FARM.

It having been determined to reduce the breeding plant at this famous stock farm, the undersigned have been authorized to dispose of at

**SACRAMENTO,
WEDNESDAY, SEPT. 13, 1893, at 10 A. M.**

FORTY HEAD CHOICE BROOD MARES,

Daughters of Electioneer, Ansel, Falls, Wooley, Antevolo, Nephew, Wild Boy, Piedmont, Etc.,

STINTED TO THE NOTED STALLIONS

TRUMAN, 2:12; WHIP, 2:27; MONACO, 2:19; AZMOOR, 2:20; NORRIS, 2:22; ELECTRICITY, 2:17; PAOLA, 2:28; HUGO, 2:29; PIEDMONT, 2:17, etc.

Catalogues, giving description and pedigrees, will be ready Aug. 20th. Apply to

EDWIN F. SMITH, Agricultural Pavilion, Sacramento, Cal.,

OR

KILLIP & CO., Live Stock Auctioneers, 22 Montgomery St., S. F.



ONLY 25 YEARS OLD AND A GIANT!

THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.



**WEATHER
VANES**

**COFFEE
MILLS**

For the Cheapest

and Best

SCALE

Of any style known
to the trade

Address

**Grain & Store
TRUCKS**

**GROCERS'
FIXTURES**

HOWE SCALE CO.

76 Front St., Portland, Or. 3 & 5 Front St., San Francisco

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular

E. FOUGERA & CO.,
30 North William Street, New York.

Dr. A. E. BUZARD, VETERINARY SURGEON.

MEMBER OF THE ROYAL COLLEGE OF VETERINARY Surgeons, London, England. Late Veterinary Surgeon in the United States Army. Veterinary Contributor to the "Pacific Rural Press." The Diseases of all Domestic Animals treated on Scientific Principles. Special attention given to Chronic Lameness and Surgical Operations. 405 BRODERICK ST., SAN FRANCISCO. Calls to the country promptly attended to. Telephone No. 4667.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos. A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St., San Francisco.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STOCKTON, CAL., Dec. 19th, '92.

Gentlemen—Having read one of your Treatise on the Horse and seeing the Spavin Cure advertised, I thought I would try it. I had one horse with a prominent Spavin of 12 months standing. I removed it with 25¢ bottle. I tied up one fore foot on same side the spavin was and compelling the horse to rest on lame leg while I took a surcingle and drew it across the hock or spavin until the hock or spavin got very warm with the friction, then putting on Spavin Cure. I had a mare that had a running from her nose for 12 or 14 months. I rubbed the Spavin Cure from her eyes down to nostrils, then from back of jaw bone down under the throat for a week. I have not seen any discharge for two months. I have not seen any discharge for two months.

Yours truly,
Price \$1.00 per bottle.
DR. B. J. KENDALL CO.,
Enosburgh Falls, Vermont.
SOLD BY ALL DRUGGISTS.

FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank.)

Wants you all to write to him for prices on Young Stock.

MINORCAS: White and Black.

LEGHORNS: White, Brown, Black, Buff.

B. P. ROCKS.

Mention the age desired and when shipped. Circular Free.

HALSTED INCUBATOR
COMPANY,
1312 Myrtle Street, Oakland, Cal.
Send Stamp for Circular.

FALL 1893

"KEYSTONE"
Corn Husker and
FODDER CUTTER.



Husks the corn and cuts the fodder at same time.

"KEYSTONE"
CIDER MILLS.
Two sizes:—
Do fast and good work.

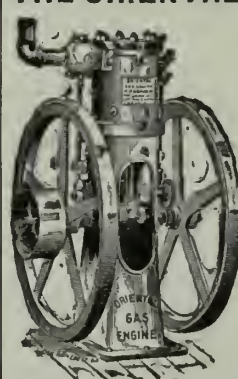


"KEYSTONE"
DISC SEEDER
Pulverize the soil, broadcast the seed and cover it.



Send for full descriptions.
KEYSTONE MFG. CO.,
Sterling, Ill.

THE ORIENTAL GAS ENGINE



IS THE BEST, because it combines simplicity of construction with power and economy in space. It can be run with natural or manufactured gas or gasoline at a cost of 20 to 25 cents per horse power per day. It can be used for pumping purposes, as well as for all purposes where a perfect engine is required, with the advantage of lessening the risk of explosion. No licensed engineer at a high salary needed to operate it. Send for circulars and prices if a good safe engine is what you need.

The Oriental Launch is Perfection.

M. A. GRAHAM,

Inventor and Manufacturer,

105 BEALE STREET, SAN FRANCISCO.

The FAIRBANKS



1893. Are WARRANTED to be strictly first-class in material and construction, to be the best regulated, and to produce more power than any other steel mill made.

THE ECLIPSE WIND MILL
the Original Self-regulating Wood Wheel.

Pumps, Tanks, &c. Send for Catalogue and Prices.
FAIRBANKS, MORSE & CO., CHICAGO, ILL.

DEWEY & CO
PATENT
SOLICITORS.
220 MARKET ST. S.F.
ELEVATOR 12 FRONT ST. S.F.

S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, Sept. 6, 1893.

Since our last report wheat has reached a still lower point than heretofore reported, but has, we are happy to say, more than recovered the ground lost, and the market has to-day a better tone than at any time within the past month. Prices have gradually advanced since Monday in sympathy with Chicago, where there has been a marked advance, especially for December delivery. The following tables illustrate the range of the speculative markets during the week up to and including to-day:

SAN FRANCISCO.

	Spot.	Dec.
Thursday, highest.....	1 17 1/2	\$1 13 1/2
" lowest.....	1 07 1/2	1 11 1/2
Friday, highest.....	1 02 1/2	1 13 1/2
" lowest.....	1 02 1/2	1 13 1/2
Saturday, highest.....	1 07 1/2	1 14 1/2
" lowest.....	1 07 1/2	1 14 1/2
Monday, highest.....	1 07 1/2	1 14 1/2
" lowest.....	1 07 1/2	1 14 1/2
Tuesday, highest.....	1 09 1/2	1 16 1/2
" lowest.....	1 09 1/2	1 14 1/2

The following are to-day's recorded sales on Call:
Morning—Informal Session—December, 300 tons, \$1.16; 400, \$1.16; 100, \$1.16. May—200 tons, \$1.26. Seller 1893, new, season's storage paid—100 tons, \$1.09 per cbl. Regular Session—December, 400 tons, \$1.16; 200, \$1.16; 200, \$1.16; 500, \$1.16; 1000, \$1.16; 700, \$1.16. May 20 tons, \$1.27; 300, \$1.27. Seller 1893, new, after October 1st—100 tons, \$1.03 per cbl. Afternoon Session—May, 200 tons, \$1.26. December, 100 tons, \$1.15; 300, \$1.15 per cbl.

LIVERPOOL.

	Sept.	Oct.	Nov.	Dec.	Jan.
Thursday.....	58 3/4	58 5/8	58 1/2	58 1/4	58 1/8
Friday.....	58 3/4	58 5/8	58 1/2	58 1/4	58 1/8
Saturday.....	58 3/4	58 5/8	58 1/2	58 1/4	58 1/8
Monday.....	58 3/4	58 5/8	58 1/2	58 1/4	58 1/8
Tuesday.....	58 3/4	58 5/8	58 1/2	58 1/4	58 1/8

To-day's cablegram is as follows:
LIVERPOOL, Sept. 6.—Wheat—Less disposition to buy. California spot lots, 5s 7 1/2d; off coast, 2s 8 1/2d; 3d; just shipped, 2s 9 1/2d; nearly due, 2s 3d.

NEW YORK.

	Sept.	Oct.	Dec.
Thursday.....	68 1/2	71 1/2	75 1/2
Friday.....	68 1/2	71 1/2	75 1/2
Saturday.....	(No board.)	(No board.)	(No board.)
Monday.....	(No board.)	(No board.)	(No board.)
Tuesday.....	70 1/2	71 1/2	75 1/2

The following is to-day's telegram—per bushel:
NEW YORK, Sept. 6.—September, 71 1/2; October, 72 1/2; December, 75 1/2.

CHICAGO.

	Sept.	Oct.	Dec.	May.
Thursday.....	63 1/2	69 1/2	75 1/2	75 1/2
Friday.....	63 1/2	69 1/2	75 1/2	75 1/2
Saturday.....	63 1/2	69 1/2	75 1/2	75 1/2
Monday.....	(No board.)	(No board.)	(No board.)	(No board.)
Tuesday.....	64 1/2	69 1/2	75 1/2	75 1/2

The following is to-day's telegram—per bushel:
CHICAGO, Sept. 6.—September, 65 1/2; December, 69 1/2; May, 75 1/2.

The Breadstuffs Situation.

An advance sheet of the *Modern Miller*, Kansas City, September 2d, says of the "Breadstuffs Situation":

"A great many figures have been made to represent this year's wheat crop, and but few of the many estimates given have had the influence calculated. This is largely due to the fact that all calculators were wide of the truth concerning last year's wheat harvest, giving the people ample ground to question the ability of any individual, association or Government to secure facts enough to make a reasonably close calculation. The undertaking to compute the wheat harvest of the world before it is actually measured is a big one—too big, in fact—and reports cannot be accepted for more than the result of close figuring by men of some judgment as such information as is obtainable.

"The Vienna Grain Congress on August 28th announced that the 1893 wheat harvest of North America would be 382,000,000 bushels. Our Government report predicted an even million more for the United States on August 10th, since which date spring wheat authorities claim an improvement amounting to 12,000,000 bushels or more, which, if correct, would make our crop about 400,000,000. The Vienna estimate is certainly too low, but that portion of it devoted to the Eastern hemisphere has been accredited as the most reasonable report yet made.

"The Hungarian Minister of Agriculture issued an estimate of the world's wheat crop August 27th which has not met with general favor, though it is probably as thorough as any yet published. It is minus important Western hemisphere features, but as all European reports are apt to overlook all but two or three of the most important American countries, his omissions are not exceptions to the general rule. The world's wheat crop, according to the Hungarian Minister, amounts to 2,279,000,000 bushels, against an average of 2,280,000,000 annually for the past decade. He says the importing countries will require 379,000,000 bushels, and that the exporting countries will have 379,666,000 bushels to spare, making the world's surplus of wheat 666,000 bushels."

Then follow statistics giving those countries which show a deficit and the surplus of exporting countries. Referring to these, the *Modern Miller* says:

"This report is made in the belief that it covers every considerable source of supply and demand. It does not do so, however, as will be presently shown. Our exportation of wheat to countries outside of the United Kingdom and Europe is slight, but not so with flour, which, in aggregating exports, is figured as wheat. Last year we exported 15,196,769 barrels of flour. Of that the United Kingdom took 9,604,910 barrels; Europe, 1,285,372 barrels; Western hemisphere countries, 3,687,487 barrels; Asia, Oceania, Africa and other countries, 619,000 barrels. Outside of the United Kingdom and Europe, we sold 4,334,434 barrels of flour last year, which demand seems to have been overlooked by the Hungarian Minister.

"This flour demand means about 20,000,000 bushels of wheat. But that is not all. Mexico is almost without wheat this year, and several South and Central American countries have been indulging in the luxury of warfare to such an extent that their breadstuff crops have been badly neglected. Our export trade with the Pacific Islands is also increasing, so that all told an increase of 1,000,000 barrels, or 5,000,000 bushels, in our export trade outside of

Europe and the United Kingdom is not an unreasonable expectation for this year. Such a demand would increase the world's deficit to about 25,000,000 bushels, according to the Hungarian Minister's report, or about 40,000,000 bushels according to the Vienna estimate.

"Which, if either, is approximately correct is more than the *Modern Miller* can indicate. We are satisfied to accept the reports quoted as to the European situation and amend them as noted with regard to the situation in America. If the wheat harvest in the United States measures 400,000,000 bushels, Europeans will not alone be surprised, and, if a big corner is now run in Chicago on wheat, anywhere from December to May, present calculations will miscarry like everything. Wheat and flour are as drugs in British and continental markets to-day, but they will doubtless be nearer the value of gold next spring, perhaps earlier, than for many years. Flour will be a good deal higher before this year's crop of wheat is all ground."

Barley.

It is now believed that the barley crop of 1893 is much larger than estimated at the beginning of the season. Local malsters are buying very little, as the consumption of beer has greatly fallen off. During the past few days feed has advanced, and at the close the market showed a good degree of strength. The following table shows the range of the market in this city during the week:

	Spot.	Dec.
Thursday, highest.....	76	76
" lowest.....	76	76
Friday, highest.....	76 1/2	76 1/2
" lowest.....	76	76
Saturday, highest.....	76	76
" lowest.....	76	76
Monday, highest.....	76	76
" lowest.....	76	76
Tuesday, highest.....	76 1/2	76 1/2
" lowest.....	76 1/2	76 1/2

The following are to-day's recorded sales on Call:
Morning—Regular Session—December, 100 tons, 79 1/2; 100, 78 1/2; 100, 78 1/2 per cbl. Afternoon Session—December—100 tons, 78 1/2; 100, 78 1/2; 100, 77 1/2. No. 1 Brewing, October—100 tons, 90c per cbl.

Other Cereals, Etc.

Oats are unchanged, sales being slow. Beans have been dropping, quite a decline being noted for the past week. Yesterday's receipts of hay amounted to 1041 tons, the largest yet reported. There has been a good demand and dealers are trying to sustain the market all they can. Hops are very quiet. While the demand is slack, growers are, at the same time, firm in their views. Rye attracts very little attention, and the article is weak.

OATS—New, red, 90¢@1¢ cbl; black, 85¢@1.10; white, 80¢@1.15. Old crop—Common to fair, 1¢@1.10 cbl; good to choice, 1.15¢@1.20; fancy, 1.25¢@1.30; milling, 1.20¢@1.30; Surprise, 1.25¢@1.30; gray, 95¢@1.10.

CORN—Large yellow, 97 1/2¢@1¢ cbl; small do, 97 1/2¢@1¢; white, 90¢@95¢.

BEANS—Pea, \$2.10@2.20 cbl; Pink, \$2.50@2.75; Bayo, \$1.50@1.60; Small White, \$2.25@2.15; large do, \$1.75@1.85; Butte, nominal; Red, \$2.50@2.65; Lima, \$2.15@2.25.

SEEDS—Rape, 2¢@2 1/2¢ lb; Hemp, 3 1/4¢@4 1/4¢; Canary, 4 1/2¢@5¢ for imported; do California, nominal; Flaxseed, 2 1/2¢@3 1/4¢; Alfalfa, 8 1/2¢@9¢; Caraway, 7 1/2¢; Mustard, 2 1/2¢@2 3/4¢ for yellow and 2 1/4¢@2 1/2¢ for brown.

HAY—Wild Oat, \$8.50@10¢ ton; Wheat and Oat, \$9@11.50; Barley, \$7@9.50; Wheat, \$9@12.50; Clover, \$7@9.50; Alfalfa, \$8@10; Compressed, \$8@11.50.

STRAW—Quotable at 35¢@42 1/2¢ lb bale.
HOPS—Quotable from 18¢@21¢ lb for new.
RYE—Quotable at 90¢@95¢ cbl.

Mill Products.

Flour is steady, with fair demand for export, shipments being promoted by the low prices which have ruled during the past few weeks and which still obtain. Ground Barley has advanced during the week. No other changes.

BRAN—From \$16.50@17.50 per ton.

MIDDLINGS—From \$19@22 per ton.

GROUND BARLEY—From \$17.00@18.00 per ton.

ROLLED BARLEY—From \$17.00@18.00 per ton.

CHOPPED FEED—From \$17.50@18.50 per ton.

FEED CORNMEAL—From \$22@22.50 per ton.

CRACKED CORN—From \$23@23.50 per ton.

OILCAKE MEAL—From \$32.50@35 per ton.

FLOUR—Family Extras, \$3.65@3.75 per bbl.; Bakers' Extra, \$3.50@3.60; Shipping Superfine, \$2.60@2.90.

VARIOUS—Cash prices per 10-lb. sks.: Cracked Wheat, 3 1/2¢ per lb.; Rye Flour, 3 1/2¢; Rye Meal, 3¢; Buckwheat Flour, 5¢@5 1/2¢; Oatmeal, 4 1/4¢@5¢; Oat Groats, 5¢; Hominy, 4 1/4¢@4 1/2¢; Rice Flour, 7 1/2¢; Farina, 4 1/2¢; Pearl Barley, 4¢@4 1/2¢; Split Pea, 5¢@5 1/2¢; Rolled Oats, 5¢; Buckwheat Groats, 8 1/2¢; Graham Flour, 3¢; Normal Nutrient, \$3 per case 1 doz. 1-lb. tin cans; Breakfast Delight, \$3.25 do. 2 doz. 4-lb. pkgs.

The Dried Fruit Situation.

Following is the regular weekly bulletin of the Santa Clara Fruit Exchange under date of Wednesday, Sept. 6th:

The business of the Exchange for this season is very clearly showing both the power of organized action and the difficulty of maintaining it in first starting. When, some weeks since, speculators attacked the prune market by short sales at low prices, the Exchange, by its explanation of the methods employed and their object, prevented the panic which was expected in the market here; the Exchange also, by printing tables showing the relations of the prices of green fruits to those of the dried product, has been largely instrumental in preventing the market from being flooded with cheap fruit purchased in this way.

Still, as was to be expected, we have not been able to prevent large numbers of orchardists from parting with their green prunes at low rates, and as no buyer this season is able to hold his fruit a day longer than he can help, some of the fruit has been offered during the past ten days at any price which would let the buyers out—usually 4 1/4¢ to 4 1/2¢ for the four sizes—which of course has prevented sales at any higher rates. Add to this the fact that the county is full of active men who can out-talk most farmers and who can make more money if the Exchange does not control the fruit, and we have

the key to the prune situation. The buyers have been, as in former years, smart enough to get a large number of orchardists competing with each other. If they keep it up the Exchange will either have to sell its fruit at same prices or keep it until all the scared and weak men have sold out. But some of the Exchange men must also have money, and the Exchange will take that course which seems necessary and wise under the circumstances. The remedy for the whole thing is to concentrate all the fruit in the Exchange, and sell it as fast as the market will take it, considering the times.

PEACHES.—The market for peaches is very active at 6¢ for choice and from 7 to 7 1/2¢ for extra and fancy.

Apriots are selling freely at 7 1/2 to 8 for choice, and 8 1/2 to 10 for the better grades. Those who have peaches or apriots, and intending to sell through the Exchange, should deliver them promptly that they may be sold and shipped to give room to the prunes as they come.

The terms "Choice," "Fancy" and the like, as applied to peaches and apriots, seem to have no such definite meaning as would prevent almost any decent fruit from being accepted on a sale of "choice" if the buyer wanted them at time of delivery, or rejected if he did not want them. As a step toward remedying this, the Exchange has decided to hereafter make four grades of these goods, numbering them 1, 2, 3 and 4. No. 1 being the best, and to grade each lot of fruit as delivered, assigning it to that grade which best fits it.

Prunes have sold up to the present time at 5¢ for the four sizes. The market, however, for reasons above stated, is yielding; 4 1/4 cents for the four sizes, and 5¢ for the five sizes in sacks is the selling price. It is the belief of the officers of the Exchange that prunes when ready for shipment will take the same upward tendency that has attended both peaches and apriots and that 5¢ will be the selling price.

Fruits and Nuts.

Green Bartlett pears have been in better demand, and prices have improved. Ripe are less favored, as the local trade takes only limited quantities. Some extra fine Peaches sold on Tuesday on the wharf as high as 75¢ per basket, but the trade generally were not paying over 50¢. Apples were dull. Plums are still dragging at very low prices. There is a fine display of choice Prunes. The supply of Watermelons is not large, and the demand has not been very active. The list of new crop Dried Fruits is increasing. Prices, however, have ruled a shade lower within the week.

FRESH FRUITS—Strawberries, \$3@5 ¢ chest for Sharpless; Raspberries, \$4@6; Blackberries, \$1.25@3.00.

Apples, 25¢@75¢ ¢ box; Plums, 10¢@40¢ ¢ box as to kind; Green Bartlett Pears, 50¢@75¢; other Pears, 25¢@50¢; Peaches, 20¢@50¢ ¢ box; do bskts, 20¢@50¢; some extra higher.

Watermelons, \$4@6 ¢ 100; Calatoupes, 40¢@75¢ per crate; Nutmeg Melons, 25¢@35¢ per box; Crab-apples, 25¢@50¢.

Nectarines, 40¢@50¢ per box; Huckleberries, 5¢@6¢ per lb; Black Figs, 25¢@75¢ per box; white do. 25¢@50¢.

Grapes—Sweetwater, 15¢@25¢ per box; Rose of Peru, 25¢@40¢; Muscat, 20¢@50¢; Malvoise, 20¢@30¢; Malaga, 20¢@35¢; Tokay, 25¢@50¢.

Citrus—Lemons, \$1.50@3 per box; fancy, Santa Barbara, \$4.50@5; Santa Paula, \$4@4.50. Limes, Mexican, \$4.50@5 in order, and no settled prices "as is."

Various—Bananas, \$1.50@2.50 per bunch. Pine-apples—Mexican, \$3@4 per doz; Honolulu, \$2.00@3.40.

DRIED FRUITS—New crop: Bleached Apricots, Royal, 7¢@8¢ per lb; do Moorpark, 8 1/2¢@9¢; Apples, 3 1/2¢ for qrs and 4¢@5¢ for sliced; do evaporated, 6¢@7¢; Peaches, bleached, 6¢@7¢; Pears, 3 1/2¢@5¢; Plums, 4¢@5¢; Nectarines, 4 1/2¢@5 1/2¢.

Old crop—Figs, pressed, 4¢@5¢; do unpressed, 3¢@4¢; prunes, 7¢@9¢ for the various sizes; Grapes, 2¢ ¢ lb for firsts and 1 1/2¢@1¢ for seconds.

RAISINS—Combination prices crop of 1893; cluster, \$2 ¢ box; 4-crown London layer, \$1.50; 3-crown do, \$1.30; 4-crown, faced loose, \$1.40; unfaced do, \$1.30; 3-crown, faced, \$1.25; unfaced do, \$1.15; 3-crown, stemmed, loose, \$1. Bags—Three-crown, 4¢ ¢ lb; 2-crown, 3 1/2¢; third grade, 3¢; dried grapes, 3¢; seedless Muscatel, 3 1/2¢; Sultana, 5¢. For 50-lb bxs, 1/4¢ additional.

NUTS—Jobbing prices; Brazil, 8 1/2¢@9¢ ¢ lb; almonds, soft, 15 1/2¢@16¢; do, paper shell, 16¢; hard —; Walnuts, California, soft shell, 13¢@14¢; paper shell, 13¢@14¢; hard, 8¢@9¢; do, Chile (new), 9¢@10¢; pecans, 10¢@12¢; Peanuts, California, 4 1/2¢@5 1/2¢; do, Virginia, 7¢@9¢; Filberts, 10¢@11¢; Pinenuts, 12 1/2¢@15¢; Cocoanuts, 55¢@50¢ ¢ 100.

Vegetables.

Onions are coming in more freely and the market was weaker yesterday. Choice Burbank Potatoes were sustained, but others were weak. Corn keeps up well. Otherwise the market is liberally supplied and prices are low.

The receipts of Potatoes and Onions at this port in August were as follows: Potatoes, 108,810 sks.; Onions, 11,242 sks.

In July there were 43,618 sks. Potatoes and 10,457 sks. Onions received.

ONIONS—Yellow, 85¢@90¢ ¢ cbl.
POTATOES—Early Rose, 30¢@40¢ ¢ cbl in sks; Burbanks, 40¢@60¢ for river; do San Leandro, 50¢@75¢; do Salinas, 90¢@1¢; Sweet, 75¢@1¢.

Various—Green Peas, 2¢@2 1/2¢ ¢ lb; String Beans, 1 1/2¢@2 1/2¢; Lima do, 2¢@2 1/2¢; Cucumbers, 20¢@30¢ ¢ box; Summer Squash, 15¢@25¢; Green Peppers, 25¢@35¢; Green Corn, 75¢@1¢ for small crates and \$1.50@1.75 for large; do sks, 50¢@85¢; Tomatoes,

15¢@25¢ ¢ box; Garlic, 1 1/2¢@2¢ ¢ lb; Green Okra, 25¢@50¢ ¢ box; Eggplant, 25¢@40¢.

Butter, Cheese and Honey.

In the dairy products market the feeling is decidedly influenced by large receipts. The supply is running somewhat ahead of the demand. Cheese has been more plentiful, and, while prices are no lower, the market rules quite easy.

BUTTER—Fancy creamery, 25 1/2¢@26 1/2¢ ¢ lb; occasionally higher; fancy dairy (rolls and squares), 23¢@25¢; other grades of fresh, 20¢@22 1/2¢; pickled roll, 20¢@22¢; firkin, 18¢@21¢; solid packed creamery, 23¢@25¢.

CHEESE—California, 8¢@10 1/2¢ ¢ lb; Young America, 9¢@11¢; New York cream, 12 1/2¢@13 1/2¢.

HONEY—New; comb, water white, 10¢@12¢ ¢ lb in 1-lb frames; extracted, 5 1/2¢ for water white and 5¢@5 1/2¢ for amber.

BEE SWAX—From 22 1/2¢@25¢ ¢ lb.

Poultry and Eggs.

The market was more than liberally supplied with Poultry, both Eastern and Californian, and prices were weak all round.

Eggs have been moving more slowly, the recent sharp advance in prices having checked the demand. As a result, dealers have to make concessions. We hear of occasional sales of extra fine ranch above the outside quotation, but in such a small way that to quote the prices would only be misleading to the majority of shippers.

POULTRY—We quote Californian: Hens, \$5.00@5.50 ¢ doz; Broilers, \$2.00@3.00 for small and \$3.00@3.50 for large; Roosters, \$4.50@5.50 for young and \$5.00@5.50 for old; Geese, pair, \$1.25@1.75; Ducks, \$3.50@6.00 per doz; Turkeys, live, 16¢@18¢ ¢ lb for Hens and 16¢@19¢ for Gobblers; Pigeons, \$1.25@1.50 ¢ doz.

EGGS—California, 27¢@30¢ ¢ doz for general offerings of ranch and 32 1/2¢@34¢ for choice and selected; store, 15¢@25¢, as to quality; Eastern, 18¢@23¢.

Provisions.

CURED MEATS—Hams—Eastern, sugar-cured, 14 1/4¢@15¢ ¢ lb; A—1—C, 14 1/4¢; California, 13 1/4¢@14¢.

Bacon—Eastern, extra light, 18 1/2¢ ¢ lb; medium, 14¢; light do, 14 1/4¢@15¢; light, 16¢@17¢; light clear, 17¢@17 1/2¢; light medium, boneless, 15¢@16¢.

Pork—Extra prime, \$16.00@16.50 ¢ bbl; prime mess, \$17.00@18.00; mess, \$23.00@24.00; extra clear, \$26.00@27.00; clear, \$25.00@26.00; pigs' feet, \$12.50; hf hbls, \$6.50.

Beef—Mess, \$7.50@8.00 ¢ bbl; extra mess, \$8.50@9.00; family, \$11.00@12.00; extra do, \$12.50@13.00; California smoked, 10¢@10 1/2¢.

Lard—California 10-lb tins, 11¢ ¢ lb; 5-lb, 11 1/2¢; kegs, 11¢@11 1/2¢; 20-lb buckets, 12¢@12 1/2¢; California compound, 8 1/2¢ for tierces; do hf hbls, 9 1/2¢; Eastern do, 9¢@9 1/2¢ for tierces; do prime steam, 11 1/2¢; Eastern pure, 10-lb pails, 12¢; 5-lb, 12 1/2¢; 3-lb, 12 1/2¢.

Wool, Hides, Etc.

The paralysis in the wool market continues; indeed, there can hardly be said to be a wool market at this time either here or elsewhere. Some new fall wool is finding its way to the city but there are no sales and apparently no prospect of any. At the East the markets are demoralized to such an extent that there is little or no business, no matter how low the dealers offer Wool.

WOOL—Prices are nominally as follows: California—Spring, year's fleece, 8¢@9¢ ¢ lb; 6 to 8 months, 8¢@10¢; Foothill, 9¢@12¢; Northern, 12¢@14¢; Extra Humboldt and Mendocino, 12¢@13¢. Nevada—Choice and light, 12¢@14¢; heavy, 8¢@10¢. Oregon—Eastern, choice, 13¢@16¢; poor, 7¢@9¢; do Valley, 12¢@15¢.

HIDES AND SKINS—Dry Hides, sound, 6¢ ¢ lb; Kip and Calf, 6¢. Heavy Salted Steer, sound, do, 4 1/2¢; medium, 4¢; do light, 3¢. Salted Cows, 3¢. Salted Kip, 4¢. Salted Calf, 6¢. Salted Veal, 5¢ (all culls 1/2¢ less). Long Wool Pelts, 75¢ each; medium do, 40¢@60¢; short do, 25¢@40¢; shearing, 10¢@20¢. Deer skins, summer, 25¢ ¢ lb; do medium, 20¢; do winter and long-haired Skins, 5¢@10¢. Goat skins, prime and perfect, 30¢@50¢ each; damaged, 10¢@15¢; Kids, 5¢@10¢.

TALLOW—Refined, 6¢ ¢ lb; best country, 4¢; No. 2 grade, 3¢.

San Francisco Meat Market.

The market has generally been without any material changes. We quote wholesale prices as follows:

BEEF—No. 1 Steers, 5¢ ¢ lb and 5 1/2¢ for prime; No. 2, 4¢@

the cereal year, with those of 1891 and 1892, shows a decline in the last year of 55 in California and 65 in red winter, and a decline in the last two years of 175 in California and 165 in red winter; 55 duty in 1891 would have given the American producer 108 per quarter more than the present prices resulting from fierce competition.

Tuesday's Sales of California Fruits in the East.

New York, September 5.—The Earl Fruit Company sold California fruit at auction to-day as follows: Tokay Grapes, \$3.75@4.25; half-crates Tokay Grapes, \$1.75@2.25; Muscat Grapes, half-crates, \$1.15@1.30; Bartlett Pears, \$2.50@3; Gros Prunes, \$1.25@1.75; Hungarian Prunes, \$1.30@1.60; Orange Cling Peaches, \$1.20@1.50; Susquehanna Peaches, \$1.25@1.50; Crawford Peaches, \$1.25@1.45.

CHICAGO, September 5.—The Earl Fruit Company sold California fruit at auction to-day as follows: Tokay Grapes, \$2.90@3; half-crates Tokay Grapes, \$1.10@1.75; Cornichon Grapes, half-crates, \$1.60@1.70; Muscat Grapes, half-crates, 90c@1.10; Malaga Grapes, half-crates, 80c@1.20; Bartlett Pears, green, \$1.90@2.15; ripe Bartlett Pears, \$1.80@1.65; Duchesse Pears, \$1.40@1.50; Beurre Hardy Pears, \$1.35@1.50; Gros Prunes, \$1@1.20; Hungarian Prunes, 90c@1.11; German Prunes, \$1.15@1.25; Fellenburg Prunes, \$1.10@1.20; Kelsey Japan Plums, 90c@1.20; Egg Plums, \$1@1.25; Golden Cling Peaches, \$1.10@1.20; Orange Cling Peaches, \$1.10@1.15.

MINNEAPOLIS, September 5.—The Earl Fruit Company sold California fruit at auction to-day as follows: Bartlett Pears, \$1.75@2; Beurre Clairgeau Pears, \$1.40@1.50; Muscat Grapes, half-crates, 90c@1.10; Golden Cling Peaches, 80c@90c.

CHICAGO, September 5.—Porter Brothers Company sold to-day at auction nine carloads of California fruit at the following prices: Bartlett Pears, \$1.35@2.05; Howell Pears, \$1.50@1.55; Beurre Hardy Pears, \$1.50; Duchesse Pears, \$1.40; Beurre Clairgeau Pears, \$1.25@1.35; half-crates Tokay Grapes, \$1.10@1.60; half-crates Muscat Grapes, 95c@1.30; Salway Peaches, \$1.05@1.25; Lemon Cling Peaches, 95c@1.25; Late Crawford Peaches, 85c@1.25; Cling Peaches, 75c@1.25; Susquehanna Peaches, 75c@1.10; Orange Cling Peaches, 70c@1.05; Peaches, \$1; Nectarines, 45c; Japan Plums, 90c@1.45; Washington Plums, 95c@1.25; Fellenburg Prunes, 85c@1.25; Gros Prunes, 80c@1.25; Egg Plums, \$1@1.20; Quackenboss Plums \$1.15; German Prunes, \$1.15; Columbia Plums, 80c@1.10; Plums, 75c@90c.

NEW YORK, September 5.—Porter Brothers Company sold to-day at auction four carloads of California fruit at the following prices: Bartlett Pears, \$1.75@2.80; half-boxes Seckel Pears, 60c; Japan Plums, \$2.50; Gros Prunes, \$1.15@2.05; Hungarian Prunes, \$1.50@1.85; Victoria Plums, \$1.30@1.40; Plums, \$1@1.30; Late Crawford Peaches, 80c@1.15; Freestone Peaches, 65c@1.55; Cling Peaches, 80c@1.45; Brandy Wine Peaches, \$1.20@1.30.

OMAHA, September 5.—Porter Brothers Company sold two carloads of California fruit to-day as follows: \$1.50@2; Plums, 80c@1; Peaches, 70c@90c.

California Crops.

[Summary of Report of Observer James A. Barwick, for Week Ending September 4, 1893.]

The average temperature during the week ending September 4th was: For San Francisco, 58; Eureka, 56; Red Bluff, 78; Sacramento, 69; Fresno, 73, and Los Angeles, 72. As compared with the normal temperature the heat deficiency was found to be three below at San Francisco, one above at Eureka and Red Bluff, while Sacramento and Fresno show a deficiency of three each, Los Angeles being normal. It appears from looking over the various newspaper exchanges that fogs are reported earlier than usual in southern California, with an unusual electrical storm at Riverside, where over an inch of rain was precipitated in a few hours, while the lightning did some slight damage. Reports come from mountainous districts that fall rains have set in earlier than usual. Take it all together this has been an unusual and phenomenal year. We find that the temperature or heat deficiency at Sacramento since January 1st is over 400 degrees, and as a period of temperature deficiencies is usually followed by one of temperature excesses, then it is reasonable to suppose that the coming winter will be a warm one, and in California warm winters are generally accompanied by copious precipitation, then, syllogistically speaking, the coming winter ought to be a warm and a wet one, but time alone can tell what the next six months have in store for this great State in the way of weather.

The observer at Red Bluff reports by telegraph as follows: "Perfect weather for all occupations. The late peach crop is now coming in, but most of it will be dried. Prunes and grapes are as good a crop as was expected."

The observer at Fresno reports by telegraph as follows: "Raisin-grape picking now progressing. The crop will be a large one."

The observer at Los Angeles reports by telegraph as follows: "Thunder storms Saturday in eastern districts, with heavy rain at several places, but no damage reported as being done. Bean-pullers are in great demand, and the crop is a good one. The prices are nominal with no demand."

The highest temperature was 102 at Anderson, Shasta county, and Upper Lake, Lake county, the lowest being 46 at San Ardo, Monterey county.

Tehama County (Red Bluff)—Sheep men are bringing their flocks down from the mountains and turning them out on the stubble. Mr. J. M. Howell drove some 7000 head last week, and two other droves of 6000 each will be started in a day or two. He paid \$600 for the privilege of pasturing on stubble near Henleyville.

Butte County (Oroville)—The crop of apples on the Mountain House ridge is the

biggest that has ever been known in the history of the county. (Palermo)—Immense yields of prunes are just now ripening upon all the orchards in this vicinity; picking and curing will commence in a few days.

Lake County (Lakeport)—Hop-picking has commenced at Upper Lake and vicinity. Sutter County (Yuba City)—Fall sheep-shearing is going on and the clip will be a good one, but prices rule low.

Sierra County (Sierra Valley)—This week will finish most of the haying in this valley, except on the lowlands, which are yet too wet.

Sacramento County (Sacramento)—Hop-picking is in full blast along the American river and also the Sacramento river, on both sides of which immense crops of hops grow. The yield is good, and quality excellent, and prices satisfactory.

Fresno County (Selma)—Many vineyard-ists have large forces picking grapes now; but most of them will not commence picking till next week.

Yolo County (Blacks)—Some grapes being picked, but the bulk of the picking will not begin for a week or more. (Rumsey)—Grape-picking begun. Superintendent Haswell of the Cashmere vineyard says the men are averaging 50 boxes of grapes per day in the lightest portion of the vineyard.

Sonoma County (Petaluma)—Hop-picking begun, but will not be general over the county before next week. Mr. Leavy of South Santa Rosa turns his hogs into his orchard and fattens them on apples, and says the fruit is worth \$5 per ton for feed, and that is all the canneries are offering. So he is saving the cost of picking and hauling by feeding to the hogs. (Stony Point)—The foggy weather is of great benefit to the late crops, especially to corn and potatoes. The latter crop seems very good in every locality near here, and good prices are expected.

Stanislaus County (Turlock)—The middle of the coming week will see the grain all thrashed in this vicinity. Those who can hold their grain for a rise in price will do so.

San Luis Obispo County (San Luis Obispo)—Weather cool. Beans filling out splendidly, but warm weather is needed for ripening purposes on the rich bottom lands. Barley harvest about over, and the crop is more than an average one, while some fields gave an exceptionally large yield; one crop gave 45 bags to the acre.

Santa Barbara County (Santa Maria)—Continuous foggy and cool weather is beginning to be detrimental to the growing crops. Beans are not plumping up as well, besides making the bean harvest quite late. Grain-threshing continues without abatement. Prune-drying has not yet begun, which is unusually late.

Tulare County (Tulare)—The weather is quite sultry with premonition of rain, while in Stokes valley it is somewhat cooler. Notwithstanding the light crops and low prices, more grain will be planted on the Kettleman plains this coming season than ever before.

Kings County (Hanford)—At the Morris drier 220 tons of peaches have been dried this season, and 20 tons more of late peaches will be dried also. The dipping of prunes already commenced. Peaches are quoted in the local markets as easy at 5 1/2 c; apricots stiff at 7c. There is more in fruit than in any other farm product at these figures.

Kern County (Weldon)—The weather was unusually warm, and stock cattle are poorer than usual at this time of the year.

San Benito County (Cienga)—Early potatoes are being harvested; the crop is excellent both in quantity and quality.

Los Angeles County (Los Angeles)—In Sycamore canyon, Wm. Ferl has over an acre of bananas. They thrive wonderfully well. He irrigates the patch, and a bunch brought down town was as fine and well ripened as any imported ones.

San Bernardino County (Chino)—The sugar output for season to date is 4,286,086 pounds. It took some time at the first of the campaign to bring the factory work up to capacity; this week's work has been enough to satisfy the most exacting—enough to justify a very large amount of enthusiasm in the sugar industry here. During the month of August the harvest has amounted to 13,406 tons, and for the season up to the morning of September 1st, 14,396 tons—over half as much as the entire harvest last year.

Riverside County (Riverside)—Grapes are ripening quite fast, and in some of the vineyards in the lower part of the valley will be ripe enough for picking by the middle of this month. (San Jacinto)—Peach-drying is now at its height. Before this is completed, pears and raisin grapes will be crowding the fruit farmer.

San Diego County (Valley Center)—There is an extra large crop of honey in this section this year. (Chollas Valley)—The cloudy, misty, rain-looking mornings still continue, and will no doubt develop into some rainy weather before finishing up.

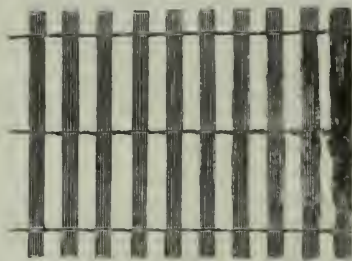
RABBIT-PROOF STOCK FENCE.

Cheap, Durable and Effective.

Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2 1/2 ft., 4 ft., 4 1/2 ft., and 6 ft. high. Send for circulars and price list to

JUDSON M'FG CO.,

12 & 14 Fremont St. San Francisco.

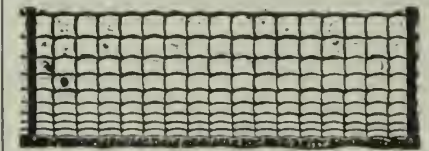


The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.

Horse Owners! Try GOMBAULT'S Caustic Balsam



A Safe Speedy and Positive Cure
The Safest, Best BLISTER ever used. Thins the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.



No Lack of Confidence

among Page fence men, not only in the fence itself but its selling qualities. One man who controls a state and contracted to use 200 miles this year, now proposes, on certain conditions to contract 500 miles for next year.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich

ROOFING

GUM ELASTIC ROOFING FELT costs only \$2 per 100 square feet. Makes a good roof for years, and any one can put it on.

GUM ELASTIC PAINT costs only 60 cents per gal. in bbl lots or \$4.50 for 5 gal. tubs. Color red. Will stop leaks in tin or iron roofs that will last for years. TRY IT.

Gum Elastic Roofing Co.,

89 & 41 West Broadway, NEW YORK.
Local Agents Wanted.

TREE WASH.

"Greenbank" Powdered Caustic Soda and Insecticide.

T. W. JACKSON & CO.,

Sole Agents,

No. 5 Market Street, San Francisco, Cal.

Almond Hullers FOR SALE!

—BY—

A. O. RIX, Irvington, Alameda Co., Cal.

Gentleman Having Practical Experience

in fruit-growing in Fresno, with office in Glasgow, Scotland,

Is Open to Represent Good Cannery

For EXCLUSIVE SALE OF THEIR CANNED CALIFORNIA FRUIT IN SCOTLAND.

Address PATON, 138 Renfrew St., Glasgow, Scotland.

MAKE YOUR OWN GAS! BADLAM BROS..

519 Market St., San Francisco,

SOLE MANUFACTURERS OF THE CELEBRATED SPERLESS GAS WORKS. New process, safe and inexpensive, from \$100 upward. Light cheaper than coal oil. Send for catalogue and prices.

CALIFORNIA If you want to know about California and the Pacific States, send for the PACIFIC RURAL PRESS, the best illustrated and leading Farming and Horticultural Weekly of the West. Trial, 50c for 3 months. Two sample copies, 10 cents. Established 1870. DEWEY PUBLISHING CO., 220 Market St., San Francisco.

Seeds, Plants, Etc.

AN INVITATION

IS EXTENDED TO ALL INTERESTED TO VISIT THE SAUSAL FRUIT FARM DURING THE FRUITING SEASON, WHERE ALL VARIETIES ARE TESTED THAT ARE GROWN AT

NAPA VALLEY NURSERIES.

AN INSPECTION OF THE NURSERIES ALSO SOLICITED. CLEAN STOCK, UNIRRIGATED, PROPAGATED FROM BEARING TREES.

LEONARD COATES, NAPA, CAL.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrabalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville Cal.

ORANGE, LEMON & CITRON TREES.

If you have a Lemon or Orange grove, or wish to start one, remember that the success of your grove depends on the trees you plant. Common seedlings will give you a poor crop. Remember now that you are in time! If you will get your plants from this island, which, in point of fact, is the real citrus producing region in the world, in the course of time you will have a very prolific grove of the best Sicilian varieties. We only ship trees three years old, budded on the sour stock. Real trees and not common seedlings. Our leading varieties are: ORANGE—Mountain, Etna, Aderno, Waterloo, Blood, Oval and Manarin. The LEMON—Messina Mountain, Etna. The CITRON—Citrus Medica, Spadafara, Diamante, Peretone, Lemniscia Turk's Head, Lemuziana, Paradise, Etc. The fruit of the above-mentioned varieties is the one largely exported in boxes to the American markets from this island. We have made several successful shipments of plants to California, Florida and Louisiana. Special care in packing. Give us an order for one case containing 100 or 200 assorted trees. Remember that every dollar you lay out on Sicilian trees is a one hundred dollar bill you have gained in future. Apply:

G. SGROI & CO., Catania, Sicily.

OLIVE TREES.

ALL KINDS OF

Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,

Pomona, Cal.

HEALD'S

BUSINESS COLLEGE.

24 POST STREET.....SAN FRANCISCO.

FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Book-keeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR. E. P. HEALD, Pres. C. S. HALEY, Sec.

Treatise on the Horse and His Diseases.

By B. J. KENDALL, M. D.

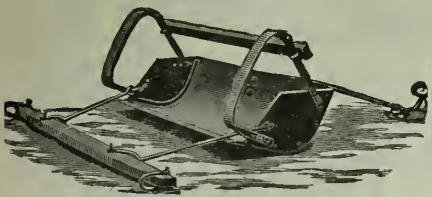


25 Fine Engravings showing the positions and actions of sick horses. Gives the cause, symptoms and best treatment of diseases. Has a table giving the doses, effects and antidotes of all the principal medicines used for the horse, and a few pages on the action and uses of medicines. Rules for telling the age of a horse, with a fine engraving showing the appearance

of the teeth at each year. It is printed on fine paper and has nearly 100 pages, 7 1/2 x 5 inches. Price, only 25 cents, or five for \$1. on receipt of which we will send by mail to any address DEWEY PUBLISHING CO., 220 Market Street, San Francisco.

THE
Porteous Improved Scraper

Patented April 3, 1883. Patented April 17, 1883.



Manufactured by G. LISSENDEEN.

The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Levelling Land, Road Making, etc.
This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.
This Scraper is all steel—the only one manufactured in the State.
Price, all Steel, four-horse, \$40; Steel two-horse, \$31.
Address all orders to G. LISSENDEEN, Stockton, California.

C. H. EVANS & CO.,

(Successors to THOMSON & EVANS.)

110 and 112 Beale Street, S. F.
MACHINE WORKS,
Steam Pumps Steam Engines
And All Kinds of MACHINERY.

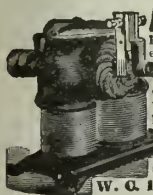


DEEP WELL
PUMPS

School of Practical, Civil, Mechanical
Electrical and Mining Engineering,

Surveying, Architecture, Drawing and Assaying,
728 MARKET ST., SAN FRANCISCO, CAL.
Open All Year.

A. VAN DER NAILLEN, President.
Assaying of Ores, \$25; Bullion and Chlorination Assay
\$25; Blowpipe Assay, \$10. Full course of assaying, \$60
ESTABLISHED 1864. Send for circular



AGENTS \$50 to \$100—A WEEK
Ladies or Gents. Best seller known. Needed
everywhere. House, place of business or farm
the year round. "Home" Electric Motor
runs all kinds of light machinery. Cheapest
power on earth. Connected instantly to
wash or sewing machine, corn sheller,
pumps, fans, lathes, jewelers' or dentists'
machinery, &c. Ores, Machines, tools
a lifetime. No experience needed. To
show in operation means a sale. Guaranteed.
Profits immense. Circulars free.
W. G. HARRISON & CO., Columbus, O.

THE American Bee Journal,

(Established 1861.)
It is the Oldest, Largest, Best,
Cheapest and the only
weekly Bee-Paper in all
America. 32 pages, \$1.00
a year. Send for Free Sample.
\$1.00 BEE-BOOK FREE
GEO. W. YORK & CO., 55 Fifth Ave., Chicago Ill

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation
Machines, Extractors, Smokers, Honey Knives, Alley's Traps,
Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases
for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything
required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.

CALIFORNIA FRUITS

AND HOW TO
GROW THEM.
By Prof. Edward
J. Wickson.

A practical, explicit and comprehensive book embodying
the experience and methods of hundreds of successful
growers, and constituting a trustworthy guide by which the
inexperienced may successfully produce the fruits for which
California is famous. 600 pages. Fully illustrated. Price \$3.
Postpaid. Send for circular. DEWEY PUBLISHING CO.
Publishers 220 Market Street, San Francisco, Cal.

California Inventors

Should consult
DEWEY & CO.

AMERICAN
AND FOREIGN PATENT SOLICITORS, for obtaining Patents
and Caveats. Established in 1860. Their long experience as
journalists and large practice as Patent attorneys enables
them to offer Pacific Coast Inventors far better service than
they can obtain elsewhere. Send for free circulars of information.
No 220 Market St., San Francisco Cal.

FRANCIS SMITH & CO.,

MANUFACTURERS OF

SHEET IRON & STEEL PIPE

FOR TOWN WATER WORKS.

Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes.

NO. 130 BEALE STREET, SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for
making Pipe. Estimates given when required. Are prepared for coating all
sizes of Pipes with a composition of Coal Tar and Asphaltum.

Commission Merchants.

ALLISON, GRAY & CO.,

501, 503, 505, 507 & 509 Front St.,
And 300 Washington Street, SAN FRANCISCO.

— GENERAL —

Commission - Merchants,
GREEN and DRIED FRUITS,
Poultry, Eggs, Game, Grain, Produce and
Wool.

P. STEINHAGEN & CO



404 & 406 DAVIS ST. S.F.

MOORE, FERGUSON & CO.

WOOL, GRAIN, FLOUR

— AND —

General Commission Merchants,

310 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances
made on consignments at low rates of interest.

LINDSAY & CRAIG,

Crocker Building.....San Francisco.

Mortgages Bought, Loans Negotiated.

Several buyers on hand for desirable Fruit and Grain
Rauches.

GRANGERS' BANK
OF CALIFORNIA.

SAN FRANCISCO, CAL.

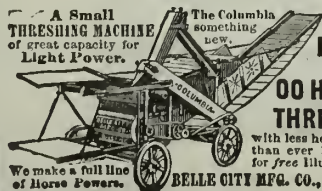
INCORPORATED.....APRIL, 1874



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 800,000
Dividends paid to Stockholders.... 720,000

OFFICERS.

A. D. LOGAN.....President
I. O. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary
General Banking. Deposits received, Gold and Silver.
Bills of Exchange bought and sold.
Loans on wheat and country produce a specialty.
January 1, 1893. A. MONTPELLIER, Manager.



EVERY FARMER
can now
DO HIS OWN
THRESHING,
with less help and power
than ever before. Send
for free list. Catalogue.
Belle City Mfg. Co., Racine, Wis.

HERCULES.

STEEL AND IRON.

The Best Windmill for Deep or Shallow Wells.

CENTRAL ACING

DOUBLE BEARING

Warranted to run with less
oil, g than any other
Windmill.

AUTOMATIC OIL BEARINGS.

THIRTY DAYS' TRIAL, IF DESIRED.

Deep Well Pumps, All Brass Cylinder Pumps.

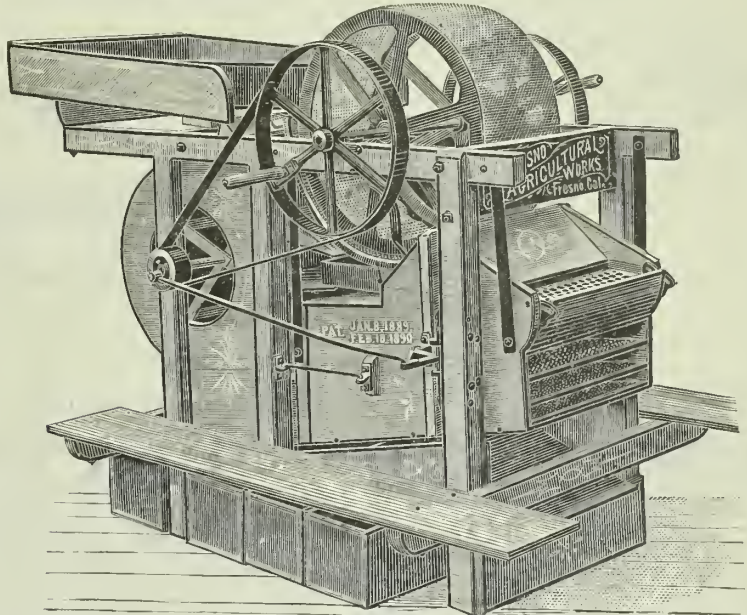
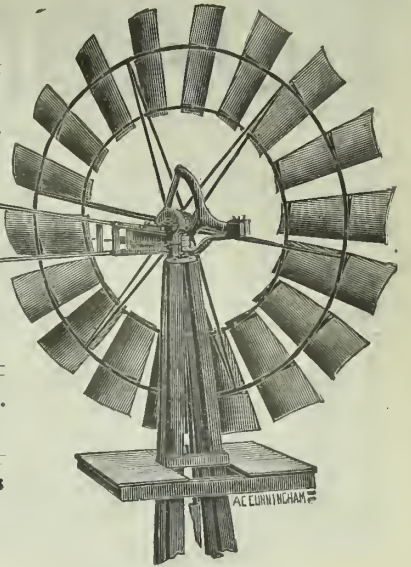
PRICES ARE LOW—Save money by DEALING DIRECT
WITH THE MANUFACTURER.

Improved Davis, San Joaquin and Hercules
Windmills, Pumps, Etc.

Patent Non-Shrinkable Redwood Tanks.
Write for Prices.

ONE 15 H. P. OTTO GAS ENGINE FOR SALE CHEAP.

R. F. WILSON, WORKS, COR. MAIN & OTTER STS., STOCKTON, CAL.
OFFICE.....347 COMMERCE ST.,



SEND FOR CATALOGUE OF RAISIN MACHINERY TO
FRESNO AGRICULTURAL W'KS, FRESNO, CAL.

PROTECT YOUR TREES

— WITH —

Gilman's Patent Tule Tree Protector

Patented Aug. 1, 1893.



Cheapest, Best and Only One to Protect Trees and Vines
from Frost, Sunburn, Rabbits, Squirrels, Borers and Other
Tree Pests.

For Testimonials from Parties who are using them send
for Descriptive Circulars.

B. F. GILMAN,

Sole Manufacturer of Patent Tule Covers,

420 NINTH ST., SAN FRANCISCO, CAL.

DEWEY & CO.

AMERICAN AND
FOREIGN
PATENTS

ESTABLISHED
1860

SOLICITORS

OFFICE OF THE
"Mining and
Scientific Press"
Pacific
Rural Press

No 220 Market St.
TAKE ELEVATOR No 12 FRONT ST.

SAN FRANCISCO, CAL.

Send for Price Lists

OF GUNS

And all Articles used
by Hunters and
Anglers.



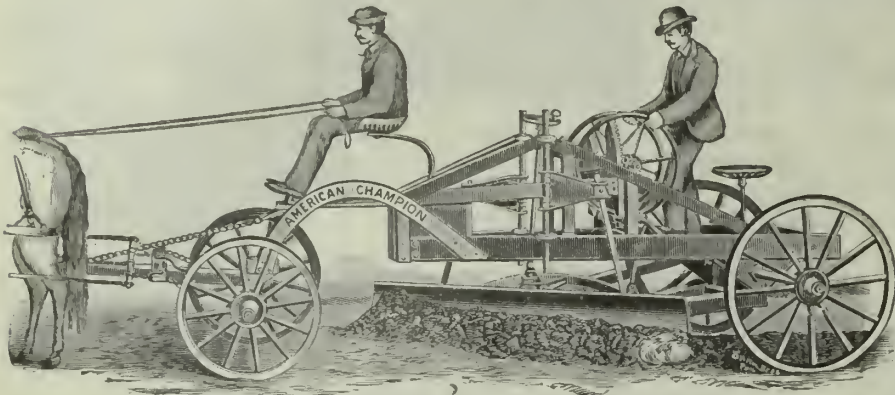
GUNS SENT ON
TRIAL.

OLD GUNS TAKEN
IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.

ROADMAKING MACHINERY

OF ALL DESCRIPTIONS.



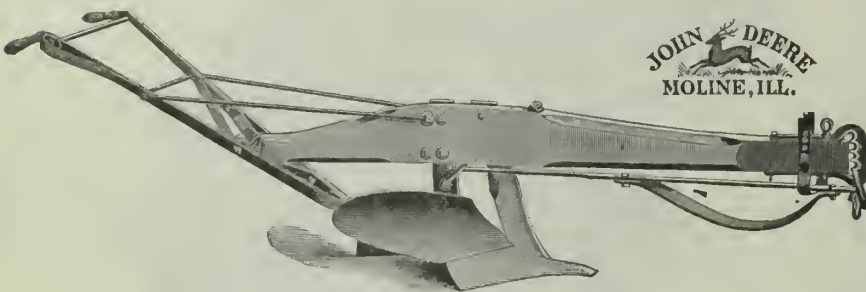
AMERICAN CHAMPION ROAD MACHINE.

Reversible Blade with Pitch Adjustment; Rotary Operating Wheels; Counterpoise Mechanism; Shifting Hind Axle, which adds one-third to the capacity of the machine.



WHEEL SCRAPERS.

Three Sizes.



CALIFORNIA GRADER.

JOHN DEERE
MOLINE, ILL.



VICTOR SCRAPERS.

Three Sizes.

WRITE US FOR DESCRIPTIVE CATALOGUE.

DEERE IMPLEMENT CO.,
305 and 307 MARKET ST., SAN FRANCISCO.

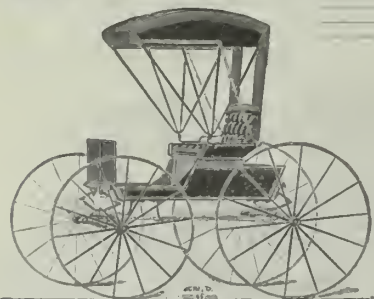
50% SAVED. F. W. KROGH & CO.,



No. 110.

PRICE \$20.

HARNESS, \$7. BUGGIES, \$75. SURREYS, \$130



No. 60. Price \$80.



No. 201. Price \$195

No. 10 Cal. Spring,

1 1/2 Concord

1 1/2 Steel Tire

This wagon is made here by us of Select Timber.

PRICE, \$110.

TOP, Extra, \$30.

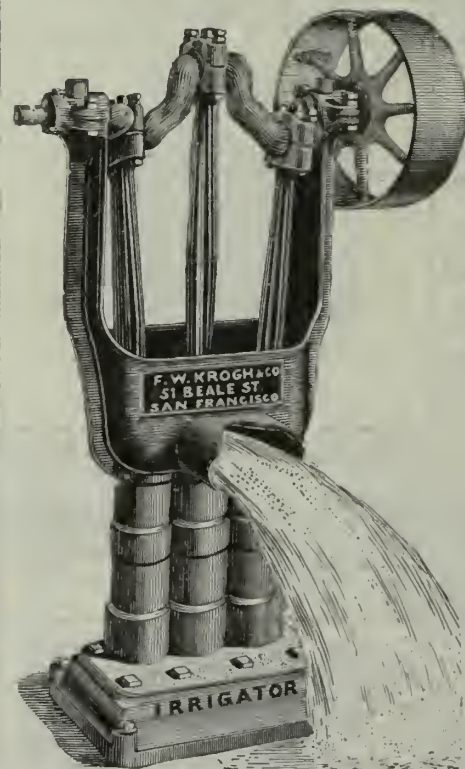


WRITE FOR
CATALOGUE
OR CALL.

CALIFORNIA WAGON & CARRIAGE CO.,

36 1/2 to 44 1/2 FREMONT STREET

SAN FRANCISCO, CAL.



51 BEALE STREET,
SAN FRANCISCO.

DEEP WELL
Pumps,
POWER PUMPS,
Steam and Irrigating
PUMPS,

— AND —

Pumping Machinery
OF ALL KINDS,
Also, several different kinds of
HORSE-POWERS.

F. W. KROGH & CO

Send for Catalogue and Price List.
Kindly mention this paper.

**GRANGERS' BUSINESS ASSOCIATION,
SHIPPING AND COMMISSION HOUSE.**

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.

Full Cargoes of Wheat furnished Shippers at short Notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries
and Merchandise of every description solicited.

H. VAN EVERY, Manager.

A. M. BELT, Assistant Manager.



Vol. XLVI. No. 12.

SAN FRANCISCO, SATURDAY, SEPTEMBER 16, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market Street.

The State Capitol at Sacramento.

Pertinent to the holding of the State Fair at Sacramento this week is the view of the State Capitol and the other structures of Capitol Park. The picture is from a recent photograph. The Capitol Park encloses about 25 acres situated in the heart of the residence portion of the city and is surrounded by private grounds which reflect its own excellence. It is easy of access from the business portion of Sacramento and its situation is in every way desirable.

A vast amount of money has been spent by the State in the grading and other improvement of the grounds and many of the trees and shrubs are of great interest and beauty. The capitol building is well built and commodious and in every way worthy of the State.

In the background of the picture is the State Fair pavilion and the residence in the distance on the left is the State printing office—a building constructed for a Governor's house but not pleasing the taste of some historic executive it was fitted out for the State printers and devoted to their uses ever since.

ONE of the new things in the horticultural labor world is the employment of deaf mutes in raisin vineyards. D. W. Parkhurst, of Fresno, now has fifteen deaf and dumb boys picking grapes and also doing general work. He says they require hardly any supervision when they become acquainted with their duties. They are picking from seventy to eighty-five trays of Muscats of Alexandria per day, each tray weighing on an average twenty-five pounds. This is equal to 1800 pounds to each boy per day. Principal Wilkinson of the State institution at Berkeley is glad to find places for his graduates who are not otherwise employed. He believes in many cases they are better than other help, because of the extra effort they make to do their work well and demonstrate that they can work as well as their more fortunate companions who can hear and speak.

ARIZONA STOCKMEN are said to be in clover this year. From the northern part of the Territory it is reported that the range is better than for years. Cattle are all rolling fat, and there will be no such rush to sell as has been the case heretofore. In the southern sections, stock has increased 50 per cent in value in the last two months.

MILLARD JOHNSON, THE MILK INSPECTOR, has been making some further investigation of the milk being sold in San Francisco and will make another report to the

Board of Health. Out of twenty-five samples taken from the milk wagons, depots and grocery stores and on sale as pure milk, only seven were pure. Six were simply disgraceful. Twenty per cent of the samples of skimmed milk taken were found to be badly adulterated with water.

THE WIND which was ill to the Washington wheat-growers seems to have blown some good to the lumber men. It is telegraphed that lumber in the Palouse valley has taken a sudden boom the last few days owing to the demand for granaries to store and hold the wheat. This is the way the farmers have of getting out of the embar-

Condition of the Crops.

It is telegraphed from Washington that the September report of the Department of Agriculture shows a decline in the condition of corn to 76.7 from 87 for the month of August and 93.2 for July. The change is marked in nearly all the corn States. In comparison with the September reports of the past ten years only three years were lower—70.1 in 1890, 72.3 in 1887 and 76.6 in 1886. The decline was caused by the prevailing drought.

The condition of wheat, both winter and spring, where harvested, is 74 against 85.4 in 1892. The general average is the lowest since 1885, when it was 73.

The condition of fruit still further declined. New Jersey, Delaware, Maryland and Virginia are the only States, excepting the Pacific, that shows good prospects. Still the largest percentages were lowered greatly by the unprecedented storm of the 28th and 29th of August. California maintains the percentage of August. Oregon and Washington show slight loss. Grapes throughout the country promise very well.

OUR FRUIT-DRIERS who may think they have all the wasps in the world to contend with, may

find consolation in the fact that England is having a siege of unusual severity. We read of people being driven from their carriages on the highway, of animals being forced into dykes, and of injury to fruit so that it has to be plucked green to save it. The fight waged upon the insects also yields large figures. Seven gardeners on one estate destroyed over 300 nests in a few evenings. Thirty-two nests were found in the vicinity of one residence. It is even recorded that picnic parties have been driven to desert their lunches.

SOUTHERN CALIFORNIA FRUIT-GROWERS who are using all available sheep manure will be interested in an English computation that in ten tons of solid and liquid sheep manure there are 250 pounds of nitrogen, 31 pounds of phosphoric acid and 241 pounds potash. In the same amount of cattle manure there are only 87 pounds of nitrogen, 17 pounds of phosphoric acid and 51 pounds of potash. These figures are sufficient in themselves to show why the foot of the sheep is golden to the land.

It is reported from Watt's valley, Fresno county, which is the center of a large sheep industry, that many sheepmen will not shear their flocks this fall because they cannot obtain money with which to pay their shearers. It is a serious time for many of them.



THE STATE CAPITOL AND THE AGRICULTURAL PAVILION AT SACRAMENTO.

ment caused by the scarcity of sacks. If the present supply continues, the lumber supply in Whitman county will be exhausted within a week.

CONGRESSMAN GEARY PROPOSES TO KEEP the Ways and Means Committee busy reading bills, if he cannot get anything more out of them. Among other measures he has presented, one, touching the wine industry, looks to the retention of duties on wines, red, white and sparkling, in bulk and in bottles and on brandies. Another, concerning fruit, aims to keep the tariff on green and dried fruits, oranges and lemons, olives, olive oil, raisins, preserved and candied fruit and nuts.

THE BUREAU OF ANIMAL INDUSTRY may find a field for investigation in Nevada. It is reported that the jack-rabbits in Washoe valley, bordering on the lake, are rapidly dying from some unknown disease. A party of Comstock hunters came across numberless dead rabbits lying in the sagebrush. The hunters were cautioned by ranchmen against killing rabbits, they saying the bunnies were daily dying from some unknown disease.

AS SHOWING HOW SCARCE HAY IS in Great Britain, the statement that imports during July were six times as great as during the same month of 1892 is significant.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half inch (1 square).....	1.00	2.50	6.50	22.00
One inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, September, 16 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—State Capitol at Sacramento, 197.
EDITORIALS.—The State Capitol at Sacramento, Miscellaneous, 197.
The Week; The Dairymen's Association; Miscellaneous, 198. From an Independent Standpoint; Miscellaneous, 199.
CORRESPONDENCE.—Higher Culture for Wheat, 199. Wrongs by Nurserymen; Myrobalan and Mariana; Plum Stocks and Other Matters, 200.
MISCELLANEOUS.—California Wool Dealers Under Way; Dairymen's Union Meeting; Condition of the Crops, 199. The Road Convention in Sacramento; The Tariff Question, 200. Great Glut of Imported Lemons in New York; The Guano of the Nile; Available Timber Supply; Determining Straightness by Sight; A Simple Barometer, 210. California Crops, 211.
HORTICULTURE.—The Apricot in France; Saccharate of Copper, a New Fungicide, 201.
POULTRY YARD.—Soft Food; The Government and the Poultry Interest; How to Make Nests, 201. Mistakes with Poultry; Kerosene Emulsion, 202.
WORLD'S FAIR.—A Field Day at the World's Fair Among the Live Stock, 202.
THE DAIRY.—The New Organization of Dairymen; Temperature for Cream, 203.
RURAL IMPROVEMENT.—Annual Address at the State Fair, 203.
THE HOME CIRCLE.—Miscellaneous, 204-205.
PATRONS OF HUSBANDRY.—The Master's Desk; Executive Committee Meeting; Tulare on the Wool Tariff; Preparations at Petaluma; National Grange to Meet at Syracuse, 206.
AGRICULTURAL NOTES.—206.
MARKET REPORTS.—209-210.

The Week.

The chief out-door feature of the week has been the September rain which seems to have touched us as lightly as could be asked. Near the coast and at some interior points in the upper half of the State rain has fallen and in some cases heavily, but the proportion of perishable products exposed in these regions is small. The greatest dried fruit regions escaped lightly. At present there is no indication of farther cloud menace to our fall crops and we hope that the weather having filed this declaration of its intentions may subside for a month or two.

This is the closing week of the State Fair. The telegrams announce that the pool sellers have been surprised in the amount of their receipts and the reporters seem inclined to cite this as proof that the times are not so hard after all. To us it rather indicates that the fools still live and naturally fall into the pools. It is as hard to keep them out as to hold back a starving family from the circus. Why there should be more fools than usual this year we do not quite understand. It is probably merely another sign that the times are all agog.

Dairymen's Union Meeting.

The annual meeting of the Dairymen's Union was held September 11th, at 119 Davis street. President W. S. Pierce presided.

Expert Luman Wadham reported that the books were all correct, and it was found that, whereas the corporation had lost money last year, it was a shade ahead for the past twelve months.

Manager Tomasini reported that the union had been instrumental in establishing several creameries, and had been very successful in its battle against hogus butter.

A large number of members were present from the country, many of whom spoke of the outlook for the producers of pure dairy products very cheerfully. This is the second year of the existence of the corporation, which was organized with a capital stock of \$250,000.

For the ensuing year the following officers were re-elected: President, W. S. Pierce; vice-president, Warren Dutton; secretary, William Hatton; treasurer, E. W. Steele; directors—W. S. Pierce, E. W. Steele, I. Sartori, L. Tomasini, L. Yori, Warren Dutton, William Hatton, J. Bloom, G. W. Burbank, P. Tognazzini, G. Muscio.

It is announced privately from Chicago that Riverside has taken the first prizes at the World's Fair for both oranges and lemons.

The Dairymen's Association.

Much interest pertains to the report which we give on another page of a meeting held in Petaluma, which we trust will prove the first step in the formation of a permanent and effective association of wide-awake and progressive dairymen. Our older readers will remember that movements like this have arisen before. About eighteen years ago the first effort was put forth to secure an organization of dairymen similar to those which have proved of such value at the East. One or two interesting assemblages convened and papers and discussions of importance were presented but the dairy public did not take up the effort as it was hoped it would and meetings were discontinued. A few years later another attempt at State organization was made at the time of the first uprising of the oleomargarine menace. A very large and influential meeting was held. It was clear that something forcible must be done to protect the legitimate industry from the bogus product, and to this fact was due the wide interest of the dairy producers. A committee of this organization drafted the law against imitation butter and cheese in much the form that it now stands for our statute book. The dairy merchants of the city aided well in this enterprise. From the spirit and interest manifested all around, it seemed likely that then a permanent organization could be effected. Our hope was illusive because, as soon as the new law was passed by the Legislature, the work of association seemed accomplished and no subsequent call for a meeting could muster a quorum. Even when the need of taking up united effort for enforcement of the law became apparent, it was not possible to convene the association, the members seemingly being content to rest under the protection of a sharp enactment even though the friends of the fraudulent had less respect for the law than law-abiding citizens should have. So the second association of California dairymen lapsed into innocuous desuetude.

There were several reasons why it seemed at the time more difficult to maintain a popular association of dairymen in this State than in Eastern dairy regions. The magnificent distances to be traversed and the high rates of local transportation were both inimical to frequent convention of those from distant counties. The fact that so large a proportion of our dairymen were of alien birth and not familiar with the English printed pages made it difficult to interest and hold them in discussions of dairy practice. It seemed to require some exceptional provocation to bring the dairymen together.

Thus much of the past; the present condition of dairy affairs in California exhibits changes which may notably affect the disposition towards the association. The appeal to the pocket is effective in all tongues and when recently the local system of marketing dairy products became too unsatisfactory, the organization of dairymen upon a commercial basis became possible. Hence arose the Dairymen's Union, concerning the object and aims of which full accounts have been given from time to time in the RURAL. This organization continues and grows in importance and promises to be of permanent value to the dairy industry of the State.

But it is not alone the commercial bond which will serve to draw dairymen together now as they were not drawn in the past. There has been a wonderful reform movement in progress during the last decade. Old style dairying, with no provision for shelter, very little for extra feed and the use of the modest appliances in the most shakily builded, has well nigh passed away. The wonderful achievements in Europe and at the East in the systematic handling of milk and in greatly increased economy in production have at length taken hold upon our dairy producers. It has been demonstrated that even in our favoring climate there is great profit in exact dairy processes. The old wasteful practices were profitable in the old flush times when prices were good and money plentiful, but such practices are out of the question now. Unquestionably many dairymen are now finding their margin of profit in the extra fraction of yield which improved processes place in their hands. In the old times they wasted enough to make a fortune for each of them; now they have to save what was wasted to secure a livelihood. But the very existence of the dairy business to-day depends upon such close working, and producers generally are eager to learn of it and to pursue it.

In this changed condition of affairs we see the greatest chance to-day for the prosperity of a State dairy organization. All the new methods and appliances need discussion and demonstration of their value to those who have as yet but heard rumors of them. Every item of procedure, from the erection of a creamery down to the testing of the milk of a single cow, needs discussion by practical men to make benefits of the new methods and means clearly intelligible. We believe the dairymen of the State will recognize this, and that if the plan of organization he wisely promoted, there will be no lack of membership and of practical benefit from the meetings.

A Local Wheat Master.

Nearly the whole produce trade stands aghast this week at the mastery of the local wheat situation secured by G. W. McNear. While other wheat-shippers were discussing the hard times and wondering what would happen to improve them, McNear went to work and got the wheat-shippers, the hard times, the farmers and everything else that was worth picking up, into his pocket. How he did, and why he did it, is given in the following paragraph, which purports to be what he said to a reporter of a daily paper:

I am a heavy shipper of wheat—perhaps the heaviest on this coast. Until this year we have had as many bottoms as needed and men grew careless. A few months ago I studied the situation carefully and found that there would be very few ships here—so few, in fact, that they would not be able to carry all the wheat. As a prudent man I looked to secure charters. If I had gone about taking ship by ship, I would have had to pay more money, for you can understand that as soon as a ship is chartered the prices of others go up. I sent out my brokers quietly, and before the shipowners were aware of what I was doing I secured refusals of a great many. It was very satisfactory.

My purpose was, in a measure, for the benefit of the farmer. I acted as I did to keep freights down. Getting all these ships in a bunch of course made them cheaper. It was all so quietly done that there was no raise. Now there are no ships left to crowd us. Of course it is not my fault that there are fewer ships here than ever before. The low rates of the past year especially have greatly injured the shipping. Many ships had to lay at Port Costa because there were no cargoes for them. There being no business, the ships did not come seeking. Then, too, the barley crop was handled in an entirely new manner, more being sent out than ever before. That took up several ships.

At the rate ships are being dispatched from this port, in a month there will not be a vessel fit for carrying of wheat in the harbor. I have engaged all the ships I could get hold of to handle my wheat, but I will not seek to use my advantage to drive wheat down. I realize the advantages I possess, but I will not make any improper use of them. Doing a legitimate business, I will require all the vessels to keep the wheat I buy every day moving. It will be a good thing for the State to get the wheat out and the money in, don't you think so?

There is a delicious blandness about this statement of Mr. McNear. It is conceded that he holds the key to the present situation; if he did not the other dealers would not have so much to say against him. As between McNear and the other shippers we see no objection to him. If other shippers have been content to do nothing, through timidity and irresolution, and have thus given him the chance to copper all the ships, they have only themselves to blame. It was known long ago that there would be much fewer ships here than usual—at least early in the season. They all had the same chance that he had to get charters, but they allowed him to get behind them all. Every other man of them would have done the same thing if he had possessed the courage of his convictions upon the probably tonnage supply.

Of the relation of Mr. McNear's action to the public interest, and especially to the interest of the wheat grower, there are other things to be said. His course is that of a shrewd business man who sees what he considers an opportunity, and, being possessed of ample means, he grasps it. His action may be a severe blow at the general welfare. He disclaims such intention, of course, but he will be rather more than human if he does not buy what wheat he wants at the lowest possible price, and he prepares for that by making it impossible for other dealers to get wheat afloat. It is not a new game which Mr. McNear is playing. It has been on the cloth ever since wheat-shipping from this port began. It has wrought great hardship in many ways, and it should be a thing impossible of accomplishment. It is, however, a game of great hazard and has usually worsted those who essayed to win at it. Mr. McNear takes his chances at that.

It seems to us that when the blame for the unfortunate turn of affairs is carried back to its final resting place it will go beyond both Mr. McNear with his daring and other shippers with their timidity and irresolution, and will strike against the closed doors of the bank vaults of San Francisco. If loans on wheat in warehouse could be had this year as usual, the grower would not be at McNear's mercy. If he did not offer a fair equivalent of the Liverpool wheat price he could not get the grain, and to fill the string of ships he has he would be forced to deal fairly. If loans on wheat are to be still longer refused, the grower will be forced to come to McNear's terms. It really becomes a question whether the hanks will sacrifice the wheat-grower whom they have made such pretensions of serving. It is surely demonstrated by this time that our people are not excited and alarmed and do not expect to loot the hanks. All through this local situation, at least, the distrust and alarm has been within the hank, rather than with the people. Now the hanks have a chance to save the people from a grievous corner. Will they do it?

RIVERSIDE RAISIN MEN are meeting regularly in the interest of their business. Wages have been fixed at \$1.25 per day as the price to be paid white labor and \$1 to be paid Chinese. It was voted to give the preference to white labor at the figures named. The raisin crop of the valley is fairly good. Picking will be under way next week.

From an Independent Standpoint.

Three Chinamen under sentence of deportation as the penalty of not having registered in accordance with the requirements of the Geary law are now in jail in this city awaiting the departure of the China steamer. Another and much larger hatch of cases has been brought to the attention of the courts, and must of course result in further convictions. And now, what are we going to do about it?

The bulk of our Chinese population came in response to national invitation and under the most solemn guarantees of friendliness and protection. Until now no intelligent man has questioned the right of those who came prior to the restrictive legislation to be here and to remain here. To prevent others from coming in violation of the prohibitory acts, Congress enacted a law requiring all Chinese legitimately present in the country to register in a specified way and prior to a specified date; and providing further that, after the date named, any Chinaman who had no certificate of registration, and whose registration could not be proved by the record, should be returned to the country from whence he came—or, as the phrase goes—deported. The whole purpose of this enactment was to provide a plan for the detection and identification of interlopers to the end that they might be sent away. There was no thought of driving out of the country those who came under the original treaty and whose privilege of continued residence was unquestioned.

For various reasons the leaders of the Chinamen objected to the scheme of registration, their principal contention being that it imposed a condition upon their people not contemplated by the original treaty, that it was in violation of that treaty and therefore illegal. Some of the best lawyers in the country held to this theory, and under their advice the Chinamen as a rule did not register, allowing the time in which they were required to do so to expire, their expectation being (under assurances from their American lawyers) that the law would be declared invalid. But it was not declared invalid; on the contrary, the Supreme Court held that the United States Government has a right to prescribe the conditions under which foreigners may reside in this country, and to modify these conditions at any time. This decision leaves practically the whole mass of our Chinese population liable to the penalty of deportation, since not one in twenty has registered, while the time for registration has passed. Whenever a Chinaman who cannot produce proofs of his registration is brought before a United States court, the judge must order him sent out of the country, for that, plainly, is the law.

Now, shall we let this law, designed simply to prevent the illegal coming of more Chinamen, operate to drive out those legitimately here? Or shall we, by extending the time for registration, permit those here to comply with the law, as now (since its validity is no longer questioned) they will promptly do? It seems to us that the considerations of humanity, national good faith, fair dealing and expediency prompt this course. To do otherwise—to actually drive out of the country a multitude of people here by our own invitation—would be a monstrous proceeding. It would subject us to the reproach of breaking faith with a sister nation. It would bring upon us the contempt of mankind. It would give our industrial system a wrench ten years would not cure.

We believe in the principle of the Geary law—that is, that it is right to prevent the coming of more Chinamen and that it is right to require those here to register. But we do not believe that it would be right or decent to forcibly eject as quasi-criminals a body of people here by our invitation. It would be an act better suited to the spirit of Spain and the Middle Ages than to America and the Nineteenth Century. And we believe furthermore that it would be an act of unparalleled folly.

The readers of the RURAL PRESS do not need to be told of the part played by the Chinese in the industry of California. They are the mainstay of the orchardist, and thus far it must be said, form the only supply of labor which he can depend upon. They are expert pickers and packers of fruit and may be relied upon to work steadily through the season. It is difficult to see how our annual fruit crop could be harvested and prepared for market without the Chinaman. To drive him out would for the time being utterly prostrate an interest which is doing more for the immediate and promising more for the future good of California than any other. This industry is now threatened by changes in the tariff; would it not, let us ask, be folly akin to madness, to put still another strain upon it?

We do not argue that the Chinaman is a permanent necessity to the California fruit industry; but he is a necessity until somebody else is qualified to take his place;

and qualification implies not only the particular skill called for by the operations of picking and packing fruit, but a degree of discipline upon which orchardists can depend. Suppose the Chinese were all sent away; to whom could the fruit-grower depend for help in his orchard and in his packing-house? Not, surely, upon such material as has made up the anti-Chinese mobs at Fresno, Tulare, Visalia, Selma and elsewhere during the past few weeks. Hoodlums, tramps and ruffians can never be relied upon for any useful work, especially for a sort of work which requires persistent devotion and which leaves no time for dissipation. Under the laws which prohibit Chinese immigration our Chinese population will gradually decline and white labor will as gradually fill its place in orchard work. This is the normal and wholesome method of change. By it the transition from Chinese to white labor will be accomplished without the shock which would result, inevitably, from driving the Chinamen away in a body as the Geary law, interpreted by its letter rather than its spirit, proposes.

This whole matter of the Geary law has been badly confused by the course of the Administration respecting it. When the validity of the law was established some three months back, it was clearly the duty of the Administration to carry it into effect. True, the fund available was small, but there was enough to pay the charges of conviction and deportation of some scores of Chinamen. The Administration should have applied this money so far as it would go to the deportation of the known bad men among the Chinese. This course would have shown good faith on the part of the Administration; it would have taught the Chinese that our laws are not to be violated with impunity even upon the advice of American attorneys; it would have ridded the country of a vicious body of thugs and cut-throats, and it would have left the Sand Lot hoodlums and agitators without the pretext upon which their recent proceedings have been based. But the law did not suit Mr. Cleveland and his Cabinet and they practically disregarded it until the courts within the past ten days have forced them to recognize it. This delay, amounting in fact to nullification of the law, alike insolent in its contempt of Congress and in its arbitrary assumption, is largely responsible for the recent troubles in this State. There has been a situation in which hatred of the Chinaman has been associated with a sentiment of indignation against the administration; and to minds not capable of nice distinctions, the justice of the one has seemed to excuse the criminality and folly of the other. It is not possible to justify Mr. Cleveland's course; he assumed to sit in judgment of the law and took it upon himself to disregard it when his simple, plain and only duty was to carry it into execution. Of course, the fault of the administration in this matter does not justify the fault of the mob, but it has had a relation to it very plainly to be seen and which it seems right to point out. It is hard to deal with proper sternness toward a lot of ignorant and prejudiced rioters for disregard of law when the example is set them by the President of the Republic.

All hopes of prompt action on the part of the Senate in the matter of the pending financial measures have been disappointed. Another week has been taken up in useless talk, and the vote seems as far away as ever. Indeed, it now seems that the Senate will take even more time than the House did, and that it will require at least another fortnight to come to a definite result. There is, of course, nothing to do but to wait. This much, however, is practically certain—that the silver-purchase law will be repealed. Whether or not something "favorable to silver" will take its place it is impossible to tell, though we imagine that the utmost to be expected is the pledge of bimetallism contained in the Voorhees bill, and which, it will be remembered, was printed in full in last week's RURAL. Although nothing definite has been done by Congress, the course of its preliminary proceedings has been such as to assure the commercial world that the United States is not going to drop to the silver basis; and the result is seen in the return of a great deal of foreign (chiefly English) money for reinvestment in American securities. It is evident that confidence is being slowly restored. However, in our judgment, nothing like normal times can be looked for till Congress has provided a way to increase the volume of our currency and until the uncertainty as to our tariff policy is done away with. With these matters yet to be considered, it is high time for Congress to quit desultory talking and get down to business.

A great point has been gained in the fight for Irish home government. It is true that the House of Lords has just rejected the bill providing for an Irish Parliament which recently passed the Commons; but this was expected. It is the special function—and is these days about the only function—of the Lords to delay good legis-

lation. In time they will be brought round to approve it, for, if they should continue to stand out, the Commons will cut off their supplies or cut them off altogether. All this is clearly within the power of the so-called "lower" house, and the Lords well know it, therefore they may be depended upon to meet the Commons in any measure upon which the latter firmly set their minds. The Irish bill is not a measure which seems very satisfactory in the American view, but it involves the main point of providing an Irish legislature for a certain class of Irish affairs; and this much accomplished, it will be easy to enlarge its jurisdiction. A proposition commended by common sense, by every principle of abstract justice, and absolutely essential in the necessities and conditions of things, cannot long remain a mere proposition. In a comparatively brief time the Irish are certain to achieve everything which they rightfully demand, and they will owe much of their success to the example, the sympathy and the substantial aid of America.

Higher Culture for Wheat.

TO THE EDITOR:—Your article in last week's RURAL on "Wheat-growing in California" reminded me of a letter I received some time ago from a friend of mine, who owns a little farm in Holland and who wanted to know how long yet American farmers would be able to flood Europe with wheat at the ruinously low prices of last season, which were still getting lower. And, as he gave me at the same time a description of his work and its results, I thought it might interest some of our farmers here to know how grain-growers on the other side of the water manage to hold their own on land worth from \$150 to \$200 per acre, where the grain is yet cut and bound by hand and where the steam thrasher is the only innovation of modern times which has proved of actual value, as the farms are too small and too much divided in different fields to allow the use of much machinery.

Stating how his place of 45 acres was worked, he goes on to say as follows:

"I brought my land of course in a first-class state of cultivation, not allowing any weeds to grow in any place, paying for wages, harvesting included, for taxes and all other expenses, a total of 3000 guilders, or \$1200

"My crop of wheat was 2900 pounds per acre, chevalier barley 3300 pounds, rape seed 2000 pounds, caraway seed 1400 pounds, peas 1600 pounds, and horse beans 2500 pounds per acre, for the whole of which I realized 4800 guilders, \$1920, leaving me a profit of 1800 guilders. Now, I admit, he writes further, that I might have saved 1000 guilders or so on my expenses, by working or manuring my land less, yet I am convinced that just there is where we are liable to make our biggest mistakes. My land is better than ever and will bear just such or heavier crops next year, and if things do get cheaper yet than everything is now, I shall keep right on and make it pay."

Of course it is not my intention to make a comparison between a large California wheat ranch and a small spot of fertile land in Holland, but there are thousands of farms there in the same condition, bearing heavy crops every year and getting better at that, and all in a free-trade country, open to all the world's products without hindrance to or protection for anybody. The price of labor is low, viz., 40 cents and, in harvest, 60 cents a day without board; but look at the money spent on that 45-acre farm, mostly in wages received by somebody.

It is true our American laborer earns more and lives better than his class in the old country, but I often doubt if he lives really happier and is so much better off after all. Colorado has no more work for her thousands of miners which had been making their several dollars a day right along for years, yet they nearly all prove to be so many paupers unable to pay for their railroad fares or their meals. I wonder where the beauties of their protected industries or their high wages comes in and I think the little farm in Holland may yet teach a lesson to many of us.

E. C. WILLKES MACDONALD.

Aptos, Cal.

California Wool-Dealers Under Way.

The Wool-Dealers' Protective Association does not want any change in the present tariff on wool, and on Friday of last week there was a meeting of the association which was attended by the following: Jacob Rosenberg, president; F. S. Moody, secretary; George W. Kearns, Jacob Woolner, Watson & Marx, Platschek & Harris, E. Y. Judd, B. P. Flint, F. P. McLennan, Hulme & Hart, Dellepiane & Co., A. C. Schlesinger, C. S. Moses & Co., L. Breslauer & Co., Thomas Denigan, Son & Co., W. Morrison, Shoochert, Beale & Co., George Davis, H. H. Lee and L. F. Moulton.

The meeting unanimously indorsed the resolutions adopted by the Ohio Wool-Growers' Association, and also adopted the form of petition which is printed on page 200 of this issue.

A committee of three was appointed to circulate the petition among the wool-growers of the State for their signatures, that the petition may be forwarded to the California members of Congress. It was also decided that a delegation be sent to Chicago to attend the meeting of the wool-growers, wool-dealers, cotton-planters and cotton-dealers, to be held in that city Sept. 28th and 29th; also the same delegation to represent the association at the National Wool-Growers' Convention at Chicago Oct. 5, 1893.

Wrongs by Nurserymen.

TO THE EDITOR:—In my opinion nurserymen as a rule are careless, and it is charitable to them not to use another and much stronger expression. You have no idea of the mischief they have done to orchards and vineyards of the State, by selling one thing and delivering another, which the grower is not able to find out until three or four years after planting. Mr. Hilton may have used language in his communication to your paper a little stronger than you care to print, but he has been hit pretty severely and is therefore entitled to consideration. A nurseryman is much like the representative of a fire insurance company after one's property has been destroyed; he will pay just as little as he can, and make use of every technicality to wriggle out of paying a just claim. His usual defense is carelessness of the planter himself, in mixing his trees with those of some other nursery, etc.; and, as a matter of fact, it is pretty hard to prove a claim against a nurseryman for trees and vines received from him and found not true to name. To prove to a court of law that he has done wrong, it is necessary to produce the men who have done the planting, and the foreman in charge, when these men may not be in his employ any more or possibly have left the State. An intending planter should have an expert examine the articles in the nursery and after receipt, carefully preserve his bills, and get a guarantee that these trees or vines are true to name and on roots as indicated, and as soon as he finds himself taken in, vigorously present and press his claim for all sustained damage, out of court if possible, but in court if necessary. I bought a lot of Muir peaches from a certain nursery; they were ordered and billed to be on peach root, but fully four-fifths turned out plum roots. The same nursery sold me 250 Sellers' Cling, three-fourths of which are Foster. The Muirs on Julian plum were planted in rather hard and dry ground suitable for peach root only, and when three years old were dug up and thrown away. The one-fourth Sellers' Cling were budded last year to Foster, when five years old, and the loss is two crops.

A nurseryman in another county billed 600 Moorpark apricots, all of which are seedlings, at least a very small, white, worthless apricot, and these were budded over at the age of five. The same nurseryman sent 200 seedlings in place of Sellers' Cling. They are now six years old and the whole lot has never shown one box of fruit, and these were budded over at the age of five. I have about 30 acres of vines bought from a prominent propagator of wine grapes. They are now six years old and the cuttings came for Cabinet Franc. They are of a different variety, which has never borne half a ton per acre, and, although I have consulted many experts, nobody can tell me what variety they are, but all agree they are not Cabinet Franc, and I will have to graft over the entire 30 acres. It is not always possible to tell within a few years what one has on his place; there is no crop until the fourth year and one is very apt to wait another year to see if the trees or vines will not bear better. Even if not the variety ordered, it would be better to put up with something else, if at all profitable. If these people are careless and make mistakes they should manfully come up to the captain's desk and pay the damage and not try to wriggle out of it, as they invariably do. As far as I am concerned, they have damaged me to the extent of many thousands of dollars, and I will make them pay for it, if I can, at least I shall try hard and my evidence is pretty well in hand. Do not lean too much toward the nurserymen; give us farmers a show as well. Let them all relate their experience through your paper and much good may come from it, and if it tends to make the nurserymen more painstaking in the future, great good will have been done.

WILLIAM WEHNER.

Evergreen, Santa Clara Co.

WHERE THE TROUBLE COMES IN.

TO THE EDITOR:—I see by your valuable paper that there is a good deal of trouble in regard to trees bought from the large nurseries. I have had some trouble myself, the fault is in the men who do the budding in these large nurseries, it is all left to hired men and all they care for is their pay and bacon. In 1891 I bought 900 trees for Late Crawford peaches, this year they came into bearing, they are cling peaches. Of course it is quite a damage to me; all I ask of the company is to refund the money, but they will not do it, so instead of grumbling and growling I am cutting them down and budding them over. The only thing for the orchardmen to do is to raise their own trees. Any one with common sense can bud trees. It is better to have half the number of trees and have them good to start with. When any orchardist finds a poor tree in his orchard the sooner he cuts it down and gets a good one the sooner he will be prosperous.

Chico, Sept. 11, 1893.

JAMES A. CROWDER.

The Road Convention in Sacramento.

The convention in the interest of good roads, which had been summoned through the Humane Society of Sacramento, assembled in the Senate Chamber at the State Capitol on Thursday, Sept. 7th, and continued its sessions during that day and the day following. J. A. Woodson, of the committee on promotion, called to order an assemblage of about 200 and an address of welcome was made by Governor Markham. R. C. Irvine was chosen temporary chairman and stated the objects of the meeting and the needs for reform in road construction and management.

The following were chosen permanent officers of the convention: President, A. B. Lemmon of Santa Rosa; vice-presidents, A. P. Stanton of Santa Cruz, A. C. Maude of San Bernardino, J. L. Gilbert of Fresno, J. A. Filcher of Placer, H. W. Cornett of Mariposa, Mrs. Ana M. Reed of Mendocino and Mrs. Mary F. Merrill of San Joaquin. Secretary, L. W. Ripley of Sacramento; assistant secretaries, F. D. Baldwin of Santa Cruz and L. M. Lands-

borough of Sacramento; reading clerk, Thomas R. Knox of San Francisco.

Essays on the general principles of road construction and repair were read by W. E. McClintock of Massachusetts and Ernest McCullough of San Francisco. There were general discussions in which many participated and during which all phases of opinion were given on road matters including the desirability of bonding counties for road building, etc. Finally a committee was chosen to present definite propositions for the action of the convention. The report of the committee was presented, discussion followed which tabled a number of the committee's commendations, but the following were approved:

That each county should have engineering supervision of the roads.

That the question of bonds for road construction be deemed local and not a subject for the conventions.

That a broad tire system be advised according to weight carried.

That the contract system for construction and maintenance of county roads is wise and should be encouraged in the discretion of the Supervisors.

That the ten block system of numbering roads be approved, but eight blocks to the mile agrees better with section lines and is therefore preferable.

That the League of American Wheelmen should be thanked for their warfare against bad roads.

That chief roads should be general charges upon the whole county.

That sprinkling of roads is essential to their preservation.

That an executive committee of nine be chosen to prepare a road bill for the next Legislature in accordance with the suggestions of the convention. Such bill to be submitted to the next convention. Said committee to organize a plan of action, collect statistics and devise methods for construction, improvement and maintenance of public roads in the State.

On motion of Emory E. Smith there was created an Educational Committee consisting of J. A. Woodson and two engineers to ascertain the literature of good roads and inform delegates of it and to devise means to disseminate information upon road reform.

It was also decided to ask Boards of Supervisors to make appropriations to aid the expenses of the Executive and Educational Committees. Adopted.

The President announced the Executive Committee as follows: J. R. Price, Colusa; J. L. Maude, San Bernardino; J. A. Filcher, Placer; H. Weinstock, Sacramento; J. M. Fulton, Lassen; Thomas R. Knox, San Francisco; J. L. Gilbert, Fresno; Thomas McConnell, Sacramento; J. A. Linscott, Santa Cruz, also that he had selected as engineers on Education Committee, Ernest McCullough and Otto Von Geldren, both of San Francisco.

The Executive Committee immediately met and for an hour nearly discussed plans of work. It elected A. B. Lemmon, Sonoma, chairman; H. Weinstock, Sacramento, secretary; J. M. Fulton, Lassen, treasurer.

The Educational Committee met at once and agreed to reassemble early in October.

Myrobalan and Mariana.

TO THE EDITOR:—Again I beg your indulgence in a brief space in your valuable columns for the purpose of replying to certain statements in the RURAL of Aug. 26th in regard to "Root Knot," Myrobalan and Mariana. Whatever statement I may make will be based upon experiments conducted and observations made in Santa Clara county only and from examination of soils and climatic influences in other localities. I am unable to concede that the difference can be very great.

I cannot help but conclude that the nurseryman, of whom Mr. Bonine supposed he bought 40 trees on Mariana root, in fact sold him true Myrobalan, because I have seen in this county, last season, what was known to be true Mariana standing in nursery row from 12 to 18 inches in height, covered with knot, both root and top; while, on the other hand, not far distant—the conditions the same—stood a nursery of true Myrobalan, with no evidence of knot, and twice the size of said Mariana. The Inspector of Santa Clara county will verify this statement.

And, further, no orchard yet planted here, where the roots were true Myrobalan, have ever developed a knot to my knowledge, and I have taken no little pains to examine into the matter carefully, because it is of vital interest to planters to know these things. As to dwarfing, the very opposite is the case here. There are many orchards in this valley planted on Myrobalan, the growth of which is simply phenomenal. Right before me, while I write, stands a young orchard planted four years ago on true Myrobalan root whose average height from ground to topmost shoot is 18 feet. Are these dwarfs? I think I have said sufficient on this topic to give rise to the inquiry in the minds of those who complain of knot and dwarfing whether or not they have had imposed upon them the worthless Mariana in place of true Myrobalan.

In the report of the State Board of Horticulture for 1891, page 112 to 113, will be found these statements in reference to true Myrobalan: "The Myrobalan stock comes from France. It is a wild plum of great thriftiness, and is used very extensively in that country for budding stock of the prune." * * * "practice has proceeded without much reference to the discussion, and whether grown here from seed of trees imported long ago or whether seedling stocks are imported directly from France, as large quantities are, the Myrobalan of French origin is now the accepted plum stock for California." The French definition and pronunciation of the word is given thus: "Myrob'alan (accent on second syllable), prune des Indes, nolk de Bengale." Webster gives the spelling and pronunciation the same as the French, and define it as a drupe—a dried fruit brought from the East Indies, etc., leaving no doubt that Myrobalan is a true plum and a native of the East Indies.

San Jose, Sept. 5, 1893.

A. KAMP.

Plum Stocks and Other Matters.

TO THE EDITOR:—Your correspondents writing on fruit tree stocks get a little mixed, and assume theories to be facts. Mr. Webster (Sept. 9th) assumes that plum stocks having knots or showing a feeble growth at the base are "Mariana" or "hog plum" or swamp plum of the South." Pure assumption. We all know that the root knot was found all over the State many years before Mariana was known. It is only within the last few years that this latter has been known and sold as a stock, and as no less an authority than Prof. Thos. Meehan of Philadelphia has given it as his opinion that the Mariana is less liable to root knot than Myrobalan, I bought some two years ago for the first time, paying double the price at which the imported Myrobalan can be obtained. I have a few French prune trees in my orchard on that stock, planted previously as an experiment, and so far I can find no fault with it—no knots and no enlargement above the bud.

Myrobalan stocks are mostly imported seedlings from France, the stock always used by me. I have been in France, and am quite familiar with *Prunus myrobalana*. Sometimes the stocks are raised from cuttings, which, as I pointed out years ago, is not a practice to be commended, because of the increased possibility of propagating disease.

Soils will be found quite as important a factor in the successful growth of a tree as stocks. Mr. Webster, after deploring the failure of his plum stocks, admits, casually, that they were planted on "dry, rolling land"! If the gentleman will turn to Downing or any horticultural authority, or to any successful orchardist in California, he would learn that he should plant his plum roots on the very opposite soil to that which he selected.

I have not been 33 years in the business, but only 18. Yet I can show a successful orchard of 75 acres. I can also show letters from Mr. Goodsell and others, showing that my brand of fruit is in favor in the East, and figures to show that, even this year, all of my fruit has been sold profitably, much above the average. The San Francisco canners, even, recognize this by paying me \$30 f. o. b. for peaches, when few others are getting more than \$20.

Note an exception in another of your correspondents. Mr. Joseph Hobart (who, I would wager, is a successful orchardist), who, to plagiarize the editor, "grafts while others growl." In other words, he watches his trees, and is prepared to act in any emergency. For the root knot, he bored the base of trees, cut out the knots, and treated them to fungicide. I have done the same when knots first appeared, and have the trees examined every year. There is hardly any knot left, and no trees show any ill effects.

Ten years ago, to read the agricultural press, one would think the orchard industry of California was on the verge of destruction through the ravages of *aspidiotus perniciosus*. We have virtually overcome this pest and bear little of it. To-day the fungoid diseases are prevalent. Let the Bordeaux mixture be systematically applied, and we will soon be ready for the next visitor.

The nurserymen's interests are one with that of the fruit-grower. If fruit-growing does not pay, then where is there profit to the former? Will any one say that fruit-growing is a failure in California? As a business, conducted on business principles, emphatically not! To some individuals, who doubtless would make a failure at everything, it has proved nothing but vexation and worry.

Napa, Sept. 1, 1893.

LEONARD COATES.

The Tariff Question.

We have already alluded to the beginning of organization in this State to impress upon Congress the need of protection to our wool interest. The same course is being adopted by wool-growers in all parts of the country. The Montana Wool-Growers' Association, at its session last week, adopted the following:

Resolved, By the Montana Wool-Growers' Association in convention assembled, that we expect and insist that our employes shall accept a scale of wages commensurate with the depreciation in valuation of our product.

Resolved, That any unfavorable legislation in the near future would intensify the present deplorable condition of our business, and we therefore ask our Representatives in Congress to use their best endeavors to prevent placing wool on the free list.

Resolved, That we believe more can be accomplished by concerted action than by individual effort, and it is therefore the duty of this association to co-operate with the National Wool-Growers' Association, and with that end in view we should be represented at the National Wool-Growers' Convention to be held at Chicago on the 28th inst.

The following form of petition is commended to all wool men:

To the Honorable Members of the Fifty-third Congress of the United States: Whereas, As a result of a general belief that the tariff on woolen goods will be reduced and wool put on the free list, the price of wool is now below the production; and whereas, We believe that if wool is put on the free list and the tariff on woolen goods materially reduced, the price of wool will be still lower; and, whereas, we cannot afford to raise wool in competition with free wool raised in countries like Australia, where the wool-grower rents land from the Government at a less rental than we pay in taxes on our land, and receives Government aid and encouragement; and whereas the lands of these United States are well suited to the raising of sheep, provided we can get a fair price for our wool and mutton; and whereas we believe that it is to the best interests of this country to prevent the slaughter of a large proportion of the sheep of this country, which will be the certain result of a further reduction in the price of wool.

We, the undersigned farmers and wool-growers, irrespective of party, do hereby petition and beg that your honorable body will make no change in the present tariff affecting the wool and woolen schedule now in force.

It is understood that the local dealers of San Francisco will in the near future convene for the purpose of having some unity of action in securing signatures to the petition to Congress, and also of seeing that this State is well represented at the convention of wool-growers which will assemble on the grounds of the World's Fair at Chicago on the 28th and 29th of September. It is understood that all wool-growers, independent of any selection or appointment, who contemplate visiting the World's Fair shall go at such time that they can be present at the convention, and it is also understood that all will be welcome and considered as a member by merely attending.

HORTICULTURE.

The Apricot in France.

All apricot growers will read with interest the essay which we shall print below from the pen of Mons. F. Jamin. This paper was read before the Royal Horticultural Society. It contains many chances for striking contrasts with California experience—notably in the weight of the crops which the French growers are contented with. Such contrasts show all the more clearly what advantages the California grower possesses. The essay gives also the French estimates of some varieties we are growing here. Not the least interesting point of the essay is the frank admission that the French use many pumpkins in making their apricot jam. Fortunately in California apricots are so abundant and cheap that apricot products do not have to be debased. The following is M. Jamin's essay:

The apricot, which appears to be a native of Western Asia, has been known in France for several centuries, its introduction dating as far back as 1450. In the north and northwest of France it must be trained on a wall or on a fence, but under these conditions its fruits are, as a rule, only slightly appreciated. They ripen very unevenly, the portion of the fruit against the wall always remaining more or less green, whilst that exposed to the sun becomes more or less mealy. From bushes or standards in the open air the fruits are far better; but, in order to ensure success, great attention must be given to details. The trees require a warm and rather calcareous soil, and should be sheltered from the north and north-east winds. In less favored localities the apricot will give good results if sheltered by other fruit trees or by some ornamental trees. Unlike other fruit trees, it will succeed in the gardens of large towns, and even those of small dimensions, as in them shelter is always to be found. The great abundance of apricots in some seasons does not influence the selling price to any great extent, and they are generally very remunerative.

The varieties most largely grown in France are very few in number and to a great extent localized. By simply inspecting the wood it is difficult to distinguish one variety from another. Sometimes confusion may be avoided by noticing the distance—more or less great—between the leaves. In Apricot "Peach" and its sub-varieties, for example, the leaves are very near to each other, and the young wood consequently short-jointed, whilst in other kinds the wood is longer-jointed, and the leaves, therefore, perceptibly farther apart. By means of the foliage, apricots may be divided into three great classes. First, the varieties with large leaves, the blade of which forms a right angle with the petiole, as in Apricot Royal, Commun, etc.; second, those kinds in which the blade of the leaf is rather tapering and forms a sharp angle with the petiole, as in Montgamé, Luizet, etc.; and, thirdly, the varieties in which the leaves are flaccid, wavy, and partly folded, as in Peach, Moorpark, Viart, etc. The stone is also of some assistance in classification. It is generally of a bitter taste, but has a sweetish flavor in the following varieties, viz., Montgamé, Hollande, Blenheim, Luizet, etc. In Apricot Peach and its sub-varieties the stone is perforated—that is to say, it presents on one side a small orifice through which a needle may be passed. This is a characteristic which is not to be found in Commun or the Royal and many others.

The Apricot is cultivated in many parts of France. The locality in which the fruits are chiefly ripened in spring is at Solespont, in the department of the Var. Here the fruits, though only of ordinary quality, are ripe by the 1st of June. When sending to market, about a dozen are packed in a small light box, and, notwithstanding their somewhat inferior quality, they readily find purchasers at a comparatively high price. In La Limogne d'Auvergne a larger number of Apricots are grown, and these represent for the most part a variety with large white fruits bearing the name of the province. The entire produce is almost entirely utilized by the manufacturers of Apricot preserves, into which an appreciable quantity of Pumpkin pulp finds its way. It is easy to imagine the enormous profits realized by the manufacturers who were the first to direct their attention to this particular business.

In the valley of the Rhone, in the departments of the Rhone and the Isere, there are several places in which the Apricot grows remarkably well. For several years the variety Luizet—raised by M. Luizet, of Ecullies-Lyon—seems to have excelled all others. The fruit is of good quality and ripens rather early, while the trees present a vigorous and fruitful appearance. The average income derived from Apricots in these three departments is said to exceed £4000. The Saumurois, in the department of Maine-et-Loire, is another part of the country remarkable for the culture of Apricots. The variety Peach, and to some extent the less known Precoce de Saumur—closely related to l'Alberge de Montgamé—are the principal ones grown. The last-named is a good early sort, and is superior to the Apricots of the Var. Unfortunately, however, owing to the latitude of the district, the fruits reach the Paris markets rather late for realizing very high prices.

The average yield in this district is only estimated to return 8s. a tree when in full bearing, and the number of trees seems to be about a thousand. Under the Apricots, Strawberries are grown with great success, and in the full season of their ripening two vans are daily loaded on the railway at Saumur Station for the Paris markets. About twenty-two miles to the west of Paris, and along the banks of the Seine for a distance of about five miles, is to be found some remarkable land, which for centuries has been utilized for the culture of Apricots. This highly favored locality extends in a circle as far as the parishes of Triel and Vaux, sheltered from the cold winds of the north and north-east by the heights of Hautil. In this region the soil is warm and calcareous, and everyone grows Apricots. Spring

frosts rarely make themselves felt there, so that the crops ripen with great regularity. The trees (often more like large bushes) are planted from 12 feet to 15 feet apart each way. The stems are never very tall, 3 feet to 4 feet at the most, and oftentimes the branches bear fruit on a level with the ground, and thus the trees assume, more or less regularly, a globular or pyramidal form. The method of pruning back the fruiting branches to three or four eyes is the same as that used for Peach trees, and it is, speaking generally, the only method to which cultivators attach any importance.

Three years after planting, the trees generally bear fruit, the quantity increasing year by year, and the trees thrive without any particular attention being given them. Of course poor trees will be met with in this locality occasionally, but it may generally be concluded that such are quite the old trees of the neighborhood, veterans 200 years old being occasionally met with. It may be said that the trees are at their best for fruit producing between the ages of 10 and 50 years. In spite of the favorable conditions referred to, it cannot be said that the yield of fruit is at all uniform in quantity or quality. Sixty pounds weight of fruit may be considered about the average yield per tree, and estimating the price at an average of 24s per 100 lbs., each tree will at this rate produce an income of 14s. 6d.; but it almost invariably happens that besides fruit of ordinary size there are a certain number of first-class fruits, and even some few extra choice samples, which without the least trouble will realize half a franc per pound. It follows, therefore, that without any exaggeration one may consider the sum of 16s. to be the average value of the fruit produced by a tree in full bearing. Growers who sell their crops on the trees, which is very often done, of course do not realize such a large income as this; but, on the other hand, they do not incur the expenses of gathering, nor of other items which tend to lessen the profits of those who pick and sell their own fruit. The annual sale of apricots grown in this district is said to amount to a sum of £3000 sterling.

The common apricot is almost the only one cultivated, and although the fruits are not of the finest flavor, they are largely used for culinary purposes. Choice preserves are made from the ordinary qualities of fruit, while the better samples are naturally reserved for the table. In the above named parishes (as well as throughout the whole neighborhood of Paris) apricot trees are worked upon the stock of the St. Julien plum. The plantations extend in a straight line along the banks of the Seine, which at this point is at an elevation of about 90 feet above the sea level. They occupy a narrow band or border along the river side of only 40 feet or so in width, and are then far from reaching the top of the hill behind. A remarkable fact is that the soil does not appear to become at all exhausted. Every year the trees which perish from old age or other causes are replaced by new ones, which always seem to grow in a very satisfactory manner. The severe winter of 1879-80, however, played great havoc in the orchards of Triel and Vaux, but the majority of the trees have now recovered their usual healthy condition. Descending the river Seine, and more to the west, is a small locality known as Tripleval, belonging to the parish of Bonnières. Here some equally fine plantations are to be met with, and so favorable are the climatic conditions that the inhabitants are enabled to even cultivate the fig with great success.

At my own place, Bourg-la-Reine, the apricot grows satisfactorily, but rarely produces anything like a good crop of fruit. Some trees planted twenty-five years ago in my nursery produce an abundance of fruit—at least every alternate year. They are planted in the midst of other fruit trees, and are protected from ill-favored winds by a screen of elm trees a little distance away. Some other specimens, however, of the same age and vigor, and only a few hundred yards distant from the preceding plantation, are almost entirely exposed and all but sterile—a fact which serves to emphasize again the necessity of growing the apricot under particular conditions if it is to yield a satisfactory crop of fruit.

Saccharate of Copper, a New Fungicide.

Prof. Prillieux, of the National Agronomic Institute at Paris, recommends strongly the following preparation in place of both the Bordeaux mixture and ammonia-copper liquid, for use as a fungicide or germicide in spraying:

For 25 gallons of the spraying liquid, slake and make into "milk of lime" four pounds of quicklime; dissolve four pounds of molasses in a gallon of water and mix with the milk of lime—this will make a solution of "saccharate of lime"; stir thoroughly and let stand for a few hours. Next dissolve four pounds of bluestone in eight or ten gallons of water and pour into it the lime-molasses solution, while stirring briskly. The mixture becomes very turbid with the gypsum formed, which may be allowed to settle out, leaving a clear, greenish solution of "saccharate of copper," which may be drawn off from the sediment, thus obviating all danger of clogging the spray nozzle and leaving the leaves clean; or, if to be used on leafless trees, it may be at once thinned down to the 25 gallons wanted, since even thus the liquid is much thinner than the Bordeaux mixture of equal strength.

E. W. H.

POULTRY YARD.

Soft Food.

Opinions differ greatly as regards what is the best food for poultry. Some people swear by soft foods of various kinds, whereas others patronize a grain diet alone. All sorts of mealy doughs, however, are a wholesome food for poultry, and result in producing more eggs than feeding a whole grain diet pure and simple. The ideal diet for poultry should be neither too much soft nor too much hard, but just the happy medium. Several people feed soft foods alone in every possible form—with and without pepper, with and without pot liquor, with and without grease. Ex-

periments made with such feeding suddenly and gradually in all weathers proved unfavorable in every instance. Several good birds died of diarrhoea induced by such feed, while the others suffered greatly from sicknesses of various kinds. A prominent continental breeder's opinion on soft feeding is this: "My experience in soft feeding is just the same, and I am convinced that fowls cannot do without hard food. Where much soft food is given unhealthiness generally reigns. Of course, a soft meal now and then is of great advantage." A change of diet is also essential to good condition—charcoal, burnt bones, sand, a little salt, while onions, cabbage, potatoes, beans, etc., are all good for health, and hence lead to egg production. All kinds of poultry are also very fond of milk, and it appears to make no difference to them if it is sour, thick or clabbered. The waste from cheese rooms or buttermilk from the churn is excellent food, especially if mixed with an occasional meal feed. To make hens lay well feed as follows: Put two or more quarts of water into a kettle and one large seed pepper and boil; now stir in coarse Indian meal till thick; cook this one hour and feed hot. Horseradish may be chopped fine and stirred in, with the result that you will get eggs daily, instead of none perhaps before feeding. Many people complain that their hens won't lay; to such we recommend cooked feeds, fed hot, especially good egg bringers being boiled apple skins seasoned with red pepper, or boiled potatoes spiced with horseradish. Corn or wheat fed alone tend to lay on fat and keep egg baskets empty. A spoonful of sulphur stirred in with cooked foods is a good thing for hens; it frees them from vermin and gives tone to the system. Some people object to the giving of sulphur. These I would remind that sulphur is largely present in the feathers and eggs of fowls, and where birds are kept in confined spaces it only seems reasonable that a certain amount of sulphur should be given them occasionally. Of course, it is not required if cabbage leaves or some other sulphur-containing food is given. Lime should also occasionally be given as a solution in water.—Feathered World.

The Government and the Poultry Interest.

The Los Angeles County Poultry Association, a few months ago, passed resolutions asking for a recognition of the poultry industry by the Department of Agriculture. The resolutions were sent to the Secretary of Agriculture, in Washington, and copies to our Senators and Representatives, also to all the leading poultry and agricultural papers and poultry organizations in the United States. The following letter has just been received, which explains itself. It is dated, Department of Agriculture, office of the Secretary, Washington, D. C., August 17, 1893:

Mr. C. T. Paul, President of the Los Angeles County Poultry Association, Los Angeles, Cal.—DEAR SIR:—I am in receipt of your communication of the 3d inst., addressed to me on behalf of the Los Angeles County Poultry Association, and inclosing resolutions of the society, requesting the establishment in this department of a division of poultry. I will inform you in reply that there is, in my judgment, no occasion for the establishment of a special division in the interest of the poultry industry, inasmuch as the bureau of this department known as the Bureau of Animal Industry is charged by the law with duties of such general character in relation to the animal industry of the country that it is at present, in my opinion, fully authorized to perform whatever functions it may be proper for this department to undertake with reference to the poultry interests.

Yours is one of several communications I have received from individuals and associations, representing the poultry industry, looking toward a fuller recognition of the poultry industry in the economy of this department. Believing that the first thing to be done in this interest is to present such facts and figures in regard to it as will reveal to us its actual importance, agriculturally and commercially, I have, as a preliminary step, instructed the statistician of this department to take measures to procure all the information available, with reference to the poultry product and consumption throughout the country; and I bespeak for him in carrying out these instructions, the hearty co-operation of all such associations as that over which you preside.

Yours respectfully, JOHN STERLING MORTON, Secretary.

Poultry men throughout the country should do all they can to gather the necessary information. Los Angeles has taken the start in this matter and set a good example to other sections of the country.

How to Make Nests.

In arranging nests for hens in the poultry house the average farmer takes little if any pride in guarding against things that are the means of many accidents and bad results with laying and sitting hens, when, if he would stop and think a minute, he would quickly discover that it was much to his interest financially, as well as a saving of time, to build nests that would better fill the requirements of a successful poultry raiser. J. C. Baker gives the *Poultry Keeper* the plan he has adopted, and the manner of construction:

Make a frame of any light material in strips, set edge-ways for strength, 2½ feet wide and any length you desire to have the row of nests. Next get four 2x4 posts (two for back side at each corner and two for front side at the other two corners). The two back posts must be cut 3½ feet, and the front posts 2½ feet long. Nail each post securely to the frame, 16 inches from the floor. Now nail strips from top of hind posts to top of front posts to act as supports to the top. Next nail cross pieces, 2x2 inches, on bottom of frame, just where you want each partition to come. Be sure to make each nest roomy. Now on top, at both back and front, nail two boards edgewise over these cross pieces. This will leave a crevice of two inches beneath the nest in which can be slipped light boards loosely, for the bottom. These can be removed at any time, and the nest thoroughly cleaned. You now have the back and the front of the nests, with lath lattice ends and partitions between the nests. This completes the nests, after which fit in the loose bottoms to each nest.

Back of the nests is the passageway, which should have a board for bottom. Next nail on top with any kind of boards, leaving a space twelve inches wide at lower and front side, and the full length of the row of nests. Over this space make a lid to fit, and hinge to upper portion of

top. This now completes it. If left movable, it should be set up closely to the side of the house, there being no back to it. This makes it entirely closed, with the exception of a small space to be left at one end for the hens to enter. The lid remains closed, except when it is desired to get the eggs from the nests. I find that hens take to this kind of arrangement better than anything I ever tried. They are not so apt to disturb or crowd on the nests of each other when either laying or setting.

This nest can be made movable, set on four legs sixteen inches high, or, if desired, stakes driven in the ground floor and the slanting top nailed fast to the side of the house. The advantage in having it movable is the readiness with which it can be cleaned to rid it of any vermin. But I have none in those that are fastened solidly to the house, as the bottoms being easily removed the nests can be well cleaned out. When fresh straw is placed in them I carefully sift insect powder and sulphur in and around the nests as a preventative. Besides the hens have their daily dust bath. The dust bath should be placed directly under the nests; this utilizes room, and also allows the dust to raise in and over the nests. No lice can live or harbor where this method of dusting is used.

Mistakes With Poultry.

The man who puts fifteen eggs under a hen, instead of eleven or thirteen, so as to make sure of a good lot of chicks, wants more than he will get. We don't like to deal with that kind of a person, because he displays greediness in the first place and lack of good chicken sense in the second place. A hen will in nine cases out of ten hatch more chickens from thirteen eggs than from fifteen eggs simply from the fact that not more than one or two hens in a dozen ordinary farmyard hens are large enough to cover fifteen eggs.

Another mistake consists in consolidating broods by giving all the chickens to one hen when two or more hatch at the same time. Don't do it. It may seem all right, but it is all wrong. In warm, dry weather the large broods may do fairly well, but just let a rainy, chilly spell come along and then see how fast the smaller and weaker ones drop out of the race. Let each hen have her chickens. It would be much better, and the chickens would grow faster and larger if each brood consisted of seven or eight chickens. There is no disguising the fact that the secret of success in poultry-keeping consists in keeping all flocks small.

The person who advocates putting 100 or 200 little chickens all in one bunch in a brooder knows nothing about the necessity of observing natural conditions in poultry-raising. Nature intended a hen to sit on a small number of eggs and to care for a small number of chickens only, and nature never intended 100 hens to run, eat and roost together, nor 100 chickens to be penned up together.—Southern Cultivator.

Kerosene Emulsion.

Shave half a pound of soap in half a gallon of water, and when the soap is dissolved and the water boiling, remove it from the fire and add half a gallon of kerosene, agitating briskly for ten minutes. A creamy substance results. Add six gallons of water, stirring while so doing, and apply at any time to the poultry house with a sprayer or watering pot.

WORLD'S FAIR.

A Field Day at the World's Fair Among the Live Stock.

[Written for the RURAL PRESS.]

At an early hour we found good vantage places to look at the choicest exhibition of horses and cattle ever before collected together. The proof seemed before us that all roads lead to the big Fair, and especially to this great stock show in the immense rotunda, stables and grounds. The pavilion has a seating capacity for 10,000. It is modeled after the great Coliseum at Rome. The arena is devoted to the judges and those directly interested—located in the center under a sheltered stand—while all the space around them is the standing room for the animals, leaving a wide ring-space next the audience for trotting, racing and the various displays of horsemanship, during the time that the grave judges are critically eyeing the mild cud-chewing cattle and sleek groomed horses.

From the 25th of August to the first week of September this careful scrutiny has been going on, reviewing 1100 horses and 1275 cattle. Later there will be about 2000 sheep and 1500 swine brought into the great arena, and their points of excellence noted. This immense number, with their keepers, all comfortably housed and, in many cases, luxuriously quartered, form a good-sized fair of great attractiveness. In the south end of the grounds are 40 stables, 200x42 feet, fitted with ample stalls and filled with the choicest possessions of noted stock-raisers and stock-fanciers. Here may be seen great Clydesdales and Percherons, the tiny Shetland ponies, the fiery Russian trotter, the beautiful Arabian, the light-draft French and sleek German coach horses—all high-bred aristocrats as they looked when brought in and marched around the great arena, amid music and applause. Surely if our democratic country boasts of no biped aristocracy, the spirit is abroad in the land among the quadrupeds. While the biped owner is unable always to tell even the birthplace of his grandfather, and as often might not desire to, he rises proudly to the assistance of the quadruped and brings forward printed proofs of pedigree through numbers of generations. The family tree is all mapped out in red and blue lines, to show the relationship and nice family ties of noble origin. The whole genealogical history of uncles, cousins and aunts of each aristocratic visitor appears under the leading name, framed and hung with the prize number, and often a fine picture of the stall incumbent, showing how he looks his best while posing for the photographer. You ask the

keeper if the animal is gentle and would allow one to just touch, as it were, the edge of the shining coat. You speak in a respectful tone, with the thought that your words are weighed and measured as, before liberty and assurance of safety is given, "Bezpodobny"—without a spot—the beautiful—turns to regard you with a high-lifted head and you step back, as you fancy a sigh has just escaped the distended nostrils. He seems to think the pressing crowd utterly without breeding, as it chatters familiarly about his imperial prize at St. Petersburg, and six or more gold medals of his aristocratic line, reaching back from "Smetanka"—cream—the cream of all Arabian stallions imported by Count Orloff into Russia in 1775.

In the next stall of the Russian barn, stands "Ziona," meaning "the earth in winter," a light-gray, five-year-old mare with a brand on the right side of her neck, of the Imperial Crown—a close relative of "Bezpodobny" and "Smetanka"—without spot or blemish. We were told that she has the highest record of all the Arabian steeds and has just been sold for \$150,000.

Another close relative of "The Beautiful" and "Cream" is "The Lovely" or, in Russian, "Bezotvetany." It is jet-black and pure-blooded Arabian, recently sold for \$125,000. Then there are, translated from the Russian, "The Sire," "The Firey," "The Snorter," "The Gay," "The Bold," "The Clean," "The Agreeable," "Comely," "Light-foot," "Water Sprite," "Zenith," and many others with their characteristic names, for the most part.

They are denominated Standard Orloff Trotters, (Light Type) and (Heavy Type) of pure Arabian descent. Among the aristocrats are beautiful saddle animals notably, "Priyatel"—The Agreeable—black with white spot between nostrils, the near fore foot white, 16½ hands high, four years old. In Russia it has received two gold medals.

A brief description of the Russian high-bred horses, that are brought all the way from that distant land, to show the Americans and the rest of the world the great interest in the careful breeding of stock by the nobility, is presumed may be acceptable to the readers of the PRESS, and a personal sketch of the great Russian breeder, the late Count Alex. G. Orloff-Tchestsensky, will lend additional interest. Whenever Russian horses are mentioned either in Europe or America, to-day, the name of "Orloff" is invariably mentioned, so closely is the personality of Count Orloff associated with the improvements in the breeds of domestic animals, especially in dogs and horses.

Count Alexis belonged to a poor but noble family; exceedingly handsome, abounding in health, full of mental power and physical energy; a fine statesman, successful general, ever imbued with the desire of promoting the industries of his country and serving his countrymen. At home his chief recreation was with his horses and care in careful breeding. At last his success became so marked with trotters that the Orloff horses became world-wide in fame.

His highest ideal, or typical horse, was the Arabian, but he also desired to adapt it to the needs of European life, and so set about increasing the volume of its body, strengthening its muscles and increasing its thickness of hair to ward off the rigors of winter and at the same time retain its general beauty, noble carriage and fiery energy. So first he mated Smetanka, the cream-white Arabian stallion, with a large-boned Danish animal. The progeny of these two was mated to a muscular Dutch mare, celebrated as a trotter; this produced a horse of powerful muscles and an elegant trotter.

This point gained, he next started in to improve the shape, striving to gain a leaner animal with more rounded parts, by an admixture of English or Arabian blood. The result was three fine animals from which have come nearly all the Orloff trotters. These Orloff trotters, for convenience, are divided into two classes, light and heavy trotters, and are now on exhibition at the World's Fair—the finest examples of nearly a century and a quarter in selection of best qualities for our noble animal.

It is most instructive to the novice in this line, as well as to the expert, to compare the origin of these high-bred animals with our American trotter, and a study showing the degree of influence in careful selection may be easily shown by diagrams that are hung upon the walls of the Russian barn. They show the crossing done in Russia during 120 or more years.

After establishing the desirable form of the trotting horse, Count Orloff realized the weight of their cumbersome carriages and so decided that these fine forms of horse must be made permanent through a thorough system of regular trotting exercises at different distances, carefully noting speeds by a stop-watch, and insisting on a strict regular motion. This method developed power and endurance. "Short brushes" he considered most important in developing trotters, and this system, in use by Count Orloff 120 years ago, is almost identical with the best training of to-day, so we are told.

While such fine and successful results have come about by these Russian and European neighbors, the American, ever on the alert for the best in all directions, has not been sleeping or dozing over the horse problem, as Palo Alto stables utter testimony, and will still move in the future, through the great painstaking and tender mercy of the "Colts' Kindergarten," in which Mrs. Leland Stanford, with her late lamented husband, almost daily watched over that no whip, harsh word or loud voice should injure the tender sensitiveness of the delicate, high-bred creatures, believing that horses are liable to ruinous nerve shocks as sensitive human beings.

In closing the subject of horses, it must be noted that M. W. Dunham, of Wayne, Ill., has the largest importing and breeding establishment in the world and we are told he has nearly 100 on exhibition at the Fair, including Clydesdales, Percherons, and French coach horses. We mention Oaklawn Farm and Mr. Dunham because he has, amid many difficulties during 20 years, succeeded in raising a high standard of excellence in the home-bred product, sparing no pains or expense importing and competing with all nations, and now at this great world's con- gregation of horses he brings the choicest of his hundred

and more prize-winners to show by comparison that America is not behind European royalty in the aristocracy of horse flesh.

MRS. J. G. LEMMON.

Chicago, Sept. 1, 1893.

THE DAIRY.

The New Organization of Dairymen.

We alluded last week to the meeting in Petaluma for the organization of a State Dairymen's Association. According to the report in the *Imprint* quite a large number of the leading dairymen were present, and the meeting was an enthusiastic one in all respects. Albert P. Martin was chosen chairman and Samuel Watson secretary. After the election of directors, articles of incorporation and the constitution and by-laws were read and adopted.

Speeches were made by several of the prominent members present, and nearly all those present signified their intention of joining the organization; several renters, however, not signing until more signatures of landlords were obtained, and others deferring action until they could more thoroughly learn the object and workings of the proposed association.

Messrs. L. Tomasini, Wm. S. Pierce, J. B. Burdell and A. P. Martin and other prominent dairymen were present and labored energetically in behalf of the new association. They are confident that much benefit will be derived by all concerned should the projected plans be carried out. The objects of the association will be to promote, by all lawful and feasible means, the advancement of the dairying business in the State. The first object is educational; an interchange of views and methods will result in daily literature adapted to this coast. It is recognized that California dairying is not up to the standard of eastern dairy States in practice and results, and that the dairymen can assist each other toward better and more modern methods and appliances, improvements in breeds, establishment more generally of neighborhood creameries and other economic methods, by co-operation and organization than single-handed.

For these and other allied purposes a California State Dairymen's Association is desired and the future programme for such an association can be determined by the interest taken by all concerned in the welfare of the organization. It is proposed to hold quarterly meetings in different counties in order to discuss questions of interest and to promote the general objects of the associations.

Elliott McAllister of San Francisco, State Senator from the Eleventh district, drew up the articles of incorporation and assisted in the organization, as did Assemblyman E. E. Drees of this city.

Jas. B. Burdell was elected president; Wm. Niles of Los Angeles, first vice-president; A. P. Martin, second vice-president, and Wm. Russ of Humboldt, third vice-president. The following directors were elected: James B. Burdell, Wm. Niles, Wm. Russ, P. Tognozzini, R. H. Brown, T. Duffy, M. Lynn, George Mason, A. P. Martin, Wm. S. Pierce and Sam E. Watson.

Executive Committee—R. H. Brown, Wm. Niles and president.

Credential Committee—Geo. Mason, Wm. Lynn and president.

Finance Committee—T. Duffy, P. Tognozzini, A. P. Martin.

Temperature for Cream.

Miss A. E. Maidment, an English dairymaid, gives the following sensible and practical directions on this important subject:

In preparing the churn, scald with boiling water, and immediately cool with cold water. When the temperature of the churn is reduced to that of the prepared cream it is ready for use. Decide the temperature of cream for churning according to that of the surrounding air. The following table may be safely adopted:

Temp. of air.	Temp. of cream.
66 degrees.	55 degrees.
64 "	56 "
62 "	57 "
60 "	58 "
58 "	59 "
55 "	60 "

To heat the cream, place vessel containing it in hot water and stir continually so as to warm equally. Be very careful not to warm it too much or the butter will be injured, and the water into which the vessel of cream is plunged should not be more than 100° F. At any time when the temperature of the air is above 55 degrees take that of the cream over night, and if over 60° cool it by the best means at command. [In this country where ice and cold water are often unattainable cooling can be best done by wrapping the can with wet cloths and placing it where a draught of air can play constantly upon it. The cloth should be kept wet, which can be done by having it fixed so water can drip slowly upon the top of the cloth, or so moisture can be drawn up by placing the bottom of the cloth in a vessel of water.—ED.]

It is better to reduce the temperature to a point too low for the purpose (for it can be easily warmed again) than to have it even a few degrees too warm when required for churning. If the cream is too thick for free churning, it may be corrected by adding water, which, carefully mingled with it, will help in reducing the temperature, if that is necessary. Cream churns best when yielding three pounds of butter to every gallon. The thermometer (without which dairy work cannot be properly carried on) should be of glass, as most easy to keep clean. It is well to have a good and reliable instrument of the ordinary type hanging in the dairy, to register the changes of the temperature of the air and to serve as a standard for the glass instruments used with the cream. Having such, do nothing by guess-work; note the conditions affecting your work; do not judge by the season, but only by the temperature of the air.

RURAL IMPROVEMENT.

Annual Address at the State Fair.

In the pavilion at Sacramento, on the evening of Sept. 7th, Hon. John Boggs, President of the State Board of Agriculture, delivered the following thoughtful address:

Ladies and Gentlemen:—It is with pride that, on behalf of the society, I welcome you to this, the fortieth annual exposition of the State Agricultural Society. The financial condition of the country did not seem favorable this year for a successful exposition of the industries of the State, yet we do not perceive any diminution either in the scope or varieties of the exhibits or in the number of the attendants.

The year 1893 is a phenomenal one in the history of the State. It has been full of alarms, yet no panic has ensued; traffic has been, to some extent, suspended, yet there have been few insolvencies. There has been a bountiful harvest of wheat which has had to be stored while awaiting better prices, and the products of the orchards, though abundant, have not been so profitable as in the past, yet there has been no wide or manifest distress.

In the midst of a stringency in the money market, the people of San Francisco are making a stupendous effort to hold a Midwinter Fair. Nearly half a million dollars have been subscribed in that city alone, while nearly every county is preparing to exhibit the products of its soil and manufactures. When the doors of the magnificent structures shall be open to receive the contributions of this and other States and of foreign countries, there will have been expended one million of dollars. The fair will be successful and will be remembered as an exponent of the marvelous energy and constant courage of the people of the State.

CALIFORNIA HAS SUFFERED, BUT IS STRONG.

The calm consideration of the people in the past few months testifies to the stability of character of the people and is a lasting hostage to confidence in our future permanent progress. The sudden cessation of business throughout the United States, nay, over the known industrial world, has been a surprise, and many are the reasons ascribed therefor. I will not undertake to discuss the question. For my purpose it is sufficient to point out that the apparent stoppage of business in California is due more to sympathy with the rest of the United States than to our own conditions. The close of the year 1892 found us in a prosperous condition. On the 1st of January, 1893, there was in the savings and commercial banks of the State in good money, \$29,228,209 49, and in the national banks \$3,673,184.56, a total of \$32,901,394.05. On the 1st of last July there was a total of \$23,416,652.50. In the course of the year only four banks have finally had to suspend payment. Property valuations have not decreased. In 1892 the assessors assessed the property of the State at \$1,157,272,861, and in 1893 the assessment was \$1,169,673,434. In 1892 we raised 39,885,000 bushels of wheat. The Agricultural Department of the United States reports the yield for 1893 at 30,357,000 bushels. The fruit interest in 1892 was signally prosperous. According to the annual report made by Gen. N. P. Chipman to the California State Board of Trade, there was exported from the State in 1892 the following amount of fruit:

	Pounds.
Fresh fruit, deciduous.....	111,688,690
Citrus.....	69,715,000
Dried fruits.....	58,735,980
Raisins.....	53,113,320
Nuts.....	4,017,240
Canned fruits.....	77,555,820
Total.....	374,826,050
By sea.....	35,091,216
Total by sea and rail.....	409,917,266

Reduced to carloads the amount would make 20,495 carloads. There was no speculation in these products. The total wheat and fruit crops must have returned to the growers of the State not less than \$50,000,000.

In 1893, when the crops of wheat and fruit were ready for sale, we were met with a condition in the East which prevented the usual profits from these crops. But we are not discouraged. Nursery men inform me that the demand for trees for the planting of 1894 exceeds their expectations. Confidence will soon be restored in the East. It is inevitable. There is no reason for the depression in business in the United States except distrust, and that distrust was not based upon any reasonable grounds. California occupies the vantage ground over every State in the Union in times of peril. She is an agricultural and horticultural State, and her productions must be consumed. They are not luxuries which may be dispensed with, but are the actual necessities of life. Whether fortunate or not, she is not a manufacturing State, where large bodies of men are employed in single industries, which feel the immediate influence of restrictions of trade, and who are liable to be discharged and feel the pinchings of poverty. Seed time and harvest will never fail here, and the harmonious relation between the different industries will never be disturbed.

YOUNG MEN AND THEIR CHANCES.

The tillage of the soil for many years to come will be the principal industry of this State, and I am thankful to Providence that it is so. In a general way we all join in the praise of the pursuit of agriculture. We read occasionally a poem praising the plow, and listen to a speech about the dewy morn and the waving grain, or gaze with delight upon a painting of rural life, and assent to all that is said; but I fear that little thought is given to the question how important the vocation of agriculture is in the formation of character, and what an important field it offers for the exhibition of skill and enterprise. I once read a book whose opening sentence was: "I love to look upon a boy," and it made a lasting impression upon my mind. The author saw in every boy the possibility of a friend or an enemy of his race.

When I look upon the boys I meet now, that sentence often occurs to me, and I ask: "What are you going to do or be?" I sometimes ask a boy the question, but, alas! he cannot tell. He walks up to a door that formerly opened into the domain of mechanical skill, and he finds it closed. Closed here and closed there. Machinery, though it has provided labor for thousands, and multiplied the avenues of industry, has, in a large measure, prevented the education of the skilled mechanic, as we once knew him in the past. But there is a stronger force than steam that prevents the boy from learning a trade. It is the unreasoning and unjust rule of the labor union, which restricts the employers in the employment of apprentices. The boy has a right to live, a right to choose his vocation, a right to exercise the genius and brain with which God blessed him, and no men or set of men have the right to deny him these rights.

In an address delivered last Saturday night before the World's Labor Congress, Archbishop Ireland states the labor question in fitting terms. He says: "At the very foundation of the labor question lies the proper appreciation of the individual man. Here is the whole germ of all social rights and duty. Labor is not and cannot be an article of commerce, a merchantable commodity, such as bread or meat, entirely subject to the laws of demand and supply. The right of each man to obtain from his labor sufficient wherewith to live in reasonable and frugal comfort, implies antecedent right to the opportunity to work." Every laboring man must assent to the truth of the above statement, and yet, with strange inconsistency, he binds himself by a vow to deny even his own son "the right to the opportunity to work."

There is no law that forbids the young man of this State from earning his daily bread by the sweat of his brow out of the generous and kindly soil. Nature is kinder than man, and will return his caresses with affluent bounty. The early and the later rains fall upon the rich and poor, and the sun sheds his rays upon all alike. The field for labor is wide and open to all. The agriculturist of to-day is not the agriculturist of 50 years ago. He is the scholar, the student and the business man. Science has lent her aid to his vocation and opened up to him the secrets of nature. Especially is this so in horticulture, which demands the highest skill and most accurate learning. To be able to learn a trade is a fortunate thing, but in the condition of the world to-day the mechanic is more or less dependent, as every mechanic sadly knows. The whole domain of industry offers no greater surety than agriculture of realizing what the farmer Robert Burns called the "glorious privilege of being independent."

IMPORTANCE OF AGRICULTURE.

Agriculture in all its branches is the recipient of the State's fostering care. Experiment is not left to the individual alone. No State expends so much as California does for the advancement of the farmer's interests. There are organized the State Agricultural Society, and thirty-eight district societies, a State Horticultural Society, and State Board of Viticulture for which and for the holding of citrus fairs, there is annually appropriated an average of \$150,000.

Besides these societies the University of California and the Stanford University have each a department of agriculture and horticulture and the University of California is conducting six or seven experimental stations in different parts of the State. What is success in life? Ask yourself the question. It is trite to talk about the accumulation of wealth, of the very rich and the very poor, but it is patent to every man that the question will not down. We hear the murmur of discontent on every breeze from the East. We see the expression of the longing for a home that exists in the heart of the English-speaking people in the almost mad rush of thousands of people to obtain a piece of land in the country lately opened for settlement by the United States.

In the condition of the present unrest, in the unharmonious relation between capital and labor, there is a clamor for laws to mitigate the evils complained of. It is the European idea that the Government must interfere. The American idea is that the man is the unit and that the less the Government interferes with his conduct the less his energies are restrained. It seems to me to be wise statesmanship to direct action rather than to legislate after the effect of action has been felt. The hope of the country lies in changing the centers of population from the cities to the country. In 1800 one-twenty-fifth of the entire population of the United States lived in six cities; in 1810 one-twentieth in eleven cities; in 1820 one-twentieth in thirteen cities; in 1850 one-eighth in eighty-five cities; in 1870 one-fifth in two hundred and twenty-six cities; in 1880 one-fourth in two hundred and eighty-six cities. It is the congestion of population in cities which produce tumults, strikes, envy and that disparity of fortunes which is the fuel which feeds the flames of socialism and anarchism.

Congress to-day is in travail over the silver question, as if its solution solely was the panacea for our woes, yet all the speakers admit (I quote from a leading speech) "that it is to the products of the soil of the country that the financiers of the Government look to bring back the gold of Europe to maintain our financial system." California is an empire, and I speak for California alone. I speak to the young men of the State in the hope that what I say may induce them to seek in agriculture the vocation that shall give them independence and a surety of a living. For that is success in life. And right here I am led to speak of the opportunities that offer in California for successful careers.

Irving Scott touched on this question in a masterly speech before the citizens of San Francisco at a meeting called to consider the Midwinter Fair. He pointed out that opportunities met every man, and that the progress of a people lay in their energy and enterprise rather than in their environments or local advantages. He cited the city of Aberdeen, now the cheapest place in the world for the construction of ships, but which has not a single natural advantage. Connecticut controlled the copper market of the United States though the furnaces drew their ore from Michigan

and their coal from Pennsylvania. In Massachusetts a pound of steel costing 90 cents, by manufacturing comes out in the form of watch screws, worth \$90 per pound. And so human labor transmutes the raw material into forms of beauty and higher value.

OPPORTUNITIES IN CALIFORNIA.

California is rich in such opportunities. I confine myself to those connected with rural life. In a message to the Legislature Governor Markham stated that there was imported into the State in 1892 the following food products: Live stock, 40,000 tons; wool, 1500 tons; poultry, 1000 tons; eggs, 3500 tons; meats and packing-house products, 20,000 tons; cotton, 2000 tons; cheese, 1800 tons; hay, 1500 tons; potatoes, 3000 tons; flour, 2500 tons; starch, 1600 tons. We imported in 1892 7,500,000 pounds of lard, 1,300,000 pounds of lard oil, and 576,000 one-pound cans, or 30 carloads, of condensed milk. All these could be supplied by our own farmers. To the agriculturist in the East such a statement is a revelation, and if known, as it should be, should induce thousands of immigrants to the State. But there are opportunities for new crops. At a late meeting of the State Board of Trade, of which I am a member, representing Colusa county, W. H. Mills stated a conversation he had had with Dr. Otto Salomon of Germany, who was studying the resources of California. He was amazed at the resources of our State and the wasteful use of our products. It is well known that California produces the best sole leather in the world, and could produce the finest quality of other leather if we had the tanning material in abundance. The chestnut oak, from which we produce the tannin necessary to the production of leather, is fast disappearing. But Dr. Salomon says that the black wattle of Australia would grow luxuriantly in this State. The bark of the black wattle produces 22 per cent of tannic acid and sells in London for \$42 per ton, while the bark of our oak contains only 18 per cent. The cheap labor of Germany would not be a bar to the success of our tanneries, because the German tanner only works ten hides per day while the American can work 30 per day. And the difference in the product is due to the better living and quicker action of the American.

The cultivation of sugar beet offers one of the most profitable fields of industry. Richard Gird of Chino, San Bernardino county, in an article written for the book prepared by Governor Markham for distribution at the World's Fair, gives the production of beet sugar in California in 1892 at 21,083,322 pounds, and the total production in the United States at 27,083,322 pounds. The annual consumption of sugar in the United States is 3,575,000,000 pounds. To produce that amount it would warrant the creation of 300 factories of the capacity of the one at Chino. The San Joaquin and Sacramento valleys are eminently fitted for the production of sugar beets, and it only needs the stimulus of capital to engage the interest of the farmer in these rich sections of the State. The average tonnage is 15 per acre, the average price paid at the factory is \$5 per ton and the average cost of production is \$25 per acre.

Tobacco promises to be a paying crop in this State. Mr. Culp, the pioneer tobacco-planter in the State, assures me that California can produce the best cigar leaf in the United States. The average yield will be from 1000 to 1500 pounds of cured leaf. Wrapper tobacco is worth 50 cents per pound, and other leaf 20 to 25 cents per pound.

Tree culture is no doubt profitable. Locust timber is in demand at high prices. This is the practical part of this address. My aim is to point out the innumerable resources open to the people of the State. We should not content ourselves with grain and fruit. The exhibition at the Columbian Exposition will attract thousands of people to our State, and we should be prepared to inform them of the avenues of wealth open to them. The opportunities for industrial occupation are here, as Mr. Scott said, by the thousand. We are treading on them daily, only we do not appreciate them.

What I have said has been merely by way of suggestion, and the topics have not been treated with the elaborateness their importance demands. I have tried to point out the better security which agriculture affords over other industrial pursuits for permanent employment and independence. So much is addressed to the man as affecting his material progress. But the State has a deeper interest in his mental and moral well-being. The character of the people distinguishes the State and gives form and force to her institutions. The people who are engaged in rural pursuits have always been distinguished for sobriety of conduct and stability of character, for good morals and sturdy defense of their liberties. It is claimed that intellectual progress is slow among country people, but it can be said, at least, that their conservatism saves them from embracing many isms that are only born to vex and confuse. The "Man with the Hoe," which is the subject of a painting by a French artist, expressive of the despair of the peasant of France, is not the man with the hoe of America. The last is a man of faith, and faith is triumphant. He is individualized and not lost in the common mass.

For our own State I cherish the highest hopes. The geniality of our climate, the productiveness of the soil, the ease with which the soil is tilled, the certainty and generosity of its yield, and the traditions of the past which stimulate to high endeavor, all conspire to produce the highest type of rural manhood. The inspiration will be the homes which shall dot every sheltering vale and sloping hill; homes which shall be the nourishers of love and temples of worship, in which may fitly be sung the two sweetest songs in the English language, "Home, Sweet Home" and "Nearer, my God, to Thee."

May such homes multiply, may homely joys divert, may love and worship go hand in hand, smiling, and may the dwellers look out upon a sunny land,

Where meadow, grove and stream,
The earth and every common sight,
To them shall seem
Appareled in celestial light;
The glory and the freshness of a dream.

THE HOME CIRCLE.

The Minister's Daughter.

In the minister's morning sermon
He had told of the primal fall,
And how henceforth the wrath of God
Resteth on each and all.

And how of His will and pleasure,
All souls save a chosen few,
Were doomed to the quenchless burning
And held in the way thence.

Yet never by faith's unreason
A saintlier soul was tried,
And never the harsh old lesson
A tenderer heart belied.

And after the painful service
Of that pleasant Sabbath day,
He walked with his little daughter
Through the apple bloom of May.

Sweet in the fresh, green meadows
Sparrow and blackbird sung;
Above him their tinted petals
The blossoming orchard hung.

Around on the wonderful glory
The minister looked and smiled,
"How good is the Lord who gives us
These gifts from His hand, my child!"

"Behold in the bloom of apples
And the violets in the sward,
A hint of the old lost beauty
Of the garden of the Lord!"

Then up spake the little maiden,
Treading on snow and pink:
"O father! these pretty blossoms
Are very wicked, I think."

"Had there been no Garden of Eden
There never had been a fall,
And if never a tree had blossomed,
God would have loved us all."

"Hush, child!" the father answered,
"By His decree men fell;
His ways are in clouds and darkness,
But He doeth all things well."

"And whether by His ordaining
To us cometh good or ill,
Joy or pain, or light or shadow,
We must fear and love Him still."

"Oh, I fear Him," said the daughter,
"And try to love Him, too;
But I wish he was good and gentle,
Kind and loving like you."

The minister groined in spirit
As the tremulous lips of pain
And wide, wet eyes uplifted
Questioned his own in vain.

Bowing his head, he pondered
The words of the little one;
Had he erred in his life-long teaching?
Had he wronged to his Master done?

To what grim and dreadful idol
Had he lent the holiest name?
Did his own heart, loving and human,
The God of his worship shame?

And lo! from the bloom and greenness,
From the tender skies above,
And the face of his little daughter,
He read a lesson of love.

No more as the cloudy terror
Of Sinai's mount of law,
But as Christ in Syrian lilies
The vision of God he saw.

And as when, in the clefts of Horeb,
Of old was His presence known,
The dread, ineffable glory
Was infinite goodness alone.

Thereafter his hearers noted
In his prayers a tenderer strain,
And never the gospel of hatred
Burned on his lips again.

And the scoffing tongue was prayerful,
And the blinded eyes found sight,
And hearts, as flint aforetime,
Grew soft in his warmth and light.

—John Greenleaf Whittier.

"In God's Own Country."

A Sketch.



LOOK at her, mates!" cried the old man, stretching his arm with an indignant gesture to where the staunch little whaler lay in mid-stream, spick and span as paint could make her. "Look at her! She looks like a painted Jezabel, so she does. If it wasn't for the cut of her jib you'd never know as she'd been as decent a little woman once as ever walked the water."

It was the day, last summer, when the Peary relief expedition set sail from St. Johns, Newfoundland, on the Kite, in search of the missing explorer.

Mrs. Wentworth and her husband were among the crowd of New York tourists who chanced to be in St. Johns, and had come to bid the voyagers God-speed.

At the end of the wharf stood a knot of old salts, grumbling audibly. The leader, who had spoken out his indignation, was an old sea-dog, gray-haired, but hearty still, and bearing old ocean's hall-mark on every inch of him.

"Who is the woman in the case?" asked

Mrs. Wentworth of Michael Hawburne, who had appointed himself her guide.

"It's no woman at all," laughed Hawburne. "It's the ship. He's talking of the Kite. It's a way we Newfoundlanders have, you know. We paint our ships once in a lifetime. That's when they're built. After that, any old sea-dog will tell you that he'd sooner think of gilding a lily than painting his boat. It's sure to bring them bad luck, they say. By the way, Mrs. Wentworth, you ought to know old Ballister. He's a great character. Your collection of natural bric-a-brac won't be complete until you've added Ballister to it. I suppose you have no objections to human curios, as well as inanimate ones. Don't step on any of his religious corns, and you'll have him your devoted slave in half an hour."

"Is that Pilot Ballister?" broke in Dorothy.

"Yes, that's he. Jonah's his first name. He was christened Jonah because he was born in a whale's inside. Oh, yes, he was, really. It was his father's ship—the Whale, you know. He's been a navigator ever since."

"Stop talking, and do present me," laughed Dorothy. "He's the man above all others that I want to know. I want him to help—How do you do, Mr. Ballister?" she added, as in answer to a call from Hawburne, Ballister came forward, hat in hand. "I've just been telling Mr. Hawburne how much I wanted to know you."

The old man bowed profoundly.

"Welcome to God's own country, lady," he exclaimed. "Strangers, so long as they ain't a Frenchman, is always welcome within our gates."

"Well, I'm not a Frenchman, whatever my faults may be," answered Dorothy, smiling straight into the old man's eyes. "God's own country," she repeated; "what a lovely name! Is that what you Newfoundlanders call the island?"

Ballister's eyes smiled back.

"God's real own country lies out yonder," he said, pointing out through the narrows to where the sea lay, smooth under the rays of the July sun.

His voice grew more serious as he spoke again.

"The sea's a monarch, and God rules. It ain't got no governor-general, and the fish is the honestest of politicians. Even the sharks is good citizens, and lives according to their lights, while on shore here—but pshaw, I'm talking foolish, lady!"

As he spoke, the Kite moved off, amid the last cheers, and the eager crowd began to melt away.

Then Dorothy, turning to Ballister, broached the subject which at that moment lay nearest her curio-loving heart.

"Mr. Ballister," she said, "I want you to help me. Oh, it's nothing hard. Only I've fallen in love with a clock down here, and everybody tells me that I shall never be able to get it. I saw it, just by chance, the other day when I was walking along Signal Hill. The door of a tiny house, which looked for all the world like a sailor's cabin, stood open, and I peeped in, and there I saw it ticking away in the corner—the loveliest old grandfather's clock you ever saw. I've dreamed of it ever since, and really I'd give my eyes to get it, Mr. Ballister. I wonder if you've ever seen the one I mean?"

"Yes, lady," he answered, "I know that clock. That clock has been tried by fire, it has. But you'll never be able to buy it, lady. It's mine."

"Yours!" she cried, catching hold of his coat-sleeve in her eagerness. "Yours! Why, I never dreamed it was yours, Mr. Ballister. At the hotel they told me that there was only one man in St. Johns who could prevail upon the owner of that clock to part with it, and that man was Pilot Ballister. I supposed that it belonged to some friend of yours."

"No, lady, it's my very own. I couldn't part with it for its weight in gold."

Dorothy could not conceal her disappointment.

"Oh, but, Mr. Ballister, I would give you any price for it. Why—"

"Why?" he interrupted softly. "Why, lady? Well it's a long story, but if you'd like to hear it I'll tell you why I couldn't give the clock away."

Dorothy sat down on a rock overlooking the bay.

"I couldn't never part with it, lady, because that clock was my wife's engagement ring. I'm a widow-man, lady," the old man said earnestly, "and that clock was my wife's engagement ring."

"In our courtin' days my wife as was to be had said to me: 'Don't get me no engagement ring, Jonah, but get something as will be useful about the house.'"

"There was an auction sale that week, and I went to it, and there I saw that clock. Four young married couples were a-bidding

on it, but I outbid them all and carried it off to Beulah. When we were married we put it up in our bedroom, right alongside the chimney."

"The year the baby was born was the best sealing season I ever seen. We came home laden down with 'em. We got in just afore daybreak one Monday, and I started for home on a run, without speaking. Just as I got within sight of home—it was just there where you're sitting, lady—I stopped to catch my breath. The sun came up. I looked eagerly out for the little house. The chimney was standing, that was all. Even the walls had disappeared. I rushed forward; there was no home, no wife, no baby."

"Later on the neighbors came and told me all that had happened."

Ballister paused for an instant and wiped his eyes.

"My wife's and baby's bones were found in the ashes, and that was all, except—the clock."

"The clock?" said Dorothy.

"Yes, lady; that is the strange part. There was the clock, scarcely scorched. Its face was blackened but withstood the fire, and just as I came up it struck five—strange sounds they were in that desolation and loud as cannon-balls."

Dorothy was crying softly. She sprang to her feet and seized the old man's hands, while the tears stood on her cheeks.

"Mr. Ballister," she said, "I can never forgive myself for touching your old sorrow like this. But you'll forgive me, won't you? I did not know on what sacred ground I was treading."

He took her hand and patted it gently, as though it were that of a little child.

"That's all right, lady. You've done me good. The best of us is better for a turn at the pump now and then. It's many a day now since I've piped an eye."

"He's the noblest old creature I ever met, Tom," she said to her husband later, as she brushed her hair and told him Ballister's story.

At that very moment Ballister, in his cabin, was sobbing his heart out.

"She's enough like Beulah to be her twin," he was saying to himself. "When I first laid eyes on her I said, 'It's Beulah's ghost, dressed up for Sunday, with rings on her fingers and a new name.' I wouldn't let her know it for a gorge of seals—not for a gorge of seals. It would make her feel bad if she knew as she was harrowin' old times for me like this. I'll never say nothing, but as long as she stays here I'll just make believe as it's Beulah as has been away and has come back."

The Wentworths stayed two weeks in St. Johns, and during all that time Ballister was Dorothy's constant attendant. They scoured the country for miles around, and found no end of treasures in mahogany and brass.

On the day before they sailed for New York, Ballister asked if he might take all of Dorothy's treasures up to his cabin and pack them away in a chest.

"I know how to fix things to send to sea, lady," he said. "I'll see that nothing gets broke."

Dorothy thanked him and consented.

If any one had peeped in through Ballister's window that night, he would have witnessed a strange sight. There was a bare spot on the wall, where the clock had hung. The clock lay on its back on the kitchen floor. Over it stood Ballister, his weather-beaten old face furrowed with perplexity.

Before him stood two chairs. "This," he said slowly, touching one, "this is Beulah, and this," touching the other, "this is the lady. Now, I'll count."

Then, standing midway between them and moving his finger at each word from one chair to the other, he began:

"Annie, Orry, 'Ikery, Ann, Filsey, Falsey, Nicholas, John, Queeby, Quabby, Irish Mary, Stickeren, Stackeren, Johnnie—Co—Buck."

The last word fell to Dorothy's chair. A great sigh broke from him.

"It's done," he said.

Without an instant's pause, he pulled some old clothes out of a cupboard and began to wind them slowly around the clock.

It looked like an attenuated corpse in its winding sheet, when at last the old man's work was done. He lifted it in his arms as gently as though it were a sleeping child, and laid it down in the packing-case.

Just as the day was breaking, with his packing-case carefully balanced on his shoulder, he started for the Miranda's dock. When, six hours later, the Wentworths came down to look after their luggage, the packing-case had been stowed away in the hold.

The parting was a simple one. When all the other good-bys had been said, Dorothy held out her hand to Ballister.

"Mr. Ballister," she said, while tears stood in her eyes, "I shall never forget you."

The whistle blew again, cutting her words short. Ballister snatched up her hand and kissed it with a gentle deference.

"Good-by, lady," he said; "God bless you, and come back to God's own country soon again."

"I will, Mr. Ballister, I will," she shouted, as the ship slipped away. "God bless you! I shall never forget you, never."

She had been at home for several days before, in the bottom of the packing-case, she found Ballister's gift. When she did, she cried over it a little, then sat down and wrote Ballister a letter:

If I kept your gift, dear Mr. Ballister, the blank space on your kitchen wall would haunt me forever and ever. No I thank you from the bottom of my heart, but it is not right or just that I should keep what you prize so. You must keep it near you always, for Beulah's sake. And now, with my best love, believe me, Your affectionate friend,
DOROTHY WENTWORTH.

And as soon as the mail could bring it, an answer came in a cramped and scrawly hand:

DEAR BEULAH:—Oh, how good you were to me. I shouldn't never have ventured to write to you if it hadn't been for your letter. The clock has come. It looks fine, and ain't lost a second since it left this port. It's a good sailor. I'm so lonely, Beulah. Do come back. I know it is asking a good deal of you, but I pine for you sorely. Even the sea has lost its salt for me since you have gone. But such things can't be. So the Lord has willed it. I keep saying, "Beulah, Beulah," all the time. I call you that because you was so like her that it was just as if Beulah had been away and learned grammar and then come back to me again. Give my best respects to your husband. There will be lots of trout next season. And now, dear Beulah, I'll say good-by, and come back to God's own country as soon as you can. Yours forever, J. BALLISTER, Pilot.

Over and over Dorothy read the pathetic letter. Then, as she locked it in her davenport, she said to Tom:

"In your very most ardent days, Tom, you never wrote me so beautiful a love letter as that."—Acton Davies, in Fashions.

Watermelon Pickles.

"Harper's Bazar" gives the following recipe for preparing this pickle, the material for which is found in almost every household:

Peel the rinds with a sharp knife that will take off the green skin evenly. Trim off also every trace of the pink flesh of the fruit, because it is too juicy to make a firm, crisp pickle. Then cut the strips of rind into small pieces two or three inches long, and, placing them in a large earthen dish, sprinkle them lightly and evenly with salt. Cover the dish and let it stand over night.

In the morning drain off the water that will have formed, rinse the rinds in cold water and cook them in a steamer until a broom split will readily pierce them. Cooking the rinds by steam is an easy method, as they are less liable to burn than when cooked in the spicy vinegar. When the rinds are tender, take them out carefully with a skimmer, and put them into a stone jar.

Take good cider vinegar for the basis of the pickle. Allow a pound of sugar to a pint of vinegar, and add also half an ounce of stick cinnamon, broken into inch pieces, and a half teaspoonful each of whole cloves and blades of mace. The whole amount of sugar, vinegar and spices used must, of course, depend on the quantity of rind to be pickled, but a quart of vinegar is usually sufficient for the rinds of a medium-sized melon.

Boil the vinegar, sugar and spices together vigorously half an hour, skimming off the froth, and pour the pickle boiling hot over the rinds. Press the rinds down under the pickle by means of an earthen plate or saucer, fasten the cover on, and tie a cloth over the whole. These pickles will be ready for use in two weeks.

Reflections.

How little anything costs that is to be paid for in the future!

Every man who has a pain exaggerates in telling how much it hurts.

As people get a little older they can be very happy without making any noise.

People always look disappointed to hear that a sensation is not as bad as reported.

People are becoming so polite that when you want an honest opinion from them you can't get it.

Give a girl a dollar as the basis of a future fortune, and she will spend it on having her fortune told.

It makes no difference how innocent a man may be. If he is suspected, everything he does is a sign of guilt.

There is a great deal of difference between keeping a horse on its feet and raising one up by the tail after it is down.

—Atchison Globe.

Love Lightens Labor.

A good wife rose from her bed one morn
And thought with a nervous dread
Of the piles of clothes to be washed and more
Than a dozen mouths to be fed.
There were meals to be got for the men in the field,
And the children to fix away
To school, and the milk to be skimmed and churned;
And all to be done that day.

It had rained in the night and all the wood
Was wet as it could be,
And there were puddings and pies to bake
And a loaf of cake for tea.

The day was hot, and her aching head
Throbbled wearily as she said,
"If maidens but knew what good wives know,
They would be in no hurry to wed."

"Jennie, what do you think I to'd Ben Brown "
Called the farmer from the well;
And a flush crept up on his bronzed brow,
And his eye half bashfully fell;
"It was this," he said, and coming near,
He smiled, and stooping down,
Kissed her cheek, "'twas this, that you were the best
And dearest wife in town."

The farmer went back to the field, and the wife,
In a smiling and absent way,
Sang snatches of tender little songs
She'd not sung for many a day.
And the pain in her head was gone, and the clothes
Were white as foam of the sea,
Her bread was light, and her butter was sweet
And golden as it could be.

"Just think," the children all called in a breath,
"Tom Wood has run off to sea!
He wouldn't, I know, if he only had
As happy a home as we."

The night came down, and the good wife smiled
To herself, as she softly said,
"Tis sweet to labor for those we love—
'Tis not strange that maids will wed."

Things to Remember.

Never put left-over food in tin vessels.
Lemons will keep fresh for weeks if covered with water.

For taking blood-stains from white goods, nothing equals kerosene.

Dip fish in boiling water for a minute and the scales will come off more easily.

Vegetable, scrubbing and other brushes should be kept with the bristles down.

Sadirons will not scorch if they are first wiped on a cloth saturated with kerosene.

Rub soft, not melted, lard over the top of the bread before baking, and wrap in a damp cloth with a large dry one over after baking, and there will be no hard crusts.

The fumes of a brimstone match will remove berry stains from the fingers.

Tar stains are removed by applying oil, and then removing the oil with benzine.

In packing gowns, they will be found to crease very little if paper is placed between their folds.

Moist hands are frequently relieved by bathing them in lukewarm water containing a teaspoonful of borax or ammonia.

If a shelf in the closet is infected with red ants, carpet it with flannel, and the tiny insects will not attempt to invade that limited precinct.

A sponge large enough to expand and fill the chimney after having been squeezed in, tied to a slender stick, is the best thing with which to clean a lamp chimney.

In some of the tests in bluing it has been discovered that certain properties in poor bluing, combining with qualities of certain soaps, will produce an iron rust or stain in the clothing.

To draw linen threads for hemstitching, take a lather brush and soap and lather well the parts where the threads are to be drawn. Let the linen dry, and the threads will come out easily, even in the finest linen.

A good bleacher and stain-remover from cotton or linen is made by pouring boiling water on chloride of lime in the proportion of one gallon to one-quarter of a pound; bottle it, cork it well, and, in using it, be careful not to stir it. Lay the stains in this for a moment, then apply white vinegar and boil the table linen.

They were asked at a large wholesale furniture store the other day what they employed to keep their stock in order. This polish was recommended as all that they ever found necessary: One-third turpentine and two-thirds sweet oil, applied with a soft cloth.

If you have any trouble in securing perfect cleanliness about the kitchen sink and drain-pipe, have a little concentrated lye sprinkled over the strainer every night. Some of it, of course, is washed into the pipe, and there unites with the grease and forms strong soft soap. As soon as there is boiling water in the morning, pour a gallon of it down the pipe. This will cleanse it thoroughly.

Origin of Grain.

Nearly all the grains now in use are of unknown antiquity. Wheat was cultivated in all latitudes as far back in the past as we have authentic knowledge. Barley is thought to have originated in the Caucasus,

but it was known and used everywhere in the most ancient times. Oats, like rye, was unknown in ancient India and Egypt and among the Hebrews. The Greeks and Romans received it from the north of Europe. Had there been an early civilization on the continent the wild oats found here and there would probably have developed into the useful cereal now considered absolutely essential to the proper nourishment of horses.

This continent is credited with having given Indian corn to the Old World, but this useful cereal was doubtless known in India and China many hundred years before the discovery of America. Cotton was used for making garments in India at a date so remote that it cannot even be guessed at. The fact is mentioned by Aristotle. The first seeds were brought to this country in 1621. In 1666 the culture is mentioned in the records of South Carolina. In 1736 the culture was general along the eastern coast of Maryland, and in 1776 we heard of it as far north as Cape May.

Monkey Language.

According to a letter which Prof. Garner has written to his brother in regard to his experiments with the monkey language, he has succeeded beyond his wildest hopes. He has written down nearly 200 monkey words, and considers there are only 20 or 30 more which have escaped him at present. "Achru" means sun, fire, warmth, etc.; "kukcha" means water, rain, cold, and apparently anything disagreeable; "gosku" means food, the act of eating. Prof. Garner traveled 120 miles northeast of Sierra Leone, and established his battery with the phonograph and revolving mirror in a clump of banyans, in a forest region swarming with monkeys. "The glitter of the mirror soon attracted a host of chattering monkeys. I watched them for an hour, and then cautiously approached. They disappeared like magic when they saw me, all but one, a chimpanzee.

"When I got close to it I found that it took no notice of me, but stood as if transfixed, with widely-opened eyes and dilated pupils, gazing at the mirror. There was a slight tremulous motion in the limbs and a spasmodic twitching of the ears. I could hardly believe it—the animal was hypnotized. It was making a guttural sound like 'achru.' When I subsequently listened to the phonogram I found that a similar sound was frequently recorded thereon, amid what was then to me an unintelligible jumble of monkey chatter. I put the monkey in a bamboo cage, and on examining it about an

hour afterwards found it still under the hypnotic influence. I revived it with a good strong sniff of ammonia, and held a lighted taper before its eyes. It was quite tractable and said 'achru,' and a few more tests satisfied me that this word embodies the idea of heat, light, warmth and brightness. Other words followed, and it was wonderful to take note of his awakening intelligence."

The Sun and the Stars.

The sun is a star, and the stars are suns. This fact has been a familiar one to astronomers for many years. That the stars shine by their own inherent light and not by light reflected from another body, like the planets of the solar system, may be easily proved.

That many of them at least are very similar to our own sun is clearly shown by several considerations. Three facts prove this conclusively. First, their great intrinsic brilliancy, compared with their small apparent diameter—a diameter so small that the highest powers of the largest telescope fail to show them as anything but mere points of light without measurable magnitude.

Second, their vast distance from the earth, a distance so great that the diameter of the earth's orbit dwindles almost to a point in comparison. This accounts satisfactorily for the first fact. Third, the spectroscopy—that unerring instrument of modern research—shows that the light emitted by many of them is very similar to that radiated by the sun.

Their chemical and physical constitution is, therefore, probably analogous to that of our central luminary. The red stars certainly show spectra differing considerably from the solar spectrum, but these objects are comparatively rare, and may, perhaps, be considered as forming exceptions to the general rule.—Gentlemen's Magazine.

Responsibility in Household Management.

It is woman's province to control and manage the household. Whether she does it wisely or unwisely rests with herself. No one else can absolutely fill her place. She should, therefore, study the phases of home affairs with the same application and assiduity that she would give to a difficult problem, which may require weeks, months, even years' to work out, but which in the end must be solved.

A man enters the arena of business with the full purpose of being master of whatever he undertakes. He knows that he must succeed. Reputation, social position, comfort,

progress, the happiness of his family, even life itself, may depend upon his efforts. If woman would feel the same responsibility in regard to her home—that she must succeed in making it a peaceable, health-giving, moral-giving abode, and would never waver until she had accomplished it—we should reach a state of advancement in the understanding of life which, except among some in the cultured classes, is not general today. I do not maintain that the study of household science will enable woman to do all this, but such study will help greatly, perhaps more than anything else, toward that end. It is one of the important factors in that result, and if for no other reason than that it will make life for women in the performance of their household duties pleasanter, more satisfactory, sweeter, easier, it is more than worth trying. To work in the dark is ever perplexing; to work in the light of intelligent understanding is one form of happiness.

The study of household science, taken in its full and broad sense, leads into boundless fields of research. The phenomenon of heat, the currents of the air, the life and chemical nature of the products of the earth, the mysterious and complex processes of nutrition, fall almost without mention into such work; the sciences of chemistry, physiology and bacteriology are its foundation stones; in fact, whatever bears upon the physical life of man is included in it.—Popular Science Monthly.

An Old-Fashioned Girl.

She can peel and boil potatoes, make a salad of tomatoes, but she doesn't know a Latin noun from Greek.

And so well she cooks a chicken that your appetite would quicken, but she cannot tell what's modern from antique.

She knows how to set a table, and make order out of babel, but she doesn't know Euripides from Kant.

Once at making pie I caught her—Jove! an expert must have taught her—but she doesn't know true eloquence from rant.

She has a firm conviction one ought only to read fiction, but she doesn't care for science not a bit.

And the way she makes her bonnets, sure, is worth a thousand sonnets, but she doesn't yearn for "culture" not a whit.

She can make her wraps and dresses till a fellow fast confesses that there's not another maiden half so sweet.

She's immersed in home completely, where she keeps all things so neatly, but from Browning not a line can she repeat.

Well, in fact, she's just a woman, gentle, lovable and human, and her faults she is quite willing to admit.

Pay the Price

Royal Baking Powder is shown by chemical tests absolutely pure and 27 per cent.

greater in strength than

any other. Many second-class

brands of baking powder are

urged upon con-

sumers at the

price of the

high-cost,

first-class

Royal. These

powders, because of the

inferior quality of their ingredients,

cost much less than the Royal, besides being

27 per cent. less strength. If they

are forced upon you, see

that you are charged

a correspondingly

lower price

for them.

of the Royal

for Royal only

PATRONS OF HUSBANDRY.

The Master's Desk.

The Executive Committee, the Master and the Secretary will have rooms at the American Hotel, Petaluma, during the session of the State Grange.

L. T. Coulter, Past Master of the State Grange, has been elected alternate by Santa Rosa Grange.

Bennet Valley Grange is to have a Harvest Feast Saturday, September 16th, 1893.

The sheep, the innocent little lamb, seems to have lost all value lately. Can't somebody do, or say something to restore wool to its proper price? Don't hit anybody or any industry when down. The time to befriend is when one is down. Rally to the support of the sheep and the shepherdess!

State Grange meets at Petaluma, Tuesday October 3, 1893. Be sure to attend. The Farmers' Alliance meets in San Francisco, October 22, 1893. A large attendance is expected then and there.

Ohio has a State election on hand this fall. Hon. Wm. McKinley, the author of the McKinley bill and the present Governor of the State, is the Republican nominee. The chances for his re-election seem more than favorable, though there are at least three other candidates before the people. The campaign has opened, and the result will be watched with unusual interest by the people without regard to political sentiment.

Santa Rosa Grange will observe Pomona Day on Saturday, September 23, 1893. A fund for the National Temple will also be started by the members on that day.

Mrs. M. E. Saxton, a member of Santa Rosa Grange, has a coffee tree in full bloom. It is a novel sight.

The reports are that several great wheat-growing countries are showing a deficit in the crop of 1893. The total shortage as given by one writer is, 360,749,384 bushels. If these statements are true, there certainly ought to be an advance in the price of wheat, and that soon.

American hay is being exported. Though there may not be much profit in the business, it will help to increase our balance of trade. We hope quite a thrifty export trade may soon spring up with Germany, England and France, and that American hay will hold its own with other American agricultural products.

"The State Good Roads Convention" has met, resolved, and proposes to meet again. No doubt much good will come from the agitation thus begun. The taxpayers will do well, however, these hard times, to keep an eye on the expense account.

State Taxes for the fiscal year ending June 30, 1894, have been levied at 57.6 cents on every hundred dollars of assessable property. To that add your County tax-levy, and then tell, if you can, how the ordinary farmer is going to meet the demands.

Encourage and assist your boy to be a better man than his father, and your girl to be a more successful woman than her mother. This is a progressive age. Improvement is the key-note to success. Have the best!

An exchange says that "The Treasury Department has recently made a ruling whereby certain classes of wool are to be admitted at a duty of about 100 per cent less than heretofore. Wool heretofore classed as 149 and 150 flamantine skin wool and 179 Kassapatchia skin wool shall be known as Servian skin wool second and third quality." These changes can not be made plain in technical terms to the ordinary wool grower, but when he knows that the price of wool has fallen from 15c, 17c and 20c to 7c, 8c and 9c, he begins to think he "heard something drop." Maybe it was the cat in the wool-bag that made the rumpus!

Some people—many people—find it easier to tell what they don't know than to tell what they do know. Perhaps this comes about the easier, because there is more unknown than known to the ordinary person.

A careful estimate made by one who professes to know, says there are 1,750,000 persons thrown out of employment since the "hard times" set in. These figures come from semi-official authentic sources where labor is employed—such sources as factories, large gold, silver, coal, iron, railroad and steamship companies and the like. It does not include clerks, farm laborers and those who are employed in small shops. When we remember that, on an average, one workman feeds three mouths, is it any wonder that many people are going hungry? But this is not all, wages have been materially reduced for those who hold employment, and as winter is fast approaching, when warmer clothing, more fuel, better food and

better housing is required, it behooves all to be sober, economic and thoughtful. It is safe to increase the above number by 250,000 persons who have been employed as domestics, porters, hostlers, laundrymen and such kindred work. This will make 2,000,000 persons out of work, and about 6,000,000 mouths, where daily bread is not being eaten in the sweat of the face. This is about one-eleventh of our population. Truly these are startling figures, and to those who live in the country they seem much out of the way. But when you reflect that in hundreds of towns and cities all factories are shut down, and that lumber mills, logging camps, mines and railroad building are almost entirely suspended in their operations, you will see the force of the figures and the approximate correctness of these statements. Agriculture is suffering its full share. Farmers everywhere complain of the pinch of hard times. Grain and live stock are so cheap that the cost of production cannot be realized. Then, too, when one sells any product he cannot get the money. A remedy for all these conditions must soon be found, else there will be unheard-of suffering and distress. The people, as well as the Nation cannot long stand this drain. Report says the nation's debt is increasing at the rate of \$300,000 per day owing to the falling off of importations. Can any one of our patrons devise a scheme whereby relief can be brought. There are as level competent heads in the grange as are to be found in Congress. The people look to Congress for relief. Let the farmers look to the grange for assistance and relief.

Executive Committee Meeting.

The Executive Committee of the State Grange met on Tuesday of this week at the office of the Secretary in this city, present Worthy Master Davis, Secretary Dewey and Messrs. Loucks and Walton. The chief purpose of the meeting was to close up the books for the year and to get the financial matters of the State Grange in shape for reporting at the meeting to be held at Petaluma. After this was done there was some general talk concerning the coming session, and it was determined to recommend that the election be held on Thursday. It was understood that an open meeting and reception would be held on Tuesday night.

Among those in attendance upon the committee meeting were Past-Master Steele of Pescadero, and State Lecturer Hoffman of Lodi. The general opinion seemed to be that the State Grange was bound to be a notable success.

Tulare on the Wool Tariff.

At the last meeting of Tulare Grange the following resolutions were adopted:

Resolved, That the production of wool is one of the most important and remunerative of the industries of this coast and has materially added to the prosperity thereof.

Resolved, We deny the assertion that the present rates of wages paid by either the producers or the manufacturers of wool can be maintained if the present duty on foreign wool is repealed.

Resolved, We regard the present demoralized condition of the wool market mainly due to the proposed repeal of duties on wool and the contemplated introduction of foreign wool into our markets free of duty.

Resolved, Our Representatives in Congress be and they are hereby requested to oppose any repeal or reduction of the present tariff on wool, such repeal being in our judgment adverse and disastrous to the best interests of this State, and particularly so of this county.

Preparations at Petaluma.

TO THE EDITOR:—Please notify our brothers and sisters that there is the prospect of a large and successful gathering of members of our order and other visiting guests to the State Grange that convenes in our city Oct. 3d.

Everything is being done to make it pleasant, and we can assure our friends a hearty welcome. Any one who wishes to seek accommodations will please address the chairman or any of the committee, who has made able accommodations for all at very reasonable terms. M. D. HOPKINS, Chairman.

THEO. SKILLMAN,

W. W. CHAPMAN, Committee.

Petaluma, Sept. 12, 1893.

National Grange to Meet at Syracuse.

The following notification has just been received from the the secretary of the National Grange:

In accordance with the provisions of its constitution and the resolution adopted at the session of 1892, the twenty-seventh session of the National Grange of the Patrons of Husbandry will be held in the city of Syracuse, N. Y., commencing on "the first Wednesday after the second Monday in November" (15th) at eleven o'clock A. M.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

Pleasanton Times: Unlimited praise is due the ladies who volunteered their valuable assistance towards impressing upon the people of Pleasanton and vicinity the many advantages of joining them in the agreeable and remunerative employment of gathering hops, that by so doing they would prevent Chinese from coming here and carrying off a large amount of money that will now remain among us. The ladies feel that they have done a great benefit to the many residents of Pleasanton and vicinity. And well they may. A trip down to the hop-yard will readily convince one of the unbounded success with which their untiring efforts have been crowned. The actions of the company toward our people must not be forgotten, for they, too, played an interesting part. From the first the company signified its preference for white labor and went so far as to ask the school directors to close our public school that the children might have an opportunity to pick hops, and when it was known that a large number of our people could be depended upon to assist in the work the company provided a conveyance to carry them back and forth from the hop field.

Butte.

Oroville Register: John Rutherford of Wyandotte has ten acres in alfalfa and from this he cuts three crops of hay and then pastures the land the remainder of the year. His son Frank tells us that Mr. Rutherford, from the ten acres of irrigated alfalfa, realizes more profit than any other resident of Wyandotte realizes from 100 acres of natural hay or pasture land.

Wheatland Four-Corners: Hop-pickers are beginning to thin out quite noticeably and growers are raising wages. The hug-a-boo cry in the forefront of the season of Chinese and Japs crowding out the whites is no longer heard. In fact, the cry subsided as soon as the hobo element got a stake to travel on, for they would not stick to a good job if offered to them. D. P. Durst will have a full week's picking yet, and the Roddams, Wood and Jasper fields will remain open for several weeks to come. Pickers generally have done well, some families laying up snug little nest eggs, and there has been very little complaint of any kind from any source.

Colusa.

Maxwell cor. Colusa Sun: Some of the farmers east of the railroad are making drains in their fields so that the water can run off instead of standing on the land and destroying the grain or preventing its being worked.

Maxwell letter: Japs have been employed at the Central orchard to take care of the peaches and grapes. The proprietors tried white help with apricots, hiring boys and young men, but they were not persistent workers, sometimes quitting when the fruit demanded most urgent attention. They preferred to use white help during the season but found they could not rely on it, and got a supply of Japs who attended strictly to business.

Kern.

Californian: Kern county hereby claims the honor of raising the largest grape that ever grew. It was picked in J. D. Brown's vineyard at Rosedale, brought to town, put in preserving fluid, and is now on exhibition at Rosedale. It is of the Muscat variety and seems to have been produced by three grapes, each of the large size, growing together as one. This gives it an appearance similar to a green tomato. It weighs one and one-quarter ounces, and is certainly one of the most curious freaks of nature.

The *Bakersfield Californian* says: The fruit-growers of certain portions of the State are said to be discouraged because no more than seven cents a pound is being offered for dried apricots. It is difficult to see where the cause for discouragement is found. If one could be assured of receiving seven cents a pound for dried apricots for a series of years he need ask no better thing in the horticultural line. At that price a 20-acre orchard would assure him a handsome living, and one of twice or three times that size would give him a competence in a few years. It costs not to exceed two cents a pound to gather apricots, dry, pack and deliver them in sacks at the cars within a reasonable distance. That leaves a margin of five cents a pound profit. An apricot tree in full bearing, or at six or seven years of age and upward, will produce from 250 to 500 pounds of fresh fruit, and frequently even more. The fruit dries down in the proportion of about five to one, so that at the rate mentioned a tree will produce 50 to 100 pounds of dried fruit. At an average of 100 trees to the acre (108 is nearer the mark), the net receipts at seven cents a pound for the dried fruit would be \$250 and \$500 to the acre. Granting that the lower figure is an outside one, though it is not, it will be seen that there will yet be a decent "living profit." It is true inexperienced persons may make it cost them considerably more to dry their fruit than the two cents a pound mentioned, but that is their own fault. The best and the cheapest methods to follow are well known, and there is no reason why the limit of two cents may be exceeded.

Mendocino.

Cloverdale Revueille: Owing to the poor outlook for wool this fall many flocks in this section, we learn, will not be sheared. The fact is, the spring clip is not yet entirely sold, and what has been sold is at prices that hardly pay for the trouble and expense of taking care of sheep. Should there be no change for the better in the wool market soon, the flocks will be greatly decreased, if not entirely disposed of by most of the sheep men, as they are unwilling

to carry their flocks at a loss. In conversation with W. P. Ink, who is a large wool-grower in this vicinity, we learn that he will not shear his flock this fall.

Riverside.

The South Riverside *Bee* gives a careful summary of the number of acres put out to fruit in that colony during the year 1893, in which it is shown that 281 acres were set to oranges, 615 acres to lemons, 754 acres to deciduous fruits and 100 acres to nuts.

San Bernardino.

Ontario Record: The cannery is now handling about 14 tons of fruit daily. Nearly all the fruit comes from Ontario and Cucamonga, though some has been shipped in from Banning and Chino, and Pomona orchards have furnished a few lots. It is expected that from 5000 to 6000 cases of fruit will be canned, two dozen cans to the case. Sutliff & Groom are paying out from \$2000 to \$2500 per week for fruit and labor.

San Luis Obispo.

Paso Robles Moon: H. W. Merrill of Cholame will plant over 1200 prunes and pears the coming season.—Frank Smith of Parkfield will plant 10 acres of French prunes this year.—W. G. Lansing in the Red Hills will plant 1000 trees this season.—Henry Davis will plant 900 trees at Cholame next year; he also intends to plant 100 acres to French prunes next year.—J. E. Hodges will plant 10 acres to prunes the coming season on his ranch near Cholame.—Poke Gillis of Shandon has one vine three years old that has over 75 pounds of extra fine grapes this year.—Mr. Granger of Shandon has 40 acres of fruit that make him more clear money than 640 acres of grain.—Mr. Ford of Parkfield has 20 acres of almonds, four years old, that will bring him over \$7000 for the nuts this year.—A. F. Martin of Cholame has planted over 1000 trees of different varieties that have made a growth of five feet to some trees this season.—Wm. Goff of Cholame has apricot trees two years old, that averaged 75 pounds of apricots to the tree this season.—J. W. Short, seven miles from Cholame, has 600 trees of an assorted variety, including pears, peaches, prunes and plums. The trees are four years old and the prunes will average over 150 pounds of first-class fruit to the tree; peaches, 175 pounds to the tree; pears, 150 pounds, and Hungarian prunes, 250 pounds. This orchard has had very little care and is in what is usually known as the "dry belt." This shows what fruit will do if given half a chance.—A. L. Bruce of Palprietta valley has 20 acres of very fine fruit, two years old. His peach trees will average over 100 pounds of extra fine fruit. His figs have made a growth of four feet and over so far this year; he is also growing some fine orange trees which promise very well.

Santa Barbara.

Santa Maria Graphic: The Gilt Edged Creamery Company has been incorporated at Guadalupe and the members will proceed immediately to erect the largest creamery on the coast. The capital stock is \$10,000, of which \$7750 has been subscribed. The shares are \$50 each, of which the Dairyman's Union of San Francisco has taken 50 and B. Pezzoni 20. These are the largest. The capacity of the plant will be equal to the task of handling the milk from 2000 cows.

Santa Clara.

Los Gatos News: It is estimated that the fruit crop of Santa Clara County, marketed at the present prices, would bring \$6,000,000. This is a large amount of money for a product of the soil, probably the largest in any county in the United States.

Santa Cruz.

Sentinel: The new crop of Pajaro strawberries is coming on, with promise of a big yield. The prices for berries have shown some improvement during the past week.

The *Pajaronian* states that during his Eastern visit James Waters expects to call the attention of fellow nurserymen to the good qualities of the Logan berry—the cross between a raspberry and blackberry which was developed by Judge Logan of Santa Cruz. The good qualities of this berry commend it for shipment, and its excellent flavor will win its way as a market berry. The *Surf* expects to soon see this berry ranked among the standard fruits.

Santa Cruz Surf: The prunes from Santa Cruz county are not coming in as good shape this year as usual; too many fall to the ground before they are fully ripe. Growers make a great mistake in shaking trees too hard, and also in allowing too many prunes to remain on the trees by improper pruning. In some sections trees have to be pruned thoroughly in order to check the setting of so much fruit, which makes it not only small and unprofitable, but there is not vitality enough left in the tree to mature the fruit.

Pajaronian: The active work in the hop-yards will commence next Monday, and the busy season of picking and curing will last at least four weeks. White labor will be exclusively employed in the yards of Owen Tuttle, M. B. Tuttle and Wm. McGrath, and the Rodgers Bros. expect to have a large force of white labor in their yard. The Mongolian is going to be on a back seat in the hop-picking business this year. The change from Chinese to white labor has been in gradual movement for several years. Last year Owen Tuttle entirely dispensed with the Mongolian, and the change was so satisfactory that more of the growers have pursued a similar course this season. The main reason why this course was not followed sooner was the inability to get a sufficient crew of whites to pick the hops and stay with the job through the season. This change has been partially brought about by the white labor that has been employed in many of the blackberry fields, the season in the latter closing

about the time the work in the hop-fields began. The fact that white labor can find employment in the hop-fields has become known through the coast counties, and the rush here this year is in families from the upper part of Santa Clara county to down in San Luis Obispo county, and even the San Joaquin section is represented. Many of these families have been here for some months, camped on the Salsipuedes creek and along the river, and they have been employed in the berry fields. Before long, white labor will have entirely supplanted the Mongolian in all classes of field work in the Pajaro valley. The change is taking place rapidly, and without friction. In the case of the hop crop, from \$15,000 to \$20,000 is paid out for labor during the picking and curing season of a month. With this money paid to white labor it goes directly into local circulation, and stays here. In proportion to acreage, the hop-fields pay more for labor than any other field crop of the Pajaro valley excepting berries.

Solano.

Davisville Cor. Woodland Democrat: Manager Hillman began picking the prune crop of the Briggs orchard last week. He will finish by the last of the week. If the weather is favorable, the crop will be dry by the middle of next week. The yield is very large, the fruit is of excellent quality and it is drying very satisfactorily. It is estimated that the ten acres of prune orchard will yield 63 tons of green fruit, or about 18 tons of dried fruit. Captain Hillman now has a force of 25 men at work. Of these, 16 have recently been taken on. He had a conference with the men and represented to them that he was willing to employ white labor, but owing to the low price of fruit and the difficulty in getting money, he was not able to pay more than \$20 per month. The men readily accepted the terms, and the captain says he could have secured the services of a hundred men at the same wages.

Sonoma.

Democrat: The Fountain Grove Vineyard Company will ship nine carloads of wine to the East between now and vintage. One hundred barrels will go to England.

Democrat: The outlook for a large grape crop in the northern part of the county is not so promising as thought at first. They will be of fine quality, the weather being so favorable that they have filled up to a good size and have not been damaged by sunburn. The vintage begins next week at the Italian-Swiss colony.

Sutter.

Yuba City Farmer: The season's pack of the Sutter Canning and Packing Company has been very good, but not so extensive as in former years. Only the first-class fruit was received and it was well put up. The usual varieties of apricots, plums, pears, peaches, grapes, etc., are included in the pack, the principal fruit being peaches. The drying department has been taxed to its utmost and many thousand trays of fruit are on the drying-ground now.

Tehama.

A correspondent writing from Vina, says: Mrs. Stanford arrived here last Tuesday in her private car, accompanied by her private secretary and Stephen Gage. She completed her mission and returned last evening to San Francisco. While here she put a great many changes into effect—that is, so far as the conduct and future management of the Vina ranch and vineyard are concerned. The Vina interests have now been separated into three departments, each independent of the other, and under charge of a superintendent. J. S. Copeland is placed in charge of the farming interests. The wine and vineyard departments have been consolidated and placed under the management of Charles Staubs. Mr. Staubs was formerly cellar-master at this place. The third department is made up of the distillery and all brandies in both bonded and private warehouses. The latter is under supervision of W. W. Guptile, who was brought here by Mrs. Stanford to assume control of that branch of the business. Captain H. W. McIntyre, who was the late Governor Stanford's general agent here, has been reappointed by Mrs. Stanford as her agent in charge of general business. "This change in the management of details," said Mrs. Stanford, "will relieve Capt. McIntyre of a class of work which in the past has taken up a great deal of his time. By this arrangement he will be enabled to give his attention and time chiefly to Vina products, especially wines and brandies, at home and abroad." A great reduction has been made in the working force. The entire French colony, 60 odd in number, brought here by Governor Stanford from France some six years ago, were discharged. The majority of the latter informed your correspondent that they would at once return to their native land. The help on the entire ranch, which in former years at this season numbered from 600 to 800 men, has been reduced to about 125 men. The crop this year, which is very large, warrants the disposal of a considerable quantity of grapes to other winemakers. A Sacramento firm has purchased some 1500 tons of wine grapes, shipment of which will be commenced during the coming week. The town of Vina, which has been about one of the most prosperous in the State, will feel the effects of the many changes made here within the past few days.

Tulare.

Porterville Enterprise: David Campbell brought us in a bunch of black Morocco grapes from his place on Tule river, six miles from Porterville. It weighed three pounds, and was grown without any irrigation. Mr. Campbell planted out 100 prune trees a year ago and they have already made a six-foot growth, and all without irrigation.

Visalia Delta: The Visalia Fruit and Land Company has contracted to sell its dried

peaches for 7 cents a pound. The bearing trees were two years old last February and yielded eight tons of fruit to the acre, which will produce 1½ tons of dried fruit. At the price named, this will make a return of \$175 per acre. To pick, dry and deliver the fruit on board of the cars will cost 2 cents a pound, leaving a profit of 5 cents a pound, or \$125 per acre. In days of low prices this is a splendid return from an orchard so young. The first carload will be shipped this week. The purchasers of this fruit are engaged in picking fruit at Hanford. They informed Major Berry, manager of the Visalia Fruit Company's orchard, that this fruit is the finest they have seen this year. Considering the season and the low price of farm products, here is one more good argument for abandoning the growing of grain to engage in fruit growing.

H. E. Dye writes as follows to the Tulare Register: There are going to be many ways to do besides raising wheat. And those who have been disappointed in trying to raise a crop of corn after wheat, can fix to keep all the stock possible. Foxtail and other wild feed, while it grows, is much better than alfalfa. So to make the most of this and keep as much stock as possible, let some of your wheat land go to wild feed until May or later, then plant it to corn. The wild feed and crop of corn is about as satisfactory a two-crop yield as we can get. Last winter I did not think it reasonable to get my whole place wet in time for wheat, so I decided to leave one field for corn and other summer crops. This would give me a chance to do part of my irrigating late. And then the idea of a wild-feed crop struck me; and there is another great advantage. Among the things that are certain in this world, such as the rising of the sun, is that the price of hogs will drop about September 1st, and as I always have a lot of wheat in the field that will go to waste if I don't keep the hogs until late, they are pretty sure to drop enough so that I get nothing perhaps for a lot of wheat. The summer crop of corn, pumpkins, millet, sorghum and milo maize (a new thing I stumbled on and which now bids fair to be the best thing of the lot, but I will tell later if it is a success) helped out of the need of keeping the hogs to save the grain, for I can harvest the summer crop and have it to feed in fall and winter to small hogs now coming on. But be sure you have the stock to clean up the wild feed, else you will have a mass of foxtail you can't plow under. Also deliver me from putting in any more summer crop broadcast so it can't be cultivated to kill weeds.

Ventura.

Venturian: This year there is quite a lot of barley coming in to the Ventura warehouse more than formerly. One reason for this is owing to the cheaper warehouse charges here. Another reason is said to lie in the fact that it is worth more here because of the increased opportunity for shipping to the city.

Venturian: M. H. Mendelson was seen to-day in relation to the success of his bees on bean blossoms, an experiment which he recently tried. He said that he would have had 12 tons had the weather been bright, but as it was he received four tons. He will follow up this plan every year in the future. Later he has been getting 5½ cents for honey, it being amber at that. He has sold over two carloads.

Yesterday we interviewed Capt. S. G. Brooks, the warehouse man, and asked him about beans, says the *Chronicle*. He says there are conflicting reports as to the growing crops. Some say the crop will be a big one. Some say it will not be an average. Mr. Brooks says Frank Barnard of Ventura has traveled all over Ventura county investigating the bean prospects, and he says this crop will be the largest ever produced in the county. Some heavy shipments of beans have been made from the Ventura wharf warehouse within the past week. They have nearly all been cleaned out. The freight rate on beans to the East is now 62 cents per 100 from here. Formerly it will be remembered to have been \$1.10.

Yolo.

Knight's Ferry letter in Woodland Democrat: I am at a loss to understand why farmers do not plant more of their land to alfalfa. The average is four crops a year, and there is generally a good market for alfalfa hay. Besides, it makes splendid winter feed. Every farmer on the river-front should sow his levee with alfalfa and pasture it late. It is true that there are some farmers who have in some way got the idea that gophers are more troublesome in levees covered with alfalfa, but I know of levees that have been covered with clover for ten years, and they are free from rodents than others that are bare.

Three and One-Half Days to the World's Fair.

We take pleasure in advising the readers of the PACIFIC RURAL PRESS that the UNION PACIFIC is the most direct and quickest line from San Francisco and all points in California to the WORLD'S FAIR.

It is the ONLY LINE running Pullman's latest improved vestibule Drawing-Room Sleepers and Dining Cars from San Francisco to Chicago without change, and only one change of cars to New York or Boston.

Select Tourist Excursions via the UNION PACIFIC leave San Francisco every Thursday for Chicago, New York and Boston in charge of experienced managers, who give their personal attention to the comfort of ladies and children traveling alone.

Steamship Tickets to and from all points in Europe. For tickets to the World's Fair and all points east and for Sleeping-Car accommodations call on or address D. W. Hitchcock, General Agent Union Pacific System, No. 1 Montgomery street, San Francisco.

CALIFORNIA

If you want to know about California and the Pacific States, send for the **PACIFIC RURAL PRESS**, the best illustrated and leading farming and horticultural Weekly of the Far West. Trial, 50c for 3 mos. Two sample copies, 10 cents. Established 1870. DEWEY PUBLISHING CO., 220 Market St., San Francisco.



RIFE'S AUTOMATIC HYDRAULIC ENGINE

THE PELTON WATER WHEEL CO.

GENERAL WESTERN AGENTS,
121 MAIN STREET, SAN FRANCISCO, CAL.

Works
While
You
Sleep.

THE RIFE HYDRAULIC ENGINE is the most simple and efficient machine yet devised for elevating water for irrigation, filling railroad tanks, supplying mills, factories, dairies, stock yards, country residences, small towns, and for various other purposes. This ram is self-operating, constant in action, and is not only much more efficient than anything of the kind ever put upon the market, but from absence of wearing parts, more durable and every way reliable. Many may be referred to that have run for years, elevating water in some cases from 100 to 800 feet without any attention or expense in the way of repairs.

These machines have already come largely into use in all parts of the country, and are rapidly superseding every other device for the purpose. They will work effectively under a head as low as two feet and for every foot of fall will elevate 20 feet. By means of an adjusting lever the capacity of any of the various sizes can be reduced 50 per cent or more, as may be desired, to provide for a variation in water supply, without disadvantage or loss in efficiency.

WATER RAISED AND WASTE.—The fall from the spring, stream or other source of supply to the engine determines the height of which the water can be elevated, as well as the relative proportion between the water raised and wasted, the quantity raised varying according to the height it is carried and the distance conveyed. For ordinary purposes it is sufficient to say that with a discharge pipe 1000 feet in length, one-sixth of the water can be raised and discharged at an elevation five times the height of fall or one-twelfth ten times the height of fall.

Parties writing for information should give the quantity of water that can be supplied to the engine, either in gallons, cubic feet or miners' inches; the head or fall from source of supply to point where the engine is to be located, length of drive pipe, height to which the water is to be raised, distance from engine to place of discharge and the quantity of water it is desired to elevate. No reliable information can be afforded without an explicit answer to these inquiries.



ONLY 25 YEARS OLD AND A GIANT!

THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.

WE GUARANTEE

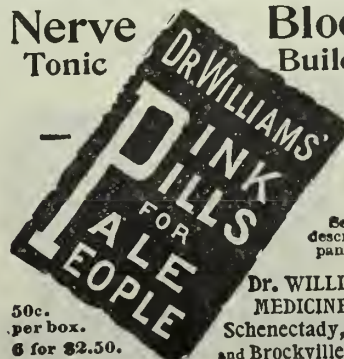
That one tablespoonful of

GOMBAULT'S CAUSTIC BALSAM

will produce more actual results than a whole bottle of any liniment or opium cure mixture ever made. It is therefore the cheapest (as well as easiest and best) external applicant known for man or beast.

THE LAWRENCE WILLIAMS CO., CLEVELAND, OHIO.

Nerve Tonic **Blood Builder**



Send for descriptive pamphlet.

Dr. WILLIAMS' MEDICINE CO.,
Schenectady, N.Y.
and Brockville, Ont.

TREE WASH.

"Greenbank" Powdered Caustic Soda and Insecticide.

T. W. JACKSON & CO.

Sole Agents,

No. 5 Market Street, San Francisco, Cal.

MAKE YOUR OWN GAS!

BADLAM BROS.,

519 Market St., San Francisco,

SOLE MANUFACTURERS OF THE CELEBRATED **PEERLESS GAS WORKS.** New process, safe and inexpensive, from \$100 upward. Light cheaper than coal oil. Send for catalogue and prices.

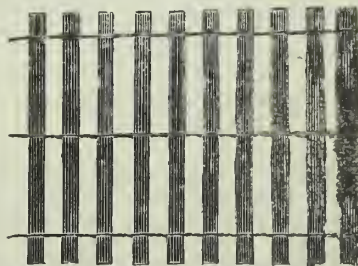
RABBIT-PROOF STOCK FENCE.

Cheap, Durable and Effective.

Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2½ ft., 4 ft., 4½ ft., and 6 ft. high. Send for circulars and price list to

JUDSON MFG CO.,

12 & 14 Fremont St. San Francisco.



The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.

Almond Hullers FOR SALE!

A. O. RIX, Irvington, Alameda Co., Cal.

Gentleman Having Practical Experience

in fruit-growing in Fresno, with office in Glasgow, Scotland,

Is Open to Represent Good Cannery

For EXCLUSIVE SALE OF THEIR CANNED CALIFORNIA FRUIT IN SCOTLAND.

Address PATON, 138 Renfrew St., Glasgow, Scotland.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,

Surveying, Architecture, Drawing and Assaying, 723 MARKET ST., SAN FRANCISCO, CAL

Open All Year.

A. VAN DER NAILLEN, President.

Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$60. ESTABLISHED 1864. Send for circular

Man in South America.

There is no part of the world that offers a more curious subject of speculation as to its future than the continent of South America, as was well set forth in an address before the American Geographical Society by its president, Mr. Gardiner G. Hubbard, says *Science*.

That the Amazon river system alone drains a basin of fertile land basking under a climate of perpetual summer, greater in area than the whole of Europe, is an astounding fact in itself. The vast territory is practically uninhabited. Its aboriginal population is disappearing, or has disappeared, and the whites, who in sparse numbers take their place, scarcely pretend to come with the expectation of remaining. There are tracts as large as the whole of France of which we know less than of any equal area on the globe. Tribes of men are living there who are yet absolutely in the stone age, and who, even by barter or distant rumor, never heard of the European race or the use of metals.

The question up to which Mr. Hubbard leads his reader is second in importance to none in the anthropology—that of acclimation. Is it possible for the white race, when it shall be endowed with all the resources of art and science which it is soon to have in its grasp, successfully to fight against the terrible odds of a tropical climate? He quotes in his favor the words of the historian, Buckle, and the naturalist, Bates. He might have added others of weight, but it cannot be doubted that most of the medical observers who have devoted themselves to this vast inquiry lean to the opinion that never will the white race flourish under tropical skies.

Tropical Roofs.

The natives of the interior of Ceylon finish walls and roofs with a paste of staked-lime gluten and alum, which glazes and is so durable that specimens three centuries old are now to be seen. On the Malabar coast the flat bamboo roofs are covered with a mixture of cow-dung, straw and clay. This is a poor conductor of heat, and not only withstands the heavy rains to a remarkable degree, but keeps the huts cool in hot weather. In Sumatra the native women braid a coarse cloth of palm leaves for the edge and top of the roofs. Many of the old Buddhist temples in India and Ceylon had roofs made out of cut-stone blocks, hewed timber and split bamboo poles. Uneven planks, cut from old and dead palm trees—seldom from living young trees—are much used in the Celebes and Philippines. Sharks' skins form the roofs of fishermen in the Andaman islands. The Malays of Malacca, Sumatra and Java have a roofing of attaps, pieces of palm-leaf wicker-work, about three feet by two in size and an inch thick, which are laid like shingles and are practically waterproof. The Arabs of the East Indies make a durable roof paint of slaked lime, blood and cement. Europeans sometimes use old sails—made proof against water, mold and insects by paraffine and corrosive sublimate—for temporary roofs.

What the World's Fair Buildings Are Covered With.

Inquiries are often made regarding the material with which the buildings of the Columbian Exposition are covered. This white, incombustible material is "staff."

Not only are the structures clad in staff, but the hundreds of columns, pediments, capitals and all the profuse, general ornamentation, as also the gigantic statuary groups and allegorical pieces, are all of staff.

Without staff, indeed, these enormous buildings would be impossible, at anything like the present cost. One may also say that without staff the Fair in its present aspects could not have come into existence.

This protean substance is a mixture of plaster—often called plaster of Paris—and a small per cent of cement, into which are introduced frequent fibers of hemp, jute, or Sisal grass, to give it toughness, so that it may be bent, sawed, nailed, or bored, at will.

It is cast in molds. The plaster and cement are first wet up to the consistency of thick treacle, a layer of which is spread on the well-lubricated mold. Next follows a layer of the long, tough fibers, over this is poured another coating of the liquid plaster, covering in the fiber and filling the mold to the required depth.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California street, San Francisco.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

JERSEYS AND HOLSTEINS, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. William Niles & Co., Los Angeles, Cal., Breeders and Exporters. Established in 1876.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

JOHN LYNCH, Petaluma. Breeder of Thoroughbred Shorthorns. Young Stock for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal., New Catalogue now ready. Wm. B. Collins.

PETER Saxe & Son, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS—The best A. J. C. C. Registered Prize Herd is owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

BERKSHIRES & POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. William Niles & Co., Los Angeles, Cal. Established 1876.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

R. H. ORANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

SWINE.

CHAS. A. STOWE, Stockton, Cal., (Box 293). Breeder of Berkshire and Poland-China Hogs; Milking Strain of Durham Cattle, and M. B. Turkeys. Write for Prices.

H. J. PHILPOTT, Niles, Cal., Importer and breeder of Tecumseh and other choice strains of Registered Poland-China Hogs.

WM. NILES & CO., Los Angeles, Cal., Breeders of nearly all varieties of Poultry, Dairy Cattle and Hogs.

J. E. ALSFORD, Woodside, San Mateo Co. Breeder of Berkshire Hogs and Toulouse Geese.

P. H. MURPHY, Perkins, Sac. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, Low Prices.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.



OXFORD DOWN SHEEP FOR THE PACIFIC COAST.

W. A. SHAFOR, Middletown, Ohio,
Largest American Importer of
O. D. Sheep.

Is prepared to quote prices on the best stock of Oxford Down Sheep to be had in England. Parties wanting first-class stock should write for particulars and induce their neighbors to join them. Import will arrive about August 1st. Write at once.

BACK FILMS OF THE PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes) \$4. Inserted in Dewey's patent binder 50 cents additional per volume.

MECHAM & FRITSOH,

Importers & Breeders of Red Polled Cattle.

We have 200 head of Full Bloods and Crossbreds on Devons. Bulls and Heifers for sale. Address communications regarding Cattle to MECHAM & FRITSOH, Petaluma, Cal.



MECHAM & HINKLE,

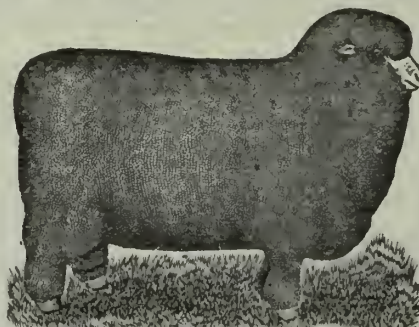
Importers & Breeders of Shropshire Sheep.

The flock was imported or bred direct from imported stock. The Shropshire excels all mutton breeds for a cross on the merino—giving more wool and mutton than that from any other breed. Pure and Crossbred Rams and Ewes for sale. Direct inquiries regarding Shropshires to MECHAM & HINKLE, Petaluma, Cal.



H. MECHAM,

Breeder of American Merino Sheep Without Horns. The only flock in the United States. When we bought our sheep East 24 years ago, among them was a ram without horns. He grew to be a fine large sheep, shearing at 2 years old, a 12-month's fleece, 85 lbs. of long white wool.



I have bred from him and his got ever since and have never made an out-cross and never used the same ram but one year on the same flock. My rams at two years old weigh from 160 to 180 lbs., have a strong constitution, without wrinkles, and will shear on an average about 25 lbs., a 12-month's fleece, of long white wool. Rams and Ewes for sale. P. O. Address Stony Point, Sonoma Co., Cal. R. R. Station, Petaluma.



CHOPPERS ATTENTION!

ASK FOR THIS AXE. USE NO OTHER.

Wood-choppers, try the

Kelly Perfect Axe

It will cut more wood

than any other axe.

The scoop in the blade

keeps it from sticking in

the wood, and makes it

cut deeper than any other

axe. Ask your dealer for

it. Send us his name if

he don't keep it. It is the

Anti-Trust Axe.

Kelly Axe Mfg. Co.

LOUISVILLE, KY.

ROOFING

GUM ELASTIC ROOFING FELT costs only \$2 per 100 square feet. Makes a good roof for years, and any one can put it on.

GUM ELASTIC PAINT costs only 60 cents per gal. in 100 lb. lots or \$4.50 for 5 gal. tubs. Color red. Will stop leaks in tin or iron roofs that will last for years. TRY IT.

Gum Elastic Roofing Co.,

89 & 41 West Broadway, NEW YORK

Local Agents Wanted.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.



THE HALSTED INCUBATOR COMPANY,

1312 Myrtle Street, Oakland, Cal.

Send Stamp for Circular.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STAR, LANE CO., OREGON, Feb. 3th, 1892.

DR. B. J. KENDALL CO.,

Dear Sirs:—I have used your KENDALL'S SPAVIN CURE for the last twelve years never being without it but a few weeks in that time and I have made several wonderful cures with it. I cured a Curb of long standing. Then I had a four year old colt badly spavined; tried every thing without any benefit, so I tried your liniment, and in a few weeks he was well and his shoulder filed up all right, and the other, a four year old that had a Thoroughpin and Blood Spavin on the same joint, and to-day no one can tell which leg it was on. These statements can be proven, if necessary; the four year olds are now seven and can be seen any day at Cottage Grove, Or.

S. Z. PAIXTON.

Price \$1.00 per bottle.

DR. B. J. KENDALL CO.,

Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular

E. FOUGERA & CO.,

30 North William Street, New York.

Short-Horn BULLS

Calves, Yearlings and 2-year-olds

FOR SALE.

ROBERT ASHBURNER,

Baden Station, San Mateo County, Cal.

Only three-fourths mile from the terminus of the S. F. and San Mateo Electric Road.

FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank.)

Wants you all to write to him for prices

on Young Stock.

MINORCAS: White and Black.

LEGHORNS: White, Brown, Black, Buff.

B. P. ROCKS.

Mention the age desired and when shipped. Circular Free.

Treatise on the Horse and His Diseases.

By B. J. KENDALL, M. D.



35 Fine Engravings showing the positions and actions of sick horses. Gives the cause, symptoms and best treatment of diseases. Has a table giving the doses, effects and antidotes of all the principal medicines used for the horse, and a few pages on the action and uses of medicines. Rules for telling the age of a horse, with a fine engraving showing the appearance

of the teeth at each year. It is printed on fine paper

and has nearly 100 pages, 7 1/2 x 10 inches. Price, only 25

cents, or five for \$1, on receipt of which we will send

by mail to any address DEWEY PUBLISHING CO., 220

Market Street, San Francisco.

American Bee Journal,

(Established 1861.)

Is the Oldest, Largest, Best,

Cheapest and the Only

weekly Bee-Paper in all

America. 32 pages, \$1.00

a year. Send for Free Sample.

\$1.00 BEE-BOOK FREE

GEO. W. YORK & CO., 55 Fifth Ave., Chicago, Ill.

THIS BIT

QUALITIES of other patent bits

and will easily control the most

vicious horse at all times. It is the

COMMON SENSE BIT

because it can also be used as a mild bit.

XC Sample mailed \$1.00.

Nickel 2.00.

RACINE MALLEABLE IRON CO.,

J. I. DAVIES, Mgr. RACINE, WIS.

Great Glut of Imported Lemons in New York.

This season's condition of the lemon market has been a mystery to our merchants. A number of reasons have been advanced as to the cause of this deplorable state of affairs, yet none prove sufficiently strong for belief to overcome the argument of overproduction. This is proven by the following figures showing shipments of lemons to the United States for the past four months as compared with the same period in the past three seasons, the figures indicating the number of boxes:

	1893.	1892.	1891.	1890.
May.....	403,000	234,000	299,000	381,000
June.....	313,000	276,000	277,000	298,000
July.....	446,000	285,000	229,000	275,000
August.....	245,000	150,000	112,000	125,000
Totals.....	1,407,000	945,000	917,000	1,057,000

It will be seen by these figures that shipments of Sicily lemons to the United States were 462,000 boxes more during the four months of May, June, July and August, 1893, than for the same months of 1892; 490,000 boxes more than for the same months of 1891, and 350,000 boxes more than for the same months of 1890.

These figures verify the statement that it has been a question of overproduction in the matter of lemon receipts this year. There has also been about the same general increase in the preceding months of 1893 against the three former seasons. Mr. Edward M. Brown, of the firm of Brown & Seccomb, who is known the world over as an accepted authority upon questions relating to the foreign fruit trade, bears out the argument that the low state of the market during this season has been the result of the enormous increase in receipts. He says that in no way does the present financial situation enter into the question.

An importer says: "The rivalry between the steamship companies to get the fruit and carry it over here, compels them to become fruit importers by advancing. A man may have swept the streets in Sicily, had some friend or relative growing or shipping fruit. He is picked up and before long is known as a fruit shipper, simply because he knows where to get the money to purchase it."

Many of our jobbers also claim that the quality of the fruit, allowing for the increase, was not equal to that shipped in previous seasons.

A leading jobber says: "Yes, what does the increased receipts consist of? Nothing but trash. Why most of the fruit purchased at these low prices is not fit to ship. They ought never to send it here. With the quality of this fruit I should certainly be in favor of levying a duty of \$1 per box. Then we will probably receive something worth shipping and be willing to pay for it."

Statistically, the present position of the lemon market should show that the goods are being given away again, and abetting the statistical position comes the report that due to cholera, exportations from Naples have been prohibited and during the past week knowledge reaches us that Sicily, through several cases at Palermo, has become an infected district and that, prohibited by Naples, may affect shipments from Sicily.

Should this prove correct, and the visible supply (per list) amounting to 79,000 boxes lemons, all told, prove to be our only source of supply, I greatly fear we may see during the last of September and throughout October and November, very high prices; for, should cholera become epidemic in Sicily, the first new-crop lemons would hardly reach us before December or January, and Malaga does not show, at latest advices, a full crop available for our use.—N. Y. Fruit Trade Journal.

The Guano of the Nile.

For quite two years at least a group of English financiers, in which there is a sprinkling of French blood, has been endeavoring to obtain, and has at last obtained, a perpetual concession for the collection and utilization of all that magnificent mass of what, for want of a better term, we will call guano, which is floated down the Nile, and has, during a long succession of centuries, assisted to build up and fertilize the Nile's verdant delta, says London *Money and Trade*. The putrid carcasses and waste of ten thousand habitations and all other things that the great river can gather up in its course, have been found, together with its sand, to make the most perfect manure—a manure, indeed, which surpasses even nitrate, for while this latter exhausts the ground after a few years, the "Nile guano" continues to enrich the soil year after year, the only possible disadvantage being that the soil might become too rich. This, however, can be easily avoided by the applica-

tion of a little congenial sand. The excellence of the guano and the terms of the concession which has just been obtained, are such as suggest profit-making in the future.

Available Timber Supply.

The Division of Forestry of the Government Department of Agriculture, through its Chief, B. E. Fernow, is now disseminating valuable information relative to the timber supply of the United States. The value of the products derived from our forest resources, says the last report of Mr. Fernow, amounts to more than \$1,000,000,000 annually, and as a single industry is only surpassed by agriculture itself. But that this vast industry sadly needs fostering care, intelligent attention and a close study of present demands and future needs and resources is proved by the vast consumption of timber in this country as compared with that of other countries where necessity has formulated and enforced protective laws. According to the census reports of 1890, the annual consumption of wood for all purposes has reached the enormous total of 22,000,000,000 cubic feet annually, or about 350 cubic feet per capita, as compared with 12 to 14 cubic feet per head in Great Britain and 40 cubic feet in Germany.

The largest amount of this consumption is for firewood, or about 280 cubic feet per capita; but this wood in the United States comes to a large extent from split body wood of the best class of trees, and not from the inferior material used for this purpose in older countries. The consumption of sawed wood products is over 40 cubic feet per head; and if to this is added hewn timber and wood used in railway construction, the total annual requirements for sizable timber will easily reach 50 cubic feet per head. To produce such amounts the annual growth of not less than 500,000,000 acres of well-managed forest in good condition would be necessary, and it would more than double this acreage to add the consumption in firewood, mining and fencing, for which we use body wood, hardly inferior to sawed timber. According to the most carefully compiled statistics, we now have only about 480,000,000 acres of forest area, and a large part of this is believed to be in a more or less devastated condition, owing to forest fires and general lack of care. We have, therefore, been using for some time more than our annual growth and are rapidly cutting into our inherited capital account. Even assuming the figure of a present annual consumption of 10,000,000,000 cubic feet, as claimed by some authorities, the supply would be exhausted in less than 100 years, for our consumption has increased at the rate of about 30 per cent in the last three decades.

Determining Straightness by Sight.

The straightest thing in nature or art is a ray of light when passing through a medium of uniform density; hence the eye is enabled to test the straightness of an edge or tube by holding it as nearly as possible coincident with a ray of light, such parts as depart from straightness then intercepting the ray and causing a shade to be cast upon other parts, says the *Engineering Magazine*. It is not known at what early period in the history of mankind the discovery was made that straightness could be thus determined. It is certain that thousands of mechanics use the methods daily without being able to give a rational explanation of it. This primitive mode of testing straightness, on account of its great convenience and accuracy, is likely to continue in use to the end of the world.

A Simple Barometer.

A simple but effective barometer can be made, says a contemporary, by filling a common, wide-mouthed pickle bottle within three inches of the top with water; then taking an ordinary Florence oil flask, and, having removed the straw covering and washed it thoroughly, plunging the neck of the flask as far as it will go into the pickle bottle, you have thus a complete barometer. In fine weather the water will rise into the neck of the flask higher than the mouth of the pickle bottle; in wet and windy weather it will fall to within an inch of the mouth of the flask. Before a heavy gale of wind, at least eight hours before the gale reached its height, the water, has, it is said, been seen to leave the flask altogether.

—Dr. Gallipe reports to the French Academy of Sciences, after eight years investigation, that all stones, such as gravel, found in the human body, are produced by microbes. Microbes are the authors of that chemical decomposition which results in calcareous deposits.

To Take Foul Air Out of a Well.

The well was to be cleaned, but the man who took the job was afraid to go down until he had ascertained the quality of the air at the bottom. He let down a lighted candle, and when it descended to within six feet of the bottom it went out as suddenly as though extinguished by a whiff of air. That was all he wanted to know. He was then sure that the well had poisonous gas in it, and took a small umbrella, tied a string to the handle and lowered it open into the well. Having let it go nearly to the bottom, he drew it up, carried it a few feet from the well and upset it. He repeated this operation some 20 or 30 times, with all the bystanders laughing at him, then again lowered the light, which burned clear and bright even at the bottom. He then condescended to explain that the gas in the well was carbonic acid gas, which is heavier than air, and therefore could be brought in an umbrella just as so much water. It was a simple trick, yet perfectly effective.—Globe Democrat.

The Largest Artesian Well.

Chamberlain, South Dakota, now enjoys the distinction of having within its limits the largest artesian well in the United States. Early dispatches placed the flow at 3000 gallons per minute, but since then the flow has increased, until on the evening of the 5th inst. it reached the enormous quantity of 8000 gallons per minute. The well is eight inches in diameter and the water is thrown to the height of over 14 feet above the top of the pipe. The only other well in the United States which compares with the one at Chamberlain is at St. Augustine, Fla., which is 12 inches in diameter, and flows at the rate of 7000 gallons per minute.

Population of Large Cities.

The large cities of the world, according to a recent publication, have the following inhabitants:

London (1891).....	4,415,958
Paris (1891).....	2,712,598
New York and Brooklyn (1890).....	2,352,150
Berlin (1890).....	1,763,543
Canton (1891).....	1,600,000
Vienna (1890).....	1,364,548

There are only 12 cities with over a million inhabitants, of which China rejoices in possessing four.

Hay Pressing.

If you are interested in pressing hay write Truman, Hooker & Co., San Francisco. They will save you money.



In These Dull Times

You can largely increase your income by buying an incubator and engaging in the chicken business. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember, the best is the cheapest. **PACIFIC INCUBATOR CO.**, 1317 Castro St., Oakland, Cal.

ACTUAL BUSINESS PRACTICE.

Established 1893

PACIFIC

Business College,

320 POST ST.

320 SAN FRANCISCO.

Established 1893

LIFE SCHOLARSHIPS, \$75.

Bookkeeping, Penmanship, Shorthand, Typewriting, English Branches, etc. Graduates aided in getting positions. Send for circulars. **T. A. ROBINSON, Pres.**

HEALD'S

BUSINESS COLLEGE.

24 POST STREET.....SAN FRANCISCO.

FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. **SEND FOR CIRCULAR.** **E. P. HEALD, Pres.** **C. S. HALEY, Sec.**

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos. A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address **DEWEY PUBLISHING CO., Publishers "Pacific Rural Press,"** 320 Market St., San Francisco.

Seeds, Plants, Etc.

Santa Rosa Nurseries.

AN IMMENSE AND WELL ASSORTED STOCK.

TREES TRUE TO NAME—Warranted clean and raised without irrigation.

PEARS AND PRUNES at about HALF USUAL PRICES till my surplus is sold.

Price List mailed free.

Address **R. W. Bell, Santa Rosa, Cal.**

Pepper's Nurseries.

ESTABLISHED IN 1858.

For Sale at Low Rates, a General Assortment of Hardy Deciduous Fruit Trees.

I do not buy trees to sell; what is offered is grown in my own grounds and free from scale bugs. No scale bugs of any kind to be found in the Nursery. No agents employed. Order direct from the nursery and procure your trees true to label. Order early, as early planting is the most successful with deciduous trees. Prices furnished on application.

Address **W. H. PEPPER Petaluma, Cal.**

AN INVITATION

IS EXTENDED TO ALL INTERESTED TO VISIT THE SAUSAL FRUIT FARM DURING THE FRUITING SEASON, WHERE ALL VARIETIES ARE TESTED THAT ARE GROWN AT

NAPA VALLEY NURSERIES.

AN INSPECTION OF THE NURSERIES ALSO SOLICITED. CLEAN STOCK, UNIRRIGATED, PROPAGATED FROM BEARING TREES.

LEONARD COATES, NAPA, CAL.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrabalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

ORANGE, LEMON & CITRON TREES.

If you have a Lemon or Orange grove, or wish to start one, remember that the success of your grove depends on the trees you plant. Common seedlings will give you a poor crop. Remember now that you are in time! If you will get your plants from this island, which, in point of fact, is the real citrus producing region in the world, in the course of time you will have a very prolific grove of the best Sicilian varieties. We only ship trees three years old, budded on the sour stock. Real trees and not common seedlings. Our leading varieties are: **ORANGE**—Mountain, Etna, Aderno, raterno, Blood, Oval and Mandarin. The **LEMON**—Messina Mountain, Etna. The **CITRON**—Citrus Medica, Spadafra, Diamante, Peretone, Lemoucella, Turk's Head, Lemsuziana, Paradise, Etc. The fruit of the above-mentioned varieties is the one largely exported in boxes to the American markets from this island. We have made several successful shipments of plants to California, Florida and Louisiana. Special care in packing. Give us an order for one case containing 100 or 200 assorted trees. Remember that every dollar you lay out on Sicilian trees is a one hundred dollar bill you have gained in future. Apply:

G. SGROI & CO., Catania, Sicily.

OLIVE TREES.

ALL KINDS OF

Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,

Pomona, Cal.

California Crops.

[Summary of Report of Observer James A. Barwick, for Week Ending September 11, 1893.]

The average temperature during the week ending September 11th was: for San Francisco 62; Red Bluff 76; Sacramento 64; Fresno 78, and Los Angeles 71.

As compared with the normal temperature the heat deficiency was found to be very great, it being 2 below at San Francisco; 14 at Red Bluff; 8 at Sacramento; 12 at Fresno, and 5 at Los Angeles.

The precipitation during the same time was .20 of an inch at San Francisco; 1.10 inches at Red Bluff; .22 of an inch at Sacramento; .05 of an inch at Fresno, and nothing at Los Angeles. As compared with the normal precipitation, there is found to be an excess of .19 of an inch at San Francisco; .96 of an inch at Red Bluff; .15 of an inch at Sacramento; .05 of an inch at Fresno, and nothing or normal at Los Angeles.

It will be readily seen that the greatest excesses were north of Sacramento county, from which county going southward the excess rapidly diminishes, and showing that the great rain and fruit drying districts of the San Joaquin valley received but little if any rain to amount to anything; but in the coast counties, the Napa valley, the upper Sacramento valley, the foothills and the Vaca valley district damage occurred to drying fruit and grapes. The grapes and late peaches will be slightly damaged in the foothills. San Rafael, Marin county: there was 1.87 inches measured and for the season 2.11 inches; Napa, heavy showers fell in the valley; Blocksburg, Humboldt county, .75 of an inch being the first storm of the season, but no doubt if clear, pleasant and warmer weather prevail the coming week, the damage to all crops will be very slight.

The observer at Red Bluff reports by telegraph as follows: abnormally low temperatures with exceptionally heavy rains for the season has done considerable damage to drying fruits and grapes on the vines. The observer at Fresno reports by telegraph as follows: temperature deficiencies for the year 5.59 degrees; ripening and sugaring of grapes much retarded and those picked are curing very slowly. Gloomy outlook for raisin growers. Observer at Los Angeles reports by telegraph as follows: weather cool for season, warmer needed for fruit drying and raisin making. Oranges growing finely. Lot of dried peaches have been sold for seven and one-half cents per pound.

Siskiyou County (Yreka)—A light rain shower accompanied with thunder, lightning and rain will be of benefit because it will put out the forest fires. All fruit and vegetable men have fine crops of apples, peaches, plums and garden truck of every description. The hay yield is a heavy one. (Fort Jones) Our agricultural districts have made an abundant hay harvest, also grain and products.

Trinity County (Weaverville)—The showers this week measured .29 of an inch, making a total to date of .32 of an inch. (Trinity Centre)—Sheep shearing is in full blast. The farmers are busily engaged in baling and hauling their hay to market.

Del Norte County (Crescent City)—The longest known dry spell to this county for many years was terminated Wednesday night by a slight shower. Mr. Allen of Smith river valley says the rain caught a portion of his hay crop down, while his other crops, such as grain, beans, potatoes and corn have turned out remarkably well.

Shasta County (Happy Valley)—Our crop is the largest ever known.

Lake County (Kelseyville)—Grain, fruit, hops, etc., are about up to the average in amount, and of fair quality, but prices are so low in the general markets that there is no inducement to sell.

Glenn County (Willows)—A slight shower of rain on Wednesday, but not enough to damage the crops.

Sutter County (Southwest Sutter)—Corn and buckwheat in this vicinity are looking well. (Nicolaus)—Hop-picking continues briskly. (Yuba City)—The almond crop is being gathered. There was a slight shower of rain Wednesday. No damage was done to the raisins or fruit in the drying yards.

Butte County (Gridley)—On Wednesday and Friday quite a rainfall occurred, cooling and clearing the atmosphere. The dried fruit was hastily protected as far as possible, with but little loss, but some peaches were knocked off the trees and ruined. (Palermo)—In all our orchards of from three to five years of age, the greatest possible activity is being displayed in handling the ripening crops; the fruit, on account of low prices, is being mostly dried.

Placer County (Newcastle)—There was quite a rainfall Sunday night, but no damage is reported.

Sacramento County (Orange Vale)—Almonds are being gathered from the various

orchards. (Folsom)—The first rain of the season was on Wednesday, accompanied by thunder and lightning. (Galt)—Large quantities of summerfallow wheat are being sowed in this section, and the average will be larger than for many years. (Sacramento)—There was .06 of an inch of rain precipitated on Wednesday the 6th, and .16 of an inch on Sunday the 10th, but no damage has as yet been reported, only the retardation of fruit drying, caused by the accompanying cloudy weather. Hop-picking is rapidly progressing and the yield is good.

Yolo County (Knights Landing)—The rains have done some damage to hay. The bean and corn crop are very promising. (Casheville)—Fruit drying is at its height in the different orchards, peaches and prunes being the only varieties handled. (Davisville)—The rain appears to have done no material damage to the raisin growers except to delay their operations a short time. Grape-picking for raisins will begin the coming week in the Briggs vineyard. (Dunnigan)—Large forces of men are now employed in our vineyards picking grapes. Fair and moderately warm weather is therefore very much to be desired by the vineyardist, and the farmer as well, as early rains in the fall almost invariably indicate a lack of rain in the spring when it is most needed.

Solano County (Dixon)—Cloudy weather and slight showers of rain, but no damage as yet reported. The prices received for fruit in the East have been more satisfactory this week, and an increased demand for dried fruit has brightened the countenances of many growers.

Sonoma County (Santa Rosa)—There is every indication that fruit will bring better prices presently. Green fruit has already brought better figures than were promised at first. Eight dollars per ton for grapes is being offered at Guerneville. On Wednesday quarter of an inch of rain fell in Alexander and Dry Creek valleys, and a downpour at Sonoma, accompanied by thunder and lightning. (Healdsburg)—Hop-picking has commenced. (Petaluma)—The Magnolia cannery has shipped away in the last two weeks 25 carloads of canned goods. (Cloverdale)—The corn crop this season is a most excellent one. Mrs. Solomon of Sonoma sold 50 tons of prunes from her orchard for \$28 per ton.

Sierra County (Sierra Valley)—The hay crop is turning out well but the grain crop will be light.

Inyo County (Big Pine)—Apples, pears, plums, grapes, strawberries and blackberries have been an abundant crop this season.

Amador County (Ione)—The first rain of the season occurred on Wednesday, but was a light one.

Contra Costa County (Crockett)—The fruit down this way is better than it has been for years.

Calaveras County—The first rains of the season began on Wednesday and was a good smart wetting.

Mariposa County (Mariposa)—A heavy grape crop is reported from all the vineyards in the county. Wednesday night gave us a fine rain with just enough electricity to make the air delightfully pure and fresh. This is early for fall rains to set in, but they are yet too light to do any serious damage.

Stauslaus County (Turlock)—Weather cool nights and mornings, with a trace of rain during the week.

Fresno County (Selma)—There is a very large shipment of dried fruit being shipped from this point.

Kings County (Lemoore)—The electrical storm of Wednesday was as heavy a one as has been seen here in years. The rainfall amounted to .61 of an inch.

Tulare County (Tulare)—Thrashing is not yet finished and will not be for some weeks. Fields are full of wheat piled up in the sacks.

Monterey County (Pajaro)—Beet hauling will begin the coming week, and the factory will start up about ten days later. The crop will be a large one. Apple and prune shipments are daily being made. Hop-picking and curing will begin in about two weeks.

San Luis Obispo County (Templeton)—The fruit prospects are remarkably assuring this season.

Ventura County (Ventura)—The bean crop in the Carpinteria valley will be very light in many places, but the corn crop will be the largest in years. Hueneme bean-cutting is progressing rapidly and the crop will be large.

Orange County (Tustin)—The prune crop is an unusually large one. It is being dried almost entirely by private parties.

Los Angeles County (Downey)—Mr. James T. Dunn is storing his crop of barley, which amounts to upward of 10,000 sacks.

San Bernardino County (Chino)—Sugar output to date is about six million pounds. (Redlands)—Fruit-growers are drying almost the whole of their crop in anticipation of

better prices prevailing this fall. The orchards are looking unusually well kept, and the citrus fruit prospect is excellent, the trees being pretty well loaded with green fruit. The raisin crop of this county is said to be larger this year than ever before known.

Riverside County (Morino)—Thrashing continues in the valley, and the crop will not all be harvested for several weeks yet.

Riverside County (Beaumont)—Fruit-growers being unable to sell are drying their crops, and barley raisers are waiting for a raise in the market. In the peach-growing section of southern California peaches are cheaper than hay, the former bringing \$10 a ton and the latter \$11.

San Diego County (Julian)—The nights are becoming quite cool. The superior quality of the fruit of this valley is giving it a wide reputation. (San Marcos)—Corn crop will be an immense one.

Highest and lowest temperature in the State was 101 at Upper Lake and 42 at Kelseyville, both in Lake county.

Commission Merchants.

ALLISON, GRAY & CO.,

501, 503, 505, 507 & 509 Front St.,
And 300 Washington Street, SAN FRANCISCO.

GENERAL

Commission - Merchants,
GREEN and DRIED FRUITS,
Poultry, Eggs, Game, Grain, Produce and Wool.

P. STEINHAGEN & CO.



404 & 406 DAVIS ST. S.F.

MOORE, FERGUSON & CO.

WOOL, GRAIN, FLOUR

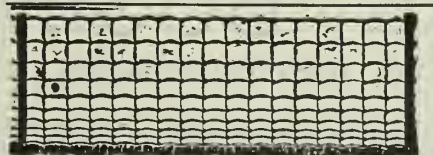
General Commission Merchants,
310 California St., S. F.

Members of the San Francisco Produce Exchange.
Personal attention given to sales and liberal advances made on consignments at low rates of interest.

LINDSAY & CRAIG,

Crocker Building.....San Francisco.

Mortgages Bought, Loans Negotiated.
Several buyers on hand for desirable Fruit and Grain Ranches.



Ratio 16 to 1
About Right.

When comparing other fences with the Page. We have no desire to see the others abolished, as some people prefer a weaker and so called cheaper article and we could not supply the demand, if the Page was suddenly adopted by all classes. 16 to 1 also represents the number of crosswires per rod.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

A BEAUTIFUL PLACE

Comprising 44 acres, within the town limits of Santa Rosa, well improved, has nursery of 50,000 trees, fine orchard, well stocked poultry yard (fancy varieties), house furniture, horse, carriage, etc. Everything in good order. Price reduced from \$10,000 to \$9,000. Must be sold. Apply early.

JOHN F. BYXBE, 42 Market St., San Francisco.

California Inventors

Should consult DEWEY & CO. AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists and large practice as Patent attorneys enables them to offer Pacific Coast Inventors far better service than they can obtain elsewhere. Send for free circulars of information. No 220 Market St., San Francisco Cal.

GRANGERS' BANK

OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 187



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 800,000
Dividends paid to Stockholders.... 720,000

OFFICERS.

A. D. LOGAN.....President
I. O. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary
General Banking. Deposits received, Gold and Silver.
Bills of Exchange bought and sold.
Loans on wheat and country produce a specialty.
January 1, 1893. A. MONTPELLIER, Manager.

Dewey & Co.'s Scientific Press Patent Agency.



OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library, containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free.

DEWEY & CO., Patent Agents,

220 Market St., Elevator, 12 Front St., S. F.
TELEPHONE No. 658.

A. T. DEWEY. W. B. EWER. GEO. H. STRONG

CALIFORNIA FRUITS

—AND—

HOW TO GROW THEM.

A MANUAL OF METHODS WHICH HAVE YIELDED GREATEST SUCCESS; WITH LISTS OF VARIETIES BEST ADAPTED TO THE DIFFERENT DISTRICTS OF THE STATE.

BY EDWARD J. WICKSON, A. M.

Assoc. Prof. Agriculture, Horticulture and Entomology, University of California; Horticultural Editor PACIFIC RURAL PRESS, San Francisco; Sec'y California State Horticultural Society; Pres. California State Floral Society; Etc.

PRACTICAL, EXPLICIT, COMPREHENSIVE.
Embodying the Experience and Methods of Hundreds of Successful Growers, and Constituting a Trustworthy Guide by which the Inexperienced may Successfully Produce the Fruits for which California is Famous.

SECOND EDITION, REVISED AND ENLARGED.

Large Octavo—599 Pages, Fully Illustrated.
PRICE \$3, POSTPAID.

FOR SALE BY

THE DEWEY PUBLISHING CO.,
PUBLISHERS PACIFIC RURAL PRESS,
220 Market Street, Elevator, 12 Front Street
SAN FRANCISCO, CAL.

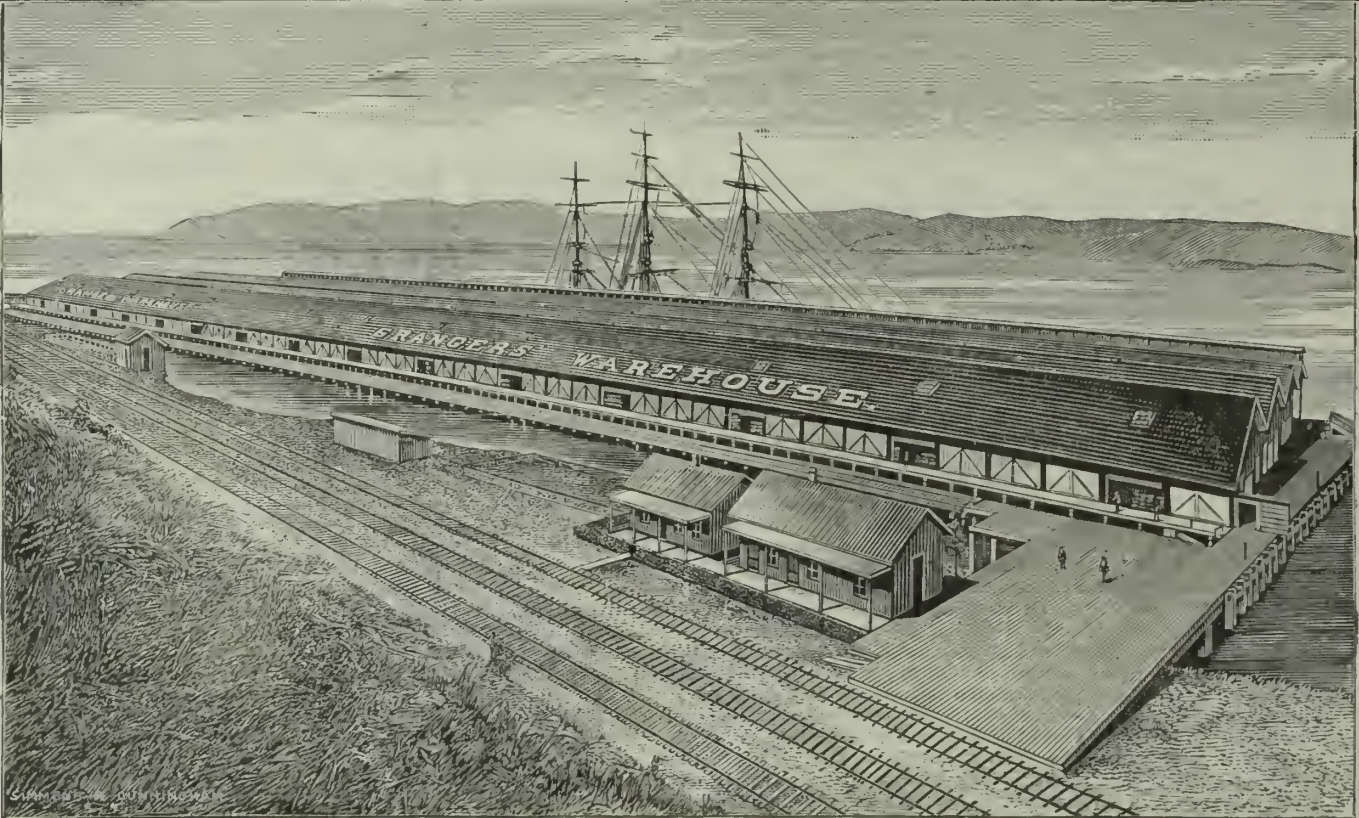
E. VAN EVERY, Manager.

T. R. BALLINGER, Grain Salesman.

Great Reduction in Storage

SEASON OF 1893

50 CENTS TO JANUARY
1st, 1894.



75 CENTS FOR SEASON
TO JUNE 1st, 1894.

AT THE

GRANGERS' WAREHOUSE, PORT COSTA.

Capacity of Warehouses, 50,000 Tons; Wharf Accommodations for the Largest Vessels Afloat.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT, AND FOR SALE ON CONSIGNMENT.

For Particulars and Rates, address all communications to our San Francisco office and they will be promptly attended to.

PARTIES DESIRING STORAGE WILL PLEASE APPLY EARLY.

GRANGERS' BUSINESS ASSOCIATION, 108 DAVIS STREET, SAN FRANCISCO, CAL.

A SUBSTITUTE

Advantages of this Paper for
a Drying Surface.

ABSOLUTELY ODORLESS.
WATER, ACID AND
ALKALI PROOF.

WILL IMPART NO TASTE
NOR ODOR TO FRUIT.

CHEAP AND DURABLE.

ITS BRILLIANT BLACK
SURFACE, which absorbs
the heat, drying both sides
of fruit at the same time,
and rendering the labor of
turning unnecessary.

E. G. JUDAH, Agent, 221 South Broadway St., Los Angeles.



FOR TRAYS!

Unequaled for
DRYING GRAPES.

Write for
SAMPLES AND CIRCULAR.

Paraffine
Paint Co.

116 Battery St.

SAN FRANCISCO

DEWEY & CO. { 220 MARKET ST., S. F. } PATENT AGENTS.

Elevator, 12 Front.



PROTECT YOUR TREES

— WITH —

Gilman's Patent Tule Tree Protector

Patented Aug. 1, 1893.

Cheapest, Best and Only One to Protect Trees and Vines
from Frost, Sunburn, Rabbits, Squirrels, Borers and Other
Tree Pests.

For Testimonials from Parties who are using them send
for Descriptive Circulars.

B. F. GILMAN,

Sole Manufacturer of Patent Tule Covers,
420 NINTH ST., SAN FRANCISCO, CAL.

Send for Price Lists

OF GUNS

And all Articles used
by Hunters and
Anglers.



GUNS SENT ON
TRIAL.

OLD GUNS TAKEN
IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.



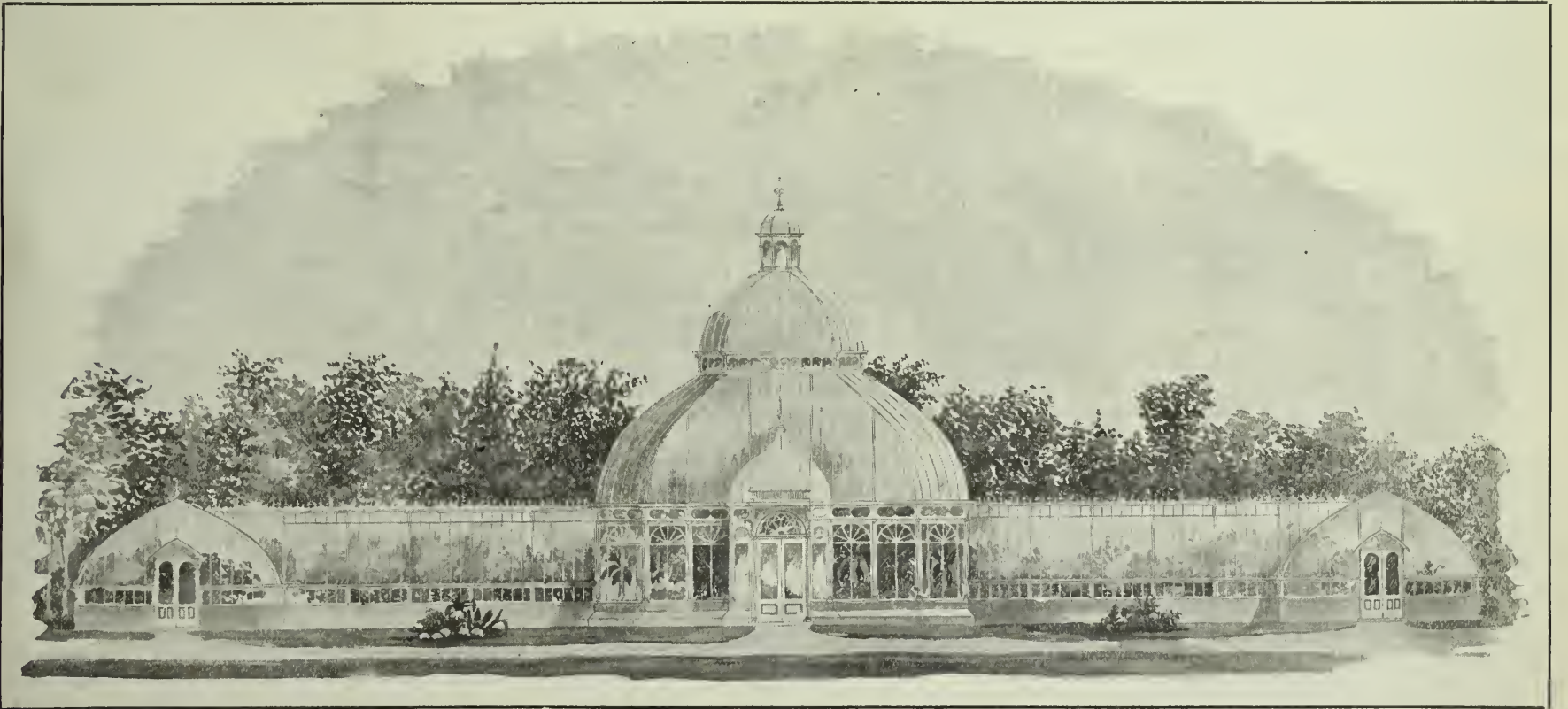
The New Greenhouse at the State University.

Some weeks ago we alluded to the advancement of horticulture as a line of university work, and noted instances of such a tendency in educational affairs. These instances are to be found in nearly all countries, and the greatest conservatories, botanic gardens and acclimatization establishments are connected in some way with the educational enterprises of the countries establishing them. This is of course their proper association, for such undertakings are not merely for the entertainment of the visitor; they are rather important factors in general education, and broadly so, for they extend from the wide extremes of pure science on the one hand to economics on the

Knowledge of the existence of the University has in fact been first brought to newcomers in distant parts of the State by this propagation and distribution work of the College of Agriculture, and it has always been a most efficient factor in the popularization of the University as a whole. The new greenhouses will facilitate a considerable extension of this valuable service to the State.

The engraving on this page gives a front elevation of the structure which will be erected during the coming winter. It will be situated nearer the central group of buildings than the old establishment now is. The materials of the superstructure are to be of iron and glass throughout, no wood being employed except for doors and for cap-bars which come immediately in contact with the

WE ARE GLAD to see that Secretary Morton was either incorrectly reported as to his intention to do away with inspection of meats and meat products intended for export, or else he has changed his mind in this respect. The change, if thus it be, is very fortunate. As we remarked some weeks ago in criticizing the proposed abandonment of inspection, it would be a serious mistake to tell European nations that we could not afford the few thousands expended to assure them that the millions' worth of meat which we sent them was fit for human food. After working for years to secure this outlet for a leading American product, it was to be lost by a niggardly notion of economical administration. Our European customers are restless under the vast sums of money they pay us for food



THE NEW CONSERVATORY OF THE AGRICULTURAL DEPARTMENT OF THE STATE UNIVERSITY AT BERKELEY.

other. They touch human life and thought at all points and constitute a most important item in university equipment.

The University of California at Berkeley has, in the many necessities of its youth and rapid growth, been obliged to postpone the erection of a plant house of size and dignity commensurate with the needs and standing of the institution. At its beginning more than 20 years ago, the importance of such facilities was recognized and small wooden plant houses were constructed. These structures were probably as good as could be provided at the time, but they were always inadequate in point of size and facilities for plant growth, and it has only been through dint of much propping for the last five years that they have been kept from falling to pieces. Their low roofs made it necessary to throw out or give away specimen plants as soon as they began to attain fair size, for they pushed the glass out of the roof. For this reason the University has never been able to show decent plants and the plant houses have been a by-word among the horticulturists as unworthy of the State. Meantime the work of the Agricultural Department has continued to increase. Thousands of plants have been propagated from seeds and cuttings brought from all parts of the earth, and many of the most interesting and useful economic plants have gained entrance to the State through this channel.

glass. The plant benches are of iron and slate of the most improved style of construction, and the hot water heating apparatus will also be of a pattern most approved by recent comparative tests. In these respects the University greenhouses will be a model of this class of structures and will prove attractive to those who contemplate greenhouse-building.

Upon page 216 of this issue the ground plan of the establishment is presented. The building will have an extreme length of a little over 170 feet, and the greatest depth will be 60 feet. The total interior area will be upward of 7000 square feet. The dimensions of the several portions of the structure as shown in the engraving are as follows:

Vestibule, 10x12 feet; palm house or central portion, 45x45 feet, with a clear height of dome of 42 feet; extensions on each side of the palm house, 20x37½ feet, 14 feet high; wings on each end, 25x60 feet, 16 feet high. Thus the main structure consists of five apartments intercommunicating and still isolated so as to admit of the maintenance of different temperatures as required for the different classes of plants. In the rear of the palm house is a building 29x30 for office, potting shed and heating furnaces. The cost of the structure will be between \$20,000 and \$25,000. The plans were furnished by Lord & Burnham of Irvington, N. Y.

and we should do everything possible to give them no excuse for exclusion. Secretary Morton evidently recognizes now the importance of this consideration, for it is just telegraphed from Washington that after October 1st all hogs slaughtered for interstate and foreign trade will be inspected before slaughter and again at the time of the carcasses being dressed. Instructions have been given inspectors covering the inspection of cattle, sheep and swine, and the products thereof, and will be enforced in all parts of the country. The enforcement of these instructions will, in the opinion of the Secretary, insure wholesome meat for interstate and foreign trade, but municipal boards of health must still be depended upon to protect consumers from diseased animals which are for consumption in the States in which they are killed. This is the right course. Local communities in this country can look out for themselves, but the Government must give a surety to foreign purchasers.

CONSUL-GENERAL MASON, at Frankfort-on-Main, Germany, reports to the State Department that, owing to the abnormal conditions which have prevailed throughout the hop districts of Germany, an enormous deficit in the crop will be the result, and that much of that staple must needs be imported in order to supply the great demand which prevails at all seasons of the year for it.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING Co.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half inch (1 square).....	1.00	2.50	6.50	22.00
One inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, September 23, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—The New Conservatory of the Agricultural Department of the State University at Berkeley, 213. Ground Plan of New University Greenhouse, 216.
EDITORIALS.—A New Greenhouse at the State University; Miscellaneous, 213. The Week; Higher Culture of Wheat; A Desert Blooming Disgrace; Miscellaneous, 214. From an Independent Standpoint, 215.
MISCELLANEOUS.—An Appeal for Relief, 215. The Irrigation Congress; Distant Marketing of California Fruits; Gleanings, 216. How the Earth Will Die; Big Pumping Feat, 227.
CORRESPONDENCE.—From R. W. Bell; From a Friend of the Nurserymen, 216.
HORTICULTURE.—Requisites for Pineapple Culture; Gum Disease of the Orange; Cross-Fertilization in Fruit-Growing; Those New Scale-Eaters; Treatment of Prunes in the Sweat, 217; Sand for Woolly Aphis, 218.
THE FIELD.—Grain Gambling and Low Wheat Values; Observations on Canals, 218.
WORLD'S FAIR.—A Day Among the Live Stock, 218.
THE STOCK YARD.—Loco Poisoning; Wheat as Stock Feed, 219.
THE POULTRY YARD.—A Few Hints on Setting Hens; Preparing Fowls for Exhibition, 219.
THE HOME CIRCLE.—Miscellaneous, 220-221.
YOUNG FOLKS.—Miscellaneous, 221.
PATRONS OF HUSBANDRY.—The Master's Desk; From Yuba City Grange; The State Grange and Then?; From Bennett Valley Grange, 222.
AGRICULTURAL NOTES.—223.
MARKET REPORTS.—225.

BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

	PAGE.
Seeders—Deere Implement Co.....	223
Thoroughbred Poultry—Theodore Cushing, Spokane, Washington.....	224
Dispersal Sale of Live Stock—Kilip & Co.....	224
Nursery Stock—Harry E. Hulbert, Santa Rosa.....	226
Nursery Stock—William Parry, Parry, N. J.....	226
Nursery Stock—Alexander & Hammon, Biggs.....	228
Loan Wanted—John F. Byrbee.....	225
Agents Wanted—J. W. Jones, Springfield, Ohio.....	225
Fertilizers—H. M. Newhall & Co.....	225
Jewelry, Etc.—J. H. Pierson.....	226

See Advertising Columns.

The Week.

It may be an equitable division of the ills between the hemispheres that Europe should have this year all the natural elements of misfortune and the United States all the artificial elements. One would think that the meanest agricultural season of the quarter-century, with a spring-time of burning drouth and an autumn of destroying floods, with cholera along the Mediterranean and war clouds over the whole territory, would make despondency and depression; but the European prints have no such local notes, while their editorials are filled to gloating with the ugly features of the financial depression in the United States. And yet we are in the midst of immense production, and, wholly free from meteorological mischief, groan and shiver and gasp and sigh as though famine and war and pestilence had us by the curves of our clothing. Indeed, it is not in our stars, but in ourselves, that we are in distress. How long are we going to suffer from self-flagellation and give Europe a distraction from her own woes in the admiration of our national antics?

The days have favored the pursuit of fall work, and it is encouraging to see some signs of better values for our chief fruit products. There is really much courage being evinced in productive enterprises and investments in these lines, and, if these interests do not get reformed to death this winter, they alone will draw our whole industrial caravan on higher ground and in brighter sunshine.

A PROPOSITION is on foot to hold a horse show at the coming Midwinter Fair. These exhibitions are generally of fancy stock, but they are very interesting. A fine showing of high-class California horses could be made. No horse in America would attract more attention than the world's champion stallion, Directum. Diablo is another production of this State whom hundreds would like to see. Palo Alto could surely show a fine collection of speedy young ones, while the Russian Orloffs, now owned in this State, would prove a great attraction for the horse show. It will be found, also, when the time arrives, that California is well supplied with hackneys, ponies, Cleveland hays and all varieties of draft horses.

Higher Culture of Wheat.

The RURAL PRESS insists that good profits will not again be made on wheat in the State until fertilizers are used upon the land. After having grown wheat for thirty years without giving his land a particle of manure, the California farmer will of course declare fertilization for wheat absurd and impossible. It is hard to teach an old dog new tricks; but really it remains to be shown what kind of fertilizers could be used in California which would not cost far more than they would add to the product of the soil. The RURAL PRESS should tell the farmer how to proceed when it advocates such a startling change as fertilizing wheat lands. However, if it is really true that the soil is so far exhausted by continuous cropping that paying crops of wheat cannot be grown without manuring, it is easy to see that the doom of the big ranchers has been written, and that they must be succeeded by smaller farms, on which shall be practiced intensive culture.—Chico Chronicle-Record.

Our contemporary strikes at the center of this matter, and we are glad of it. It is true, in the first place, that the old-line wheat-grower will scout the idea of fertilizing for wheat, and it is true also that such improvement of wheat-growing as we contemplated would essentially change the system of wheat-growing and ultimately break up the big wheat ranches. We do not fear either the scorn of the old wheat-grower nor the disintegration of the big ranches. But when we say that, we do not mean that we are going on a crusade of denunciation for either the man or the ranch. This is the way the popular writers usually handle the question, but it is not the right way.

We have no harsh criticism for the present system of wheat-growing. It has served a good purpose. It has made it possible for a few men to bring great wealth to the State. It has built up trade and manufactures. It has dotted our great valleys with fine country homes, schoolhouses and churches, and has built up many thriving interior towns, aside from its contributions to the growth of the metropolis. It was probably the only practicable system in a new country of vast areas and small labor supply. The worst that we would say of the old system of wheat-growing is that it has almost had its day, but it may enjoy a green old age. It is not going to drop off by apoplexy or heart failure.

Out of the gradual disappearance of pioneer styles of wheat-growing there will come into prominence a better style, which will meet the changed conditions just as the old style suited old conditions. This change cannot be brought about suddenly, because there is a vast amount of knowledge to be evolved from research and experience before the chief features of the new style can be definitely described. To simply command or exhort the old wheat-grower to change his practices will accomplish no good. To urge him to do anything simply because it is different from what he has been doing is not good advice. To make a general claim that he must use fertilizers and expect him at once to rise from narrow margins to large profits would be to deserve all the condemnation which the old wheat-grower could command. It is more than likely that if the wheat-grower should rush into the use of fertilizers on his fields, he would either have his wheat all flat on the ground or all burned up before spring, according to the season. It is possible that he would lose all his fertilizer cost him and part of his wheat besides. This is not the sort of reform which is needed in wheat-growing. And yet we read frequently diatribes on the lack of deep plowing and heavy manuring as the cause of the California wheat-grower's small returns. The old farmer probably knows very well that either deep plowing or coarse manuring would cut off his chances of getting even the moderate crop which he is hoping and working for.

The proper use of fertilizers on wheat in this dry climate, and especially on light, loose soils, cannot be learned in a year, and this is the reason why the beginning of field experimentation should not be longer delayed. It is perfectly demonstrable that the soil needs restoration to the old heart and strength which gave the grand returns of pioneer days, but how to make such returns is the point to be ascertained. Every thinking wheat-grower should give such attention to this subject as his time and means will allow. He should try different manures on small pieces convenient for observation and watch the results. From such tests, in connection with notes on the character of the season, he can get hints of the next steps to take. It would not be difficult for neighboring farmers to co-operate in tests of this kind, and in the consideration of the results. Such undertakings would probably command the interest of our fertilizer dealers, and they would give all the help in their power in selecting the materials most suitable for trial. We have no doubt Messrs. Newhall & Co., of this city, would welcome consultation on these lines.

Now as to the breaking up of large ranches through the introduction of a more intensive system of farming. It is a culmination most devoutly to be hoped, though of course such small divisions as are admissible for fruit would not be at all desirable. The wheat-grower, even on the most intense system, needs considerable land—quite enough to make him feel respectable. It is more than

likely that in many cases the higher culture of wheat would merely come in as one of the items in a system of mixed husbandry. It is possible in many places it cannot be done without irrigation water, and with water would come clovers and root crops and cattle and a system of rotation which would restore to the soil the nitrogen which is usually the first thing needed to restore wheat yield to large figures.

And this changes the whole face of the country—water has made things possible which our old farmers now think absurd. Of course, these things cannot be done in a year, but they will be things of the future just as sure as California will have a future.

A Desert Blooming Disgrace.

Uncle Sam should certainly make some arrangement to do his land office business in a more humane manner. Even conductors of private auctions, whether they be of lands or of bulls or of goats, have some regard for the comfort of their customers. It may be that the execrable music of the contract band or the insoluble viands of the contract caterer often so affect the nerves that bidders become silent from aphasia, but the humane disposition of the auction architect is certainly displayed and there is no such disaster and loss of life as has recently occurred whenever Uncle Sam has decided to dispose of a new choice spot of desert.

Of course it may be claimed that the Government has no business interest to serve in opening up these lands to the public; in fact that the interest is wholly on the other side and that it is the chance of getting a farm for next to nothing which creates the demand and those who wish such roses should take their own risk of the thorns. Even granting all this, it would still seem to be a duty of the Government to see that its eager children are not starved or murdered when they seek its bounty. The occurrences of last week on the opening of the Cherokee Strip are certainly a disgrace to a civilized country. The following is but a hundredth part of the horrors which come over the wires from day to day:

At Kingfisher 600 tired, weary boomers lined up in front of the office and will keep their places until the office opens up to-morrow. At Guthrie no less than 1200 men and women are in line. At Perry a line of men miles long stretches away from the land office, and at Wharton 1200 people are in line.

Thousands of people who made so great an effort to get into the strip are making equally strenuous efforts to get out. A dozen dead bodies have been found between Arkansas City and Perry. Not all have been identified, and the manner of death of only a few has been ascertained. The number of those who received broken arms and legs and other injuries in the rush is very great, and the doctors have been kept busy attending to the wounded.

A whole party of people from Illinois, who had planned to establish a colony of their own in the strip came back on the Santa Fe. They made the run on foot from the line north of Orlando, O. T., and got nothing, after having stood in line at the registration booth, sleeping on the ground and existing on muddy water and dry bread.

Enoch Hooker of Green county, Ill., acted as spokesman for the party: "Uncle Sam has turned hnnco-steerer; he turned over a lot of land of no value to poor people, and if they are ever able to pay for it he will be receiving money under false pretenses. The railroads and newspapers are in the 'play,' too. I predict this winter will see more sickness, suffering and death among the people who have gone to this 'promised' land than has ever been seen in this pioneer settlement. We are glad to get back. We honestly would not take a claim in the new country as a gift now after what we have seen of it."

Such things as these should not be possible. No doubt Congress can devise some plan by which they might be obviated. Some change in the manner of registration might conserve individual rights and prevent herding of people upon a desert where even drinking water cannot be had, and where between human vultures and inhospitable nature, the deluded victim has small chance of escaping with his life.

Aside from all details of plans of selection and registration, the government should protect its own citizens by refusing to open lands which ordinary settlers cannot subsist upon. The Government has already been a party to too much distress-bringing. Year after year there comes the story of lives and earnings wasted upon lands which, in their natural state or by any improvement which private enterprise can make, cannot be rendered productive. The Government should at least make public announcement that such is the character of the lands and should make it a crime for any person or corporation to represent them otherwise than they are. If a few examples were made of parties who lead these parties out into the desert to rob them, we would hear less of the evils which are now a disgrace to our civilization.

It is estimated that the hop crop of Washington will be about 50,000 hales. The first shipment of the season, consisting of two carloads for London, was made last week by E. Meeker. The hops are of excellent quality.

THE first straight carload of raisins this season was shipped East from Fresno Monday by Porter Brothers. Previously some mixed shipments of raisins and fruit were sent out.

From an Independent Standpoint.

The congressional record of this past week simply repeats that of the week before. There has been an abundance of chin music day by day, but the matters in hand are as far from adjustment as they were last week. The Senate, upon which the country is waiting with feverish anxiety for the settlement of the financial question, has industriously "debated" each day, but it has come to nothing that tends toward definite action, and seems as far away from a vote as it was a week ago. Indeed, it is clearly apparent that the chief effort now is not to reach, but to postpone, definite action. The so-called "silver Senators" see that if the Senate comes to a vote they will be beaten, and it is their plan to put off the vote as long as possible. By this policy they have nothing to lose and possibly something to gain in the way of compromise; and they seem utterly regardless of the damage and distress they are imposing upon the country. That half a score of men are thus able to hold the Senate at bay and block the progress of legislation is due to a most pernicious unwritten law called the courtesy of the Senate. Under this tradition no limit can be put upon debate in the Senate, and any member or group of members can postpone the vote on any subject as long as their lungs hold out to talk about it. As a matter of fact, the so-called courtesy of the Senate is an out-worn absurdity. It was, perhaps, well enough long ago when Senators were gentlemen and statesmen; but in these days when the membership is largely made up of corporation attorneys and pushing political tricksters without either principles, dignity or manners, there is need for strict and definite rules. And if the popular patience is imposed upon much longer such rules will be made and enforced. The first movement toward change in the usages in the Senate was made to-day (Tuesday) by Voorhees of Indiana, the well-known bimetalist and the leader of the repeal forces. We quote from the telegraphic report of Senate proceedings:

After a sensational denunciation of New York bankers and a defiance to the press that has been criticising his actions and questioning his motives, demanded that the minority senators name a date for the final vote. Dubois of Idaho met the demand by a positive declaration that the anti-repeal men would oppose the passage of the repeal bill by availing themselves of every advantage afforded them under the rules and usages of the Senate. Voorhees retaliated by giving notice that he would to-morrow move for longer and more continuous sessions. So the situation in the Senate appears to have resolved itself into a mere question of endurance. Immediately after the Senate met the repeal bill was taken up. Voorhees once more sought to obtain an agreement as to when the vote should be taken. "The time," he said, "should not be misspent in instructing the public mind in regard to the organization of the Senate." In doing this he addressed himself "to the great body of intelligent public opinion, as well as in some quarters to a dense, opaque degree of ignorance; ignorance in some respects innocent, but in others malicious." He then reviewed the history of the rules of the Senate from its creation, showing that for seventeen years, from 1789 to 1806, the Senate, among its rules, had a provision for the previous question. It was tried fully, and in 1806, when Thomas Jefferson was President, it was deliberately abandoned and never claimed or admitted from that hour to the present. "I am now arraigned," said Voorhees, "before public opinion for not terminating this debate. As well might I be arraigned for terminating the tide of the ocean or the northwest winds. In abandoning the cloture rule, the government of this great body was placed upon a sense of propriety, patriotism and deference to the public sentiment and public interests of each Senator of the body itself, with the assurance in the minds of those then in the Senate that no Senator would be found to abuse the patience of this body or outrage public business or public interest. For eighty-seven years this body has been a law sufficient unto itself. It never has been found wanting in peace or in war, so that the criticisms of a certain class will fall as harmless upon this body as they fall upon me. As far as concerns the personal criticism of myself, I may as well embrace this moment as another to say they are met with absolute stern defiance. I have served the people of Indiana many years, and I have had no explanations required when I have gone home to them; and I treat with scorn and immeasurable contempt the suggestions coming from New York bankers or anywhere else as the motives which govern me. I respond to that kind of criticism by saying that it comes from a class whom the Saviour of the world never spoke of with respect, nor do I."

It is easy to see to what all this will lead. Nothing can be more certain than that if the so-called courtesy of the Senate is employed to defeat the will of the majority it will be knocked into a cocked hat. And the public will heartily approve. There can be no justification of the attempt to defeat and postpone action by juggling with rules of procedure. It is beginning to dawn upon the rational bimetalists of the country that the greed of the so-called silver Senators is jeopardizing the real interests of bimetalism in the effort to make the Government serve the narrow, selfish interests of the silver mines. Those men pretend to be bimetalists, while in fact they are nothing more than the attorneys in Congress of the mining interest, ready to throw the broad interests of bimetalism to the winds if thereby they can receive even a temporary advantage. Whatever their pretenses may be, their plan is such as would reduce the country to a silver standard of money. This would, of course, exalt the fortunes of the miners, but it would go hard with the country, and especially with producers, who would be compelled to do business on the basis of a depreciated and shifting currency.

The House is doing little more than the Senate. The

Ways and Means Committee, which has the tariff matter in charge, is devoting long sittings each day to hearing appeals from representatives of protected industries. It is said, though we cannot gather by what authority, that these hearings will cease in November; that the following sixty days will be devoted by the committee to framing a new tariff scheme and that a complete bill will be presented to Congress immediately after the holiday recess. If we are to have a tariff revolution, it is certainly better that we should have as little delay as possible, since anything definite would be better than the present uncertainty which paralyzes the industries of commerce and manufacture. We cannot believe, however, for all the talk to the contrary, that much of anything will be done with the tariff since the Government must have the revenue which the tariff brings in, and which practically cannot be raised by any other method. Furthermore, in spite of party promises, we believe that the mass of Congressmen will have too much discretion and too much regard for the good of the country to attempt to swap tariff horses in the midstream of such distressful times. When the matter comes before Congress for action there will, we believe, be scores of Democrats manly enough to vote as present conditions and necessities of the country demand. There is no principle of good faith which binds men to do a wrong thing simply to be consistent; we believe nobody will deny that the conditions of 1893 justify a modification of the Democratic programme arranged in 1892. It must be plain to everybody that to supplement our financial troubles with the violent change in business conditions consequent upon a radical revolution in the tariff, would be the height of unwisdom.

The corner-stone of the National Capitol was laid at Washington, Sept. 17, 1793—one hundred years ago last Monday—and the anniversary was observed with simple but appropriate ceremonies. Mr. Cleveland made a brief address, from which we extract these wise and noble sentiments:

Our celebration is chiefly valuable and significant because this edifice was designed and planned by great and good men, as the place where the principles of free representative government should be developed in patriotic legislation for the benefit of a free people. If the representatives who here assemble to make laws for their fellow-countrymen forget the duty of broad, disinterested patriotism and legislate in prejudice and passion or in behalf of sectional, selfish interests, the time when the corner-stone of our Capitol was laid and the circumstances surrounding it will not be worth commemorating.

There was never a truer expression. And it was eminently proper at a time when private and sectional interests lie struggling within the Capitol for selfish advantages that a strong and calm voice should remind Congress and the country that that noble structure was dedicated to higher uses. Mr. Cleveland touched the weak point in our political system and his admonition ought to make the country stop and think if the ruinous selfishness now so apparent in Congress has not its causes in political practices of the several States. Is it not true that in choosing a representative that our first question is, "What can he do for California?" Do we ever ask, "What can he do for patriotic interests?" Do we not enquire with more anxiety how he stands toward our local and sectional concerns rather than to the higher concerns of the national body politic? Is it reasonable to expect men chosen with reference to local relationships rather than for broad qualifications for patriotic service, will turn out to be statesmen in the true sense of the term? Is not the fountain which feeds the stream of our public life corrupted at its source? These questions are suggested by the President's timely words.

In the great financial crisis now upon us there is need in Congress for the broadest character and broadest statesmanship, and, to our humiliation and shame, no man among all the hundreds at Washington has risen to the necessities of the time; when the nation is crying out for a Money, no man with the qualification for broad and wise leadership responds. In this great crisis Mr. Sherman can do nothing more than defend his past course and make jokes at the expense of his opponents; Mr. Voorhees can do nothing better than explain his change of front and rail against the banking interest; Mr. Stewart can do nothing better than play the part of an attorney for the Nevada miners; Mr. Walcott can do nothing better than follow in Stewart's footsteps; Mr. Reed can do nothing but defend his course while Speaker of the House—and so it goes. The country waits and waits in vain for a strong voice that will plainly define the causes of our trouble, for a statesman who will point to better things and lead the way. Have we, let us ask, the right to expect such leadership when in our devotion to political expediency we always reject the man of brains, knowledge and character for the man of cheap popularity, or, worse still, for the man with a "sack." If patriotism, character and capacity are again to sway the policies of the nation as they did when the cornerstone of the Capitol was laid a century ago—at the time when Washington, Adams, Jefferson, Hamilton, Madison, Marshall and Morris directed its public affairs—we must change our system of political advancement.

An Appeal for Relief.

The Wheat-growers of Eastern Oregon have outlined a plan by which they hope to afford those of their vocation relief from existing financial conditions, and have addressed the following circular to the Board of Trade in this city. It explains itself:

PENDLETON, Or., September 15, 1893.

To the Wholesale Merchants and Bankers of the Pacific Coast States—GREETING: A convention of 500 wheat-raisers, representing Eastern Oregon and the Walla Walla district of Eastern Washington, met at the city of Athens, Umatilla county, Oregon, September 10th, to consult upon the interests of the wheat-raisers of the Inland Empire in the present money stringency.

The convention resolved by unanimous vote that to compel wheat-growers to sell their crops at the present prices would result in universal ruin to them; that if they could hold their wheat till December 15th the price would appreciate above the cost of production, and the crops would sell for enough to pay off the debts due the country merchants and banks and leave a margin for the farmers to live upon during the coming year.

The undersigned were appointed a committee by the convention to lay these facts before the wholesale merchants and bankers of the Pacific Coast and to urgently request them to refrain from pushing collections against country merchants in Eastern Oregon and Eastern Washington until after January 1, 1894.

In pursuance of the duty assigned us, we make the above statement of facts and conditions, and respectfully urge you, so far as is in your power, to give your country debtors of the mercantile class until January 1st next to settle their indebtedness to you.

This request is unusual, but conditions are extraordinary. A merchant should not be compelled to sell his goods for less than cost, nor should a farmer be forced to part with his wheat for a price less than the cost of production.

There is no real price for wheat in this section now. Small lots have been sold for 28, 32 and 35 cents per bushel—figures below cost of raising it, but farmers cannot sell at these prices without absolute ruin. We believe prices for wheat will rise 10 to 20 cents a bushel within 90 days, because:

First—The Government crop report for August places the wheat yield for the United States at 67 per cent—the lowest percentage for several years.

Second—Shortage of European crops.

Third—The large tonnage chartered for Pacific Coast ports.

Fourth—The general opinion of wheat-buyers that prices will rise materially in 90 days.

Fifth—Recent heavy rains in this section have greatly damaged large quantities of wheat.

Sixth—The gradual loosening of the money stringency, which is already indicated by reopening of suspended banks, starting up of factories, increase of bank deposits and reserves and rapid return of public confidence.

Seventh—We believe the present stringency is artificial in character and in no way the result of natural causes. As the motive for prolonging it has disappeared we expect to see the panic itself disappear speedily, though it may be long before the wreckage is entirely cleared away and business in a normal condition.

In view of these facts and beliefs the committee feels confident that you will respond favorably to the request of the wheat-raisers, co-operate cordially in mitigating the blighting effects of the recent panic, and, by refraining from distressing country merchants, save the farmers from the greatest evils that have ever threatened them in the memory of men. Very respectfully,

NATHAN PIERCE,
DAVID ASHPAUGH,
W. A. SAMPLE,
Committee.

IT IS DIFFICULT to feel much sympathy for those speculators who were caught "short" by the recent rise in prunes. They sold phantom prunes on futures for fall delivery at 4½ and 4¾ cents, and have been conscientious and continuous bears of the market. But now the price is 5 cents, and they must buy at that figure to make good their sales at the lower figure. They lose the difference.

Allen G. Freeman, manager for J. K. Armsby & Co., thus fairly describes the situation: "The freight on prunes last year was \$1.40 on boxes and bags; this year it is \$1 on boxes and \$1.20 on bags. Prices last year varied from 9 to 10 cents; this year from 4½ to 5 cents. The ruling price for the past 15 days for the four sizes—60's to 90's—has been 4½ to 4¾ cents for October delivery. The ruling price to-day is 5 cents for the four sizes. Sales are being made fairly freely at this quotation, but mostly for September delivery. The prune is a favorite fruit with consumers in the Eastern States, and the present ruling low values, it is expected, will stimulate the demand greatly. It is not expected that the price of graded prunes will advance much over this figure. It is not the object of the California prune-producers to hold their product above a price at which the masses can afford to consume them. At 5 cents prunes are fairly remunerative to the producer, and their ideas are rather to encourage a large consumption by the medium of low prices."

ARTICLES of incorporation of the El Cajon Raisin Company have been filed at San Diego. This is the culmination of a plan for handling co-operatively the crop of all the ranches engaged in the raisin industry outside of the vineyard of Souther & Crosby, who declined to go into the combine. The capital stock of the new concern is fixed at \$300,000, divided into thirty shares, all subscribed. This is regarded as ample to cover the necessary transactions of the combine, as each rancher will continue to pack his own crop.

AT a recent meeting of the State Board of Agriculture, a resolution was adopted suggesting to the Midwinter Fair people the idea of holding a grand stock exhibit in connection with the fair. The Board signified its willingness to do everything in its power to make such an exhibit a success.

From Mr. R. W. Bell.

TO THE EDITOR:—I have been interested in the various controversies in late issues of the RURAL PRESS. Those who claim that Mariana roots have a dwarfing effect and are subject to knots must have seen something else. I have seen dozens of testimonials from fruit-growers and reliable nurserymen, asserting that from their experience the Mariana is the best of all stocks for plums or prunes. My yearling prunes on Mariana are larger than those on peach or Myrobalan, some being $1\frac{1}{4}$ inches in diameter and 10 feet high, without irrigation in this dry year.

If, in extremely rare cases, knots have been found on Mariana roots, the same soil would develop ten times the number of knots on other roots, judging by my experience as well as that of others. If we could get seedling Marianas we might entirely discard Myrobalan, which is well known to be unsuitable for very dry soil, and liable to borers and sun-scald if budded high. So far, however, we have only cuttings, which throw out all roots horizontally, and I cannot say that I like such roots. In fact, I sell prunes on Mariana \$25 per thousand cheaper than those on Myrobalan seedlings on that account. I tell my customers my objection to the horizontal roots, but advise planting deep, and, after throwing in considerable soil, pull up the trunk of the tree enough to point roots downward, working soil into the vacuum thus produced under the trunk.

While on the subject of roots, I would say that the catalogues of most nurserymen tell what roots are adapted to the various soils, and most nurserymen know from experience (and will tell) what varieties of plums or prunes will do well on peach, plum or almond. The French prune has been frequently propagated on apricot, but the union is imperfect, and after the tree gets tall the wind will break it off at the point of union.

I suppose other nurserymen are too busy booking orders to take time to defend the fraternity. Mr. Wehner's wrongs seem to have biased his judgment, and he will not acknowledge that any nurseryman is honest, and when caught in wrong doing he says they *invariably* try to wriggle out of it. Mr. Hilton hints strongly that few planters ever get what they buy. Surely neither of them has dealt with many nurserymen, as all are not dishonest. We have not found that the planters who have joined our ranks as amateur nurserymen are any more reliable than the rest of us. Many regular nurserymen could show dozens, and even hundreds, of unsolicited testimonials from pleased customers of many years' standing.

Neither of the above gentlemen ever bought from me, so I am not hit, except by their sweeping hints and rash assertions. I would be as near the truth as they if I were to assert that all planters are unreliable, because some had gone back on written and verbal orders merely because they could save a few dollars by buying elsewhere. I acknowledge that there are black sheep among us, and such will cheat the best of men knowingly, but they are usually soon known and they cannot sell at home to careful buyers. Then they get their trade from other counties by selling cheap to cheap men. Some planters will correspond with a dozen or more nurserymen, telling all that they will buy at the cheapest place, often winding up by buying from some tricky cheap John who probably buys over half his stock from some careless nurseryman or amateur who may be no more reliable than himself. Of course, if a nurseryman is careless about varieties and employs cheap and unreliable help he can raise stock cheaper than a careful nurseryman, and, by substituting occasionally what he might have to burn, he can undersell honest men.

In five years I have not heard of 100 trees sold by me proving untrue to name, and, so far as I can remember, all were trees bought from others supposed to be reliable. Many others have as good a record. If buyers would enquire who are reliable, rather than who sell cheapest, there would be fewer "sore-heads."

R. W. BELL.

Distant Marketing of California Fruits.

In view of the great interest now felt by growers in the present and future of California fresh and dried fruits as commercial commodities, the State Horticultural Society has ordered that its next meeting should be wholly given to the consideration of matters involved in the distant marketing of California fruits and fruit products. This meeting will be held in Horticultural Hall, 220 Sutter St., S. F., at 1 o'clock P. M., on Friday, Sept. 29th.

Special in invitation has been extended to each of the following named gentlemen, to be present and participate in the discussion of the subject as it appears from their several points of view: Col. Philo E. Hersey, President Santa Clara Fruit Exchange; Hon. L. W. Buck, Manager California Fruit Union; H. A. Fairbank, Esq., Manager National Fruit Association; A. G. Freeman, Esq.,

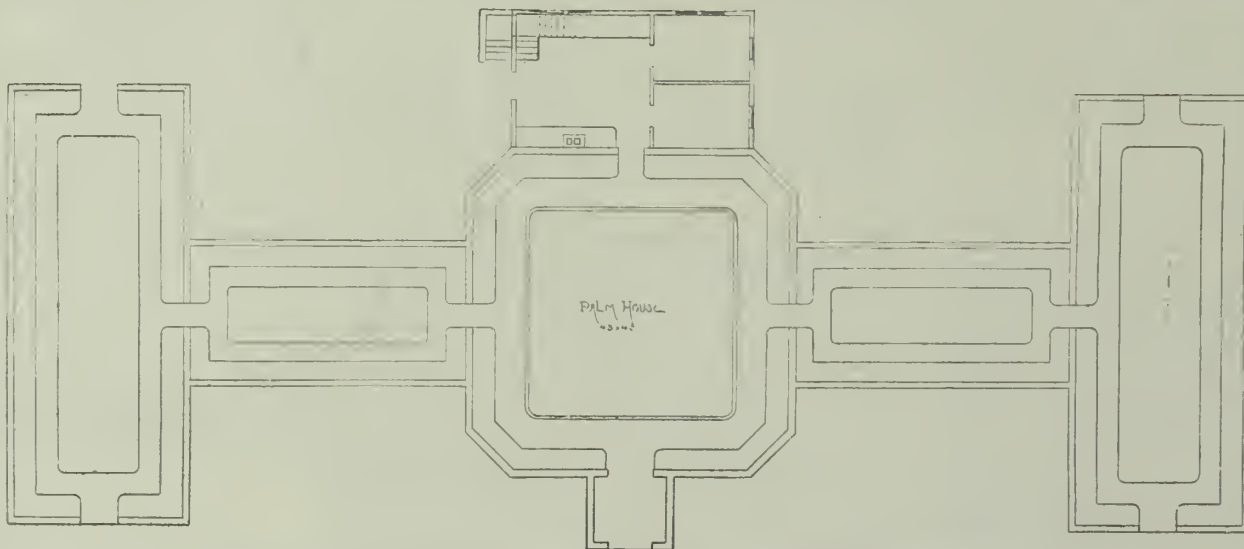
of J. K. Armsby & Co.; N. Salisbury, Esq., of Porter Bros. Company, Chicago; Mr. Porter, of Porter Bros. & Co., San Francisco; Richard Gray, Esq., Traffic Manager S. P. Co.; and Wm. A. Bissell, Esq., Traffic Manager A. T. & Santa Fe R. R. Co. Hon. S. J. Stabler, of Sutter county, was appointed to open the discussion on the part of the State Horticultural Society. All interested in these subjects are invited to be present.

From a Friend of the Nurserymen.

TO THE EDITOR:—I am not a nurseryman; I am not in any way connected with a nursery, and I do not expect to be. Neither do I own an orchard, though I have been in the orchard business for about seven years; therefore, I think I can write about orchardists and the wrongs inflicted on them by the iniquitous nurseryman, in an unbiased spirit.

To begin with, I will speak generally about errors in planting, and I wish it to be understood that any instances I quote have come within my personal knowledge and are correct.

Has it never struck you, sir, as strange that you seldom or never hear of a prominent and successful orchardist complaining about getting trees untrue to name? They, however, do get them, but being practical horticulturists and men of business, they know that errors will occur in the nursery as well as in any other business, have the errors promptly rectified and send in a just claim which is invariably and promptly settled. It is the ignorant and suspicious specimen of the human race who, with a more or less diminutive patch of badly-looking-after trees, makes all the row when an error occurs. Not that he wishes the nurseryman to make him an immediate allowance, no sir. He wants the trouble to hang on. He will, in fact, refuse the regular business allowance, then he will suddenly de-



GROUND PLAN OF THE NEW UNIVERSITY GREENHOUSE—See first page.

mand an absolutely extortionate allowance, threatening law and "exposure" in default of his demands being satisfied, posing all the time as an injured innocent when he is, in fact, a blackmailer of the most pronounced type.

I know of a case where a prominent member of the San Francisco Stock Exchange ordered some almonds to be specially grown for him, and to be of extra size. Owing to the size of the trees they had to be trimmed in the summer. Seeing where they had been trimmed, this worthy horticulturist and honest gentleman immediately declared them to be two-year-olds, returned them unpacked, so that they all died, and demanded an allowance, threatening exposure, or, in other words, demanded blackmail.

Another case I know of was more amusing. A worthy and enterprising horticulturist in this vicinity planted a patch of pears. When the trees reached a fair size his wrath was immense, the rumblings being heard far and wide, to find that the varieties were mixed. It subsequently transpired, however, that he had bought several varieties, but was under the impression they were planted north and south, when in reality they were east and west. *Huic ille lacrima.*

Mr. W. Wehner (Sept. 16th) seems to be in a bad way, indeed. The whole army of nurserymen and vineyardists seem to have conspired against him. But, seriously, Mr. W., could you not, when planting, tell plum from peach root? And have the iniquitous nurserymen really refused to make you an allowance, or are you, like Oliver Twist, wanting more?

I must congratulate Mr. Wm. H. Hilton on being one of the most able horticulturists and best men of business I ever heard of. He gets 50 trees, 12 years ago, finds they are untrue to name, and has not yet worked them over. It looks very much as if he loved to nurse a grievance, or held them as a sword of Damocles over the head of some trembling sinner. But, on your honor, Mr. Hilton, cannot you tell a Japanese plum from a yellow Egg plum, with or without foliage? I can assure you no nurseryman would make such a barefaced and imbecile attempt at a swindle. It was an error which must have been immediately apparent.

Mr. J. V. Webster (Sept. 9th) exposes his crass ignorance of horticulture by his absolutely incorrect comments on plum stocks. He further shows it by saying that he was induced to buy apricot root to plant on strong land in wet winter. Of course, he blames the nurseryman. He reminds me of those numerous men who gamble on the Produce Exchange, and blame their broker when they lose. My seven years' experience has taught me that estab-

lished nurserymen (I am not speaking of "tree agents") are far more sinned against than sinning, and are, as a rule, honest and upright men, and have done more for horticulture in California than any other class of men. I am, sir, your obedient servant,
W. H. ATKINSON.
Napa, Sept. 18, 1893.

The Irrigation Congress.

Governor Markham has issued a proclamation with regard to the International Irrigation Congress to be held in Los Angeles on October 10th, on the call of ex-Governor A. L. Thomas of Utah, and speaks of the importance to our State of the proposed congress. The Governor says:

"WHEREAS, A call has been issued by ex-Governor A. L. Thomas of Utah, chairman of the Executive Committee, for an International Irrigation Congress, to convene at Los Angeles, Cal., October 10, 1893, and continue in session for five days.

"The National Government has formally recognized this congress by a circular letter issued by Hon. W. Q. Gresham, Secretary of State, addressed to the diplomatic officers of the United States, directing them to call the attention of the governments to which they are accredited to this congress, and requesting them to send delegates to it.

"This congress promises to be the most important gathering of persons interested in irrigation which has ever been convened, and a large number of gentlemen who are prominent in the science of irrigation have signified their intention of attending this meeting. The Department of the Interior will be represented by an officer who has been specially detailed for the purpose, and he has been instructed to impart to the congress all the information in possession of the National Government on this very important question.

"It is fitting that this congress should be held in California, for this State contains within its borders irrigation enterprises which show the highest degree of engineering skill, and which have required in their perfection the expenditure of enormous sums of money. Los Angeles, where the congress is to be held, is the center of a region which was a comparative desert a quarter of a century ago, but is now a fruitful orchard, made so by the genius of enterprise and a free use of water through irrigation systems.

"No one question is more intimately connected with the future development of the country west of the Missouri river than the reclamation of our arid lands by irrigation. The diversion of flowing streams, the storage of water in the mountains, its carriage down canyons and through tunnels, out upon the dry mesas and valleys, changing them from parched plains to fruitful orchards and rich fields of grass and grain, is a subject worthy the attention and encouragement of every citizen, not only of California, but of every State which contains an acre of arid land or an inch of wasted water.

"Now, therefore, I, H. H. Markham, Governor of the State of California, do hereby request the people of this State to encourage all efforts for the promotion of the forthcoming congress, and to participate in the proceedings of the same."

Gleanings.

THE fool never has an idea that is too large to slip out of his mouth.

MILK has gone up half a cent a quart in Oakland, but no rise of cream is reported.

"Do you take this man for better or for worse?" "I can't tell until I have had him for awhile," returned the bride.

THE Los Angeles Express thinks that what we need most is the free coinage of statesmen, or perhaps it would be better to repeal the purchasing clause.

THE Wheatland Four Corners learns that Portland, Oregon, has a Mr. Steel and a Mr. Keep, both bankers. They are not partners, yet it is needless to say they are fast friends.

"Two souls with but a single thought,
Two hearts that beat as one;"
But the hammock rope was weak, and when
It snapped, it spoilt their fun.
—Brooklyn Eagle.

WATSONVILLE Rustler: When the Chinese and Japanese laborers indulge in a free fight, as was the case in a Sacramento county hop field the other day, the cause of white labor takes a hitch in its trousers and smiles audibly.

DUNNIGAN cor. Woodland Democrat: A prominent farmer was coming into Dunnigan Wednesday morning, when he came across three tramps lying on the railroad grade. Being something of a joker, he stopped and engaged them in conversation. "I would give the laziest one of you a quarter," said he, "if I had any means of determining which is the most entitled to it." "Give it to me," said one; "I haven't worked a lick for six months." "I haven't done anything but loaf for a whole year," said the second. "Say, governor," said the third, who had not even moved, "come here and put it in my pocket."

HORTICULTURE.

Requisites for Pineapple Culture.

Our southern California readers who may be trying the pineapple or thinking of such a venture will read with interest the following outlines of the natural requirements of the fruit which James F. White recently read before the Florida Horticultural Society:

The successful cultivation of the pineapple depends upon several well-known conditions. The first of these is exemption from frost. The plant is strictly tropical, and just to the extent that it is frozen just to that extent it is killed, and because of this, the area in the United States where it can be cultivated is quite limited. Florida is the only State in the American Union where it can be grown as a field crop, and only in a small part of Florida. Southern California has about the same immunity from frost as that part of Florida lying between the 29th and 30th parallels, and southeastern Texas about the same as southern Georgia. It is probable that no part of our national domain is absolutely exempt from frost, but for all practical purposes that part of Florida lying south of a line from Cape Romano to Jupiter Inlet may be regarded as tropical.

But absolute exemption from frost is not necessary to pineapple culture. South of 28 degrees on the Atlantic coast and 27 degrees on the Gulf coast, I believe a pineapple crop is in no more danger from frost than the corn crop of Ohio or the wheat crop of Virginia.

North of this line there are some localities where the fruit can be successfully grown without protection. Here on Merritt's island, in latitude 28 degrees 18 minutes, it has been injured but twice in fourteen years, slightly in 1876 and very badly in 1886.

In this climatic problem there is a positive as well as a negative factor. Heat is necessary. A region may be sufficiently exempt from frost, and yet too cold to grow pineapples. The best pineapple districts in the world have a mean temperature of 75 degrees to 78 degrees, while that of Key West is 78 degrees. Indian River Inlet and Punta Rassa are 74 degrees, Merritt's island and Tampa 71 degrees, St. Augustine and Jacksonville, 70 degrees.

The Bermudas, with an annual mean temperature of 67 degrees, produce some pineapples, and coffee has been grown there. From these facts I conclude that most of the State of Florida has sufficient heat to grow good pineapples—hence, frost is the only barrier to its general cultivation.

As to suitable soils for this fruit, opinions have been very diverse. One writer says, "new, rich land underlaid with clay;" another, "the soil should be very rich, if possible it ought to be clay," while a very intelligent English cultivator says, "The fact that sand is its native choice would of itself serve to teach the cultivator that heavy clay soil is not likely to be the most suitable for the healthy growth of pineapples." At first, low, rich land was the fashion here. Rich shell land has also had its advocates. Upon many points we yet need the verdict of extended experience, but upon two I think all intelligent planters are agreed:

1. The soil must be dry—either from natural or artificial drainage.
2. The soil must be fine—both in its material constituents and its mechanical condition.

I think there is a growing conviction that our lighter soils, with suitable additions, will give better results than the heavier grades, however rich; but of whatever grade, it must be "dry and fine." There are no exceptions to this rule, and an experience of thirteen years has served only to make it more emphatic.

So far as it relates to mechanical condition, the ground should be prepared much after the fashion of a well-cultivated garden, and to give the best results it should be well fertilized with some highly nitrogenous manure. No fertilizer has given so uniform and satisfactory results in this region as cotton-seed meal, or rather the meal of cotton-seed cake.

During these years we have learned something of the wants of the plant. It is a great lover of ammonia, demanding less phosphoric acid and least potash. Plenty of ammonia, with abundance of rain and a high temperature, develops a remarkably vigorous growth.

In this vicinity and farther south the time of planting is to a great extent controlled by the convenience of getting plants. When suitable plants can be obtained there is no better time than the last half of February and March.

As to varieties, the common red or Spanish pine "holds the fort," because of its superior shipping qualities. Some other sorts sell for more money, partly because of rarity, but chiefly because of their superior size and appearance. "Fancy fruit brings fancy prices" is true, but the popular taste is not educated so as to recognize other than the outward qualities of the fruit; hence the only "fancy" there is in the pineapple market is large size and fine appearance. Practically there is no choice as to varieties. Only the Spanish is here in quantity, and only plants of this sort are within the planter's reach. Besides the Spanish, the two varieties most abundant are the Sugar-Loaf and Gypsy, or Egyptian Queen, but these are not sufficiently abundant to be an exception to the rule.

Of the several kinds of offsets, suckers are the most valuable, because they fruit soonest. I think their superior value is in their size. They are the largest at a given age, and therefore the most valuable. The largest suckers, the largest crowns and the largest slips are each the best of their kind. To this there is one exception: A sucker may be so old as to fruit prematurely, *i. e.*, before it gets sufficiently established in its new home to produce a fruit of marketable size.

How to plant relates both to depth and distance. Plants should be set deep enough to keep them in place until they become rooted. On the Bahamas and Florida Keys they plant very close and from 15,000 to 20,000 to the acre, provided they can find that number of holes in the rocks large

enough to receive a plant. Along Indian river 2x2 feet is a common distance. Most of mine are planted 2x3 feet, and some 3x3, and my judgment inclines to the greater distance. Plants, like animals, must have sufficient food as a necessary condition of thrift. Close planting gives too many mouths for the supply of food.

And now a few words about irrigation: This plant can maintain a healthy condition for a long time with very little moisture in the soil; but in another direction its need of moisture is probably as great as that of other plants. Like other plants, its roots can receive nourishment from the soil only in liquid form. It therefore follows that moisture is a necessity of growth, and the greater the amount of plant food in the soil the greater must be the amount of water to prepare it for the use of the plants. Highly fertilized areas need much more water than those only moderately fertilized.

By some shade is regarded as an important factor in this industry. I think it mostly a question of moisture. Shade prevents evaporation and thereby promotes moisture, and moisture promotes growth by furnishing plant food in solution. This increased nutrition will give larger plants and larger fruit, but at a sacrifice of quality. Both light and heat are necessary to enable it to attain that degree of perfection of which it is capable under the best conditions. This is true of all fruits, and especially true of high-flavored fruits like the pineapple.

Gum Disease of the Orange.

The following correspondence will interest many of our readers who have noticed in their own orchards the disease discussed:

Agricultural Department California State University:—Under separate cover I mail you this day a piece of diseased orange limb. I should like to know what the disease is, the cause of the disease and what, if any, the remedy is. Rivera. E. P. HASKELL.

UNIVERSITY OF CALIFORNIA, }
BERKELEY, Sept. 16, 1893. }

Mr E. P. Haskell, Rivera:—The specimen you send presents all the characteristics of the disease commonly called the "gum disease."

From the investigations I have been able to make concerning this disease, it would seem that it is produced by a variety of organisms such as are ordinarily associated with decaying vegetable matter and not by any true parasite. The cause of the attack of these organisms must be looked for in some predisposing condition. This condition is generally and perhaps always a quantity of moist decaying vegetable matter in direct contact with the tree. This may be by the use of green manure against the crown of the tree, the planting of a young tree over the decaying roots of another tree, especially if it is one that has died of this disease, or it may be that the dead vegetable matter is furnished by the tree itself in case the thick layer of dead bark is produced by the basin system of irrigation.

In all of these cases a period of moisture is necessary to start the decay. The need of moisture explains why the disease invariably begins beneath the ground.

Now, as for remedy, it appears that, if the disease is discovered soon enough, and if it does not involve the smaller roots, it is not difficult to cure—indeed, it is remarkable what efforts the tree makes to heal when it is nearly girdled. The method that is suggested is to remove the earth from all diseased parts of the crown or larger roots, and, unless it is during the dry season, the dead bark also. It might be useful to these parts. Apply a fungicide, as Bordeaux mixture. Do not return the earth until the dead bark is entirely replaced by new, and rub off and remove all the old fragments. It might be well, also, to use new earth as free as possible from vegetable substances.

C. W. WOODWORTH.

Cross-Fertilization in Fruit-Growing.

During the past three years the Division of Vegetable Pathology in the U. S. Department of Agriculture has been engaged in the study of twig or fire blight of the peach and pear. In the course of these investigations, which were for the most part carried on by Mr. M. B. Waite, an assistant in the Division, an attempt was made to obtain some definite information in regard to the relation of insects to the disease in question. As a result of this work it was shown that the organism causing blight was disseminated by insects during their visits to the blossoms. The blossoms, it was found, were readily infected by the pear blight germs brought to them by insects, the result being the death of the flower and frequently the twig or branch supporting the latter. This discovery raised the question of the necessity of insect visits to the flowers of pears and other fruits affected by blight. It was thought that if by some practical means insects could be excluded from the flowers without interfering with the fruitfulness of the trees, one form of blight at least might be prevented.

In order to obtain some information in regard to the effect on fruitfulness of excluding insects a series of experiments were made at Brockport, New York, in the spring of 1891. The results of these trials were somewhat startling, as it seemed to indicate a fact hitherto overlooked by scientific and practical men, *viz*, that many of our well-known varieties of pears will not set fruit unless their flowers receive pollen from other varieties. In other words, the visits of insects, by means of which cross-fertilization is effected, is necessary to insure proper setting of the fruit.

To obtain further information on this subject more extended experiments were made on this subject in 1892 and 1893. This work was carried on in Virginia, New York and New Jersey, the results in every case confirming those obtained in 1891. The facts obtained by these investigations seemed sufficient to warrant the important conclusion that most of our common varieties of pears and apples are unable to fertilize themselves. This law can hardly be

called new, for Knight, Darwin and others have touched the same point in a broader and more general way. Strange to say, however, no one, up to the present time, seems to have applied the conceptions of Darwin and others on this subject to some of our common fruits, although it has long been recognized that orchards of pears, apples, plums, etc., fail to bear fruit regularly, even under the most favorable conditions.

In the light of our present knowledge it is known that unfruitfulness, in many cases, is due to the fact that large blocks of single varieties have been planted. In such cases there is not sufficient foreign pollen to effect fertilization, consequently the trees bloom profusely, but no fruit sets. The new factor, therefore, which confronts the grower of pears and apples is to select his varieties and plant them in such a way as to insure cross-fertilization. Of course, in doing this it will be necessary to observe a number of important points, the details of which need not be given here. Suffice it to say that the time of flowering of the various varieties must be kept in mind in selecting those designed for pollinating. Then, again, the question of the potency of the pollen with respect to the variety it is intended to grow must of necessity be considered, and, finally, it will be important to know what proportion of pollinating trees to trees it is desired to fruit should be planted.—B. T. Galloway in Science.

[Prof. Galloway's remarks are of much interest to California fruit-growers. It has long been on record here that some almonds do not bear without the presence of other varieties, and the idea has widely prevailed that the failure of other fruits to set, even though blooming profusely, may be due to lack of cross-fertilization. The failure of large orchards solely planted with one pear variety has been inexplicable, but on this theory becomes intelligible. It looks as though we should plant our varieties in long, parallel rows, and not in solid blocks. We shall have more about this at another time. What do readers think of it?—ED.]

Those New Scale-Eaters.

The Los Angeles *Herald* says that Mr. Alexander Crow, quarantine officer of the State Board of Horticulture, arrived in Los Angeles on Wednesday from Santa Barbara.

He saw President Elwood Cooper at Santa Barbara, and was informed by him that the work of shipping colonies of the black-scale ladybird, the *rhizobius ventralis*, from his ranch will begin September 23d. Mr. Cooper is very busy with his almond crop at present, and will be over the rush by the time set.

The ladybird is increasing wonderfully, and he will be able to fill all requests for colonies. Applications have been pouring in from many localities and will be attended to at the date indicated.

The beetles are doing splendid work in eradicating the black scale and fulfilling all that has been said about them. The applications should be sent direct to Mr. Cooper, and colonies will be mailed to the applicants.

It was learned from Mr. Crow that the State Board of Horticulture has succeeded in obtaining possession of the *orcus chalybeus* colony at the Kercheval place in this city.

It will be remembered that Prof. Coquillett assumed charge of the colony as agent of the entomological department of the United States and placed a man in charge of it, relieving the Board of Supervisors of their care.

This did not suit the State Board, which considered that the State was entitled to the supervision of the steel-blue ladybirds. President Cooper authorized Mr. Crow to take charge of the colony, and several weeks ago he did so, relieving the man placed there by Prof. Coquillett.

Mr. Crow states that the *orcus* is slowly increasing. They are laying eggs now, and, although quite a number have been removed as colonies, the trees are covered with the beetles and he expects good results from them.

In regard to the purple-scale pest, Mr. Crow reiterated that the subject of eradicating it now, when it has not got a start, should not be allowed to sleep. The few trees that are affected should be cut back and the trunks scrubbed, and adjoining trees, even if no scale can be found on them, should be fumigated. The work of stamping out this destructive pest is very important, and no pains should be spared to do it. He did not know what had been done recently, but had heard that the commissioner is working to accomplish the desired result.

Treatment of Prunes in the Sweat.

TO THE EDITOR:—Please answer through PACIFIC RURAL PRESS: After prunes are dried on trays and dumped in a pile, how often should they be turned over? Pasadena. CONSTANT READER.

[This depends upon the condition of the fruit at the time put in the pile and we do not see how a categorical answer can be given. The object is to bring the whole mass to an equable and desirable moisture condition. If the fruit is over-dried it must have little stirring and should be covered to retain moisture. If it is rather moist when taken from the trays it must be shoveled over frequently to allow moisture to escape. The answer would be that piles are shoveled over several times during the sweating process to equally distribute the moisture.—ED.]

WHO has good recipes for cooking raisins? Mr. A. A. Hibbard, of the State Board of Trade, who is trying to develop new ways for aiding in the extension of raisin consumption at the East, thinks that few house-keepers know how many ways raisins can be used in cooking. He desires to publish for general distribution a pamphlet on this subject. He is anxious to have persons in possession of

recipes, or well-tryed and satisfactory methods of using raisins in cooking, to oblige him by forwarding the same to him in care of Alex. Gordon of Fresno. No doubt our housewives have just the information that is desired.

Sand for Woolly Aphis.

TO THE EDITOR:—A local fruit inspector suggests the advisability of excavating a portion of the soil from around the trunk of a tree and replacing with sand as a preventive for the woolly aphis. He was led to this opinion by observing the fact that such pests are more plentiful in orchards growing on adobe than on sandy soils, presumably because the resulting cracks allow a more ready access to the roots. I would like to know whether or not the plan has been tried, and if so with what success.

West Saticoy, Sept. 10, 1893. H. F. CLARK.

[We are not aware that this circumvention has been tried in just the form now proposed. We are inclined to doubt its efficacy, but it is easy to try. We would place more reliance upon the use of wood ashes around the base of the tree.—ED.]

THE FIELD.

Grain Gambling and Low Wheat Values.

The markets for breadstuffs in our country and in Europe are now at a lower point than has been known before within the past century, and, with the knowledge universally conceded that the incoming harvest will be far below an average in nearly all grain-growing countries of the world, especially in Europe and America, is it not remarkable that efforts are made to depress the markets still lower? There must be some unnatural condition prevailing that tends to disturb the natural course of values in so important an article as bread, which has always heretofore had a value in proportion to cost of production. Large and abundant crops have usually tended to lower values, while short crops tend to increase prices; but at the present time there seems to be a reverse action. Overproduction has been, during the past few years, assigned as a cause for low prices, but that cannot be reasonably offered as a cause of depreciation at the present time. The wheat crop of 1891 was probably the largest ever grown in our country, aggregating something over six hundred million bushels, and yet, with an exportation less than the past year, the Eastern market price for export, as well as for home consumption, was fully \$1.27 average per bushel. The crop of 1892 was at least one hundred million bushels less than the previous year, and exports have been greater; and yet prices have declined regularly without any apparent cause until reaching the present unprecedented low figure of 60 cents per bushel, and in the face of a still shorter harvest of 1893.

The season of 1893 has been unpropitious throughout Europe as well as America, and prospects are favorable for a large export demand for all our food products, and yet prices show a systematic decadence, though 30 per cent below values of the previous years. The present stringency in the money market renders it necessary—and imperatively so—for the farmer to part with his grain for two-thirds its value, and all for what? Only to keep up a system of gambling speculation on the boards of trade at our great grain centers. No one can assign a rational reason why the bread-making grain of the world, especially when there is no excess of production, but rather a shortage, should be depressed far below the cost of production.

The wheat crop of the recent harvest is probably all sold by speculators for future delivery, and at prices ranging but a trifle above the present quotations. The grain-grower must sell for what the speculator offers, and has really but little better chance in making prices than the man who meets the highway robber and is ordered to hold up his hands. Millions of bushels are sold daily on the board of trade in each of our grain centers for future delivery, and perhaps not one in ten of the sellers owns a bushel of grain, nor does he expect to deliver, but to settle on the date of delivery for the margin, either above or below the price of sale. Such sales are all fictitious, it is true, but they are leading in the control of future prices.

The English importer buys an option for delivery three months in the future. Millions of bushels are thus sold, and the seller thus becomes a bear on the market, working to keep it down, for he may be obliged to buy to fill the contract, or will pay the difference if the market advances. Now, during the existence of such contracts, can we expect the English markets to advance? Not while such purchases can be made to meet their wants. We shall not have higher cables from Europe until necessity compels, and no necessity will exist while futures are sold at present rates. The markets must advance in our country before we can look for any change in foreign markets. America holds the key of the grain trade of Europe, and we may fix prices or we may allow England to do so. Nowhere else can the wants of Europe be supplied but from our surplus, and we may have fair prices for our grain if we will, or our speculators may rob the farmer for the benefit of England.

It is well known to every intelligent man that wheat cannot be grown in any part of the world to supply the increasing population of Europe for the prices now prevailing, and, if wheat prices are not more remunerative to the farmer soon, our surplus will cease, for we cannot long continue to produce at a loss, and at the same time exhaust all our Western soils of their virgin fertility. It is said by good authority on English agriculture that if lands were given rent free, wheat could not be grown at present ruling prices; and, if the yield of grain be, as reported, more than double that of our average yield, how can we, paying double the price for labor that the English farmer pays, afford to raise wheat to ship there? It is true we have

fertile soils in the new West that do not need the expense of artificial fertilization, but that cannot long continue.

Wheat could not have been depressed to the low prices of the past year without the manipulations of the boards of trade at our grain centers, and prices will be slow to advance until a scarcity is felt or the gambling in futures is abandoned. Wheat is not exported by American dealers, but is bought by foreign agents and shipped on foreign account, and while futures can be bought for about present prices, why should we look to Europe for advanced prices, however great their wants? If we have correct reports from all parts of the commercial world, there can be no surplus of cereal or vegetable products of the present harvest, but rather a shortage. The cereal products of Europe are below an average, and our recent harvest will not probably exceed 75 per cent of the crops of previous years. The census of 1880 shows us that the crop of '79 gave us 9.2 bushels per head of population. We then exported about 177,000,000 bushels of wheat and flour as wheat at a value of \$225,879,502, it being a fraction over 1.27 per bushel. I have not before me the aggregate exports of the past year or the total value, but it does not vary greatly from that of 1880 and at a value of probably 30 per cent less. This decrease in value is a drain from the resources of our country, and a direct loss to the wheat grown of about 30 per cent on every bushel sold, for export prices fix all local values, thus robbing the farmers of some \$150,000,000.

Such I regard as the legitimate result of gambling in futures on the grain markets, and now, in view of the present short harvest of at least 150,000,000 bushels less than the per capita crop of 1880, and a prospect of large export demand, I do not look for any material appreciation of values in the near future, but perhaps a still further decline if the superhuman efforts of the bears of Chicago can effect it.—F. P. Root in Country Gentleman.

Observations on Canaigre.

Readers will remember our earlier references to this dock (*rumex hymenosepalus*), which is indigenous in southern California and eastward and has come into brisk demand because of the amount of tannin in the root. Prof. A. E. Blount of the New Mexico Experiment Station publishes the following notes:

Since last fall further experiments made with this wonderful tanning plant have developed most satisfactory results so far as its cultivation, habits of growth, and seeding are concerned.

About a year ago 10 acres of the dry drift and sandy soil of the mesa east of the college were cleared of mesquite, plowed twice, furrowed off, and planted to one and two-year old-roots of the canaigre. Being destitute of moisture, except during winter, the roots did not germinate until late in the fall, and not until midwinter did they appear above ground. They made their growth from the last of October to May, at which time they dried up and died, only a few blooming and none going to seed.

The first of June the examination showed that every plant made at least double and sometimes six times the weight of the root planted, and that it can be planted quite thickly without any inconvenience.

The weight of one-year old roots varies very much. Generally four or five are found on each parent root, weighing from one to four ounces, and in their growth they do not seem to interfere with the growth of the old root. As the old root increases in age it becomes more firm, darker in color, and, what is very peculiar, it renews all the injured and broken parts by a new growth. An old root cut in two will take on a new part one year old, and their color will be quite different.

It would be quite difficult to estimate how many tons could be raised on an acre. From observations thus far taken, the following estimate will not be very far out of the way: Old roots weighing three ounces produced on an average two one-year-old roots weighing eight ounces; hence, if the roots should be planted one by two feet apart each way, there would be something over 20,000 per acre of one-year-old roots. These roots do not get their growth the first year, nor the second, but grow larger and larger and firmer, reproducing new roots no one knows how long. As yet I have found no dead roots in the dry soils of either the mesa or the plains where they have had a continuous growth for years.

In some cases I notice three, four and sometimes five apparently different years' growths from the same parent root, the older ones being distinguished by their black bark and cracks along the sides. The one-year-old roots are quite light in color, the two-year-old ones are somewhat darker, and those still older still darker. So much for the mesa crop.

The results obtained on adobe soils subject to regular irrigations are quite different and much more encouraging and satisfactory than those mentioned above. They conclusively show that irrigation will do much even for plants that seem to flourish in the dry soils of the plains.

Not only have roots planted at the same time as those of the mesa increased fourfold, but nearly all produced seed, and their growth has been much larger and higher, and they have retained their life above ground much longer. They began blooming in February and are still blooming, producing flowers and seed all the time.

A plant dug up at random last month had seven new roots, the weight of which was two pounds and four ounces, beside the old one, and a half-ounce of good, vital seed was taken from the seedstalk.

The same habits of renewing all injuries to the old roots were much more clearly distinguished among the roots of this plant. The plants are much larger in every way and take up much more room. It would be best to plant them not less than two by two feet each way. With the present knowledge we have it should be planted in adobe soils, in rows two feet apart, in the fall, and, after they are up in the spring, they should be cultivated like other crops.

WORLD'S FAIR.

A Day Among the Live Stock.

[Written for the RURAL PRESS.]

TO THE EDITOR:—We have spent the larger part of the day among the horned and hornless cattle, and have carefully noted the best that the world can show in Aberdeen-Angus, Ayrshires, Brown Swisses, Devons, Dutch Belts, Galloways, Guernseys, Herefords, Holstein-Friesians, Jerseys, Polled Durhams, Red Polls and Shorthorns. In order to see all, we have really walked miles in the 27 acres upon which the barns are located—up and down the center and side aisles, in and out the stalls and around the galleries and race-track of the great pavilion. We have talked with owners and keepers, looked into gentle, mild-faced kine, sized up good points of brisket, haunch and udder, laid hands lightly upon the smooth, glossy coats of black and white, black, red and white, all red, all white, long horns, short horns and no horns, and have settled back with a gentle but decided firmness upon the superior qualities of the breed comparatively little known in America—the Red Polled cattle. Until this auspicious time, dense ignorance must be acknowledged as regards the Red Polls in comparison with Jerseys, Holsteins, Herefords, Shorthorns, etc.; but now earnest work, close inquiry and comparison with such a golden opportunity show up the subject clearly. The result to me is that, till a better strain of cow is developed, the Red Polled cow claims my admiration for reasons that I will try to report as given by a bright, sparkling little lady, the wife of the owner of the choice lot—Mrs. V. T. Hills of Delaware, Ohio. We found her among the gentle animals, or beside their stalls, caressing them by turns as she kindly and delightedly answered the inquisitive and dilated upon their good qualities—I venture to assert and suggest superior qualities. It is quite impossible to do this enthusiastic lady justice in the attempt to report what might be called a lecture upon the qualities necessary in the summary of the best bred stock. We readily agreed, however, that the best cow for farmer and dairyman is the one that will produce the most butter fat at the least expense for feed.

We were told that the Ohio State Fair requires from each exhibitor in the dairy test a sworn statement as to the amount of feed consumed for two weeks before the test by each cow entered. The Jersey cow having the largest record in three years produced 4.06 lbs. of butter fat and consumed 48 lbs. of grain feed; the Holstein produced 4.81 lbs. and consumed 78 lbs. of grain feed; the Shorthorn produced 3.9 lbs. and consumed 60 lbs. of grain feed; the Red Polled produced 5.15 lbs. and consumed 57 lbs. of grain feed.

If the grain feed is estimated at \$20 per ton, the expense of each is as follows: Holstein consumed 16 cents for 1 lb. of butter-fat, Shorthorn 15 cents, Jersey 11.82 cents, Red Polled 11.07 cents. Another consideration the farmer must note in selecting a profitable cow is the value of the calves and the readiness to fatten animals when no longer desired for milk. Beef alone is not profitable, neither is milk. The two combined give the best results. It does not pay to keep a cow that eats more food value than a pound of butter-fat is worth. We were told that the Red Polled cows will produce calves that can be profitably turned into beef, tender and juicy, at two years, easily weighing from 1200 to 1400 lbs.

A brief history of the Red Polled cattle may not be out of place right here, somewhat as given me. They are native to Norfolk and Suffolk counties, England. Various theories have been given as to their origin, but no recorded facts, and they are supposed to have descended from a very ancient breed, valued for its large yield of milk. The peasantry of England have a superstitious regard for red cattle, the reason for which superstition the ethnologists profess to find in the religion of the Aryan, red typifying the heavenly fire. Down to a comparatively recent period, the red cow's milk was supposed to possess health-restoring powers. The Red Polled cow boasts of a far back ancestry, into the time of Herodotus and Hippocrates. For years these Red Polls were local and distinct in Norfolk and Suffolk, and from there they have been able to yield a limited number for export to America. In 1813 to 1824, deep-red Polled cattle were selected and successfully bred by three sisters in England—Diana, Catherine and Mary Bullock. Improvement in this breed was rapidly advancing when the cattle plague broke out in 1868 and greatly reduced their numbers. This explains why they are not numerous compared with other breeds. The first of the Red Polls brought to the United States was in 1873. Four only were then imported, four more in 1875 and 25 in 1882. Of late years but few have been imported, their value has increased so greatly, superior animals having sold as high as \$2000. Mr. Hills imported in 1888 nine head. He has now over 50 head of very choice animals. The last importation in 1890 was Wild Roy, with an unbeaten record in England, having taken first prize at every cattle fair of any importance. He won the Queen's medal at the Windsor Royal of 1889. When five years old he weighed 2480 lbs. Mrs. Hills told us that her husband bought the best animals he could find, regardless of cost, and his aim was to find and select deep, rich milkers and large, well-formed animals; also, he has ever kept in mind the selection of those animals that would make the best milkers and best beeves, in combination. The general success of his herd can be seen in the fact that it has yielded since he commenced the enterprise, 83 first, 48 second and 7 third honors during three years. This is mentioned as an indication of the superiority of the animals. The Red Polled cattle are of a deep-red color; sometimes the tip of tail and udder are white; hornless; short legs. They are not dainty feeders, smooth and fine in bone and muscle, hardy, thrifty, mature early, fatten easily, and make the best quality of beef. They are gentle and docile. "It is very rare that a bull ever gets cross." The cows are superior milkers, give

a good quantity of very rich milk, and many of them never go dry. In short, they impress us as being beautiful and purposeful, and I hope the time may come when this beautiful, gentle, hornless, red cow will be a familiar pet for our good dairy folk hard by the city and on the hill-sides of our prospering California small farms.

MRS. J. G. LEMMON.

[Our correspondent is pardonable for her partiality to the Red Polled cattle; they are good stock. They are not, however, unknown to Californians. During the last few years we have had on our pages several portraits of good specimens of the breed, and our dairy readers are aware of their good points.—ED.]

THE STOCK YARD.

Loco Poisoning.

In regard to the "loco" weed, a bulletin of the Department of Agriculture says: A careful survey of the experiments performed and observations noted leads me to the belief that the disease known as "loco" is the result of malnutrition, or a gradual starvation, caused by the animals eating the plants known as "loco weeds," either *Astragalus mollissimus* or *Oxytropis lamberti*. If there is a narcotic principle in the plant chemists have failed to find it, and a fluid extract does not possess it, and a ton of the plant eaten by an animal ought to contain enough of the poisonous properties to destroy it.

It is extremely doubtful, even though there be a narcotic agent in the plant, that an animal can reason sufficiently to know that eating this plant would produce narcosis. Why they do eat the plant is probably because it remains more green and fresh after other plants have dried up, and also because of its peculiar taste, but soon accustomed to and attractive.

Whether the disease is the result of malnutrition or mal-assimilation, I am unable to say. It is reasonable to suppose that, as the loco plants remain green throughout the year, they would not contain as much nutritious material as other leguminous plants. If they do contain the nutritious material, it is not in a form in which it can be assimilated by the animal.

The reason why horses have fits of delirium or insensibility may be due to the formation of clots, or thrombi, in the blood vessels of the brain, as there is a well known tendency to their formation during wasting and debilitating diseases.

The general emaciation of the body, the flaccid atonic condition of the digestive system, the large amount of serum surrounding the brain and in the abdominal cavity, the swollen dropsical condition of dependent parts (from an enfeebled circulation), and the low temperature of the body, all point to the same cause, malnutrition.

The diseased condition of the brain gives rise to the peculiar "crazy" symptoms associated with this disease. It is well known that if an animal suffers from degeneration of the brain tissue, even though it may recover from the disease which caused it, it does not recover its normal mental faculties. This may account for the fact that a locoed animal never makes a complete recovery.

Treatment.—Prevention, by not allowing the animals access to the plant, or by furnishing suitable food after the pastures have dried up, is much better than treatment. If any animal has acquired a taste for the plant, it should be placed where it cannot get the weed, and fed upon nourishing food. Some good "condition powders" may be given as follows:

Sulphate of iron, pulverized.....	Ounces.
Gentian root, pulverized.....	1
Ammonia murate, pulverized.....	4
Potassium nitrate, pulverized.....	1

Mix thoroughly, and give from a heaping teaspoonful to a tablespoonful, according to the size of the animal, in the food three times daily.

Wheat as Stock Feed.

We continue notes on this subject upon the ground that other uses for wheat than to fill Mr. McNear's ships may be interesting to some of our readers. Prof. W. A. Henry gives some additional advice in the *Breeders' Gazette* as follows:

The protracted drouth which has prevailed in sections of the country is showing its effect on the price of mill-feed, which has already advanced to a higher point than common for this season of the year. Strangely, with wheat selling cheaper than for a generation past, bran rules higher than it has for several years past at this season; in some cases stockmen are actually asked almost as much for a ton of bran as they can get for a ton of wheat at the same mill. Only the feeder ignorant of the value of feeds will ever think of selling his wheat for anything near the price of bran unless he has need of bran to extend concentrated grain feeds. Unless obliged to do so to raise money at once I should certainly not sell wheat at the present price, preferring to hold it for a higher price or to feed it to pigs or dairy cows. With pork at five cents and butter at twenty-four cents why sell wheat at forty cents, which is about the average price at many points in the West? A good dairy cow will give something like a pound of butter per day, and eight pounds of wheat is a good feed of that grain, so that the bushel should last fully a week and furnish the concentrated feed for making something like seven pounds of butter. Of course this is only a part of the ration, but why should a man having good cows sell wheat when he can manufacture it at a profit on his own farm?

A great deal has been said about feeding wheat to pigs. It is equally good for sheep-feeding. To-day's mail brings an inquiry from a farmer who states that he can buy barley for twenty-five to thirty cents per bushel while bran is cost-

ing him \$14. That is, barley can be had for say \$10 to \$12 a ton while bran is \$14. In this case I should certainly buy the barley. Let the brewers have the bright-colored grain which brings the highest price and use that which has been made dark-colored by rains. Of course if it is musty it should be let alone, but often colored barley is just as good for feeding as is the bright grain and costs much less.

For feeding heavy grain like wheat and barley it is necessary to practice caution, as it is a very concentrated feed. For this purpose some bran is very helpful. Mix one-third bran by weight with ground wheat or barley to lighten it and you have as near a perfect grain ration as can be made for dairy cows. For pig-feeding a little bran, or better yet shorts, can be used to extend the heavy feed. Pigs do well on barley, or better yet on barley-meal and corn-meal mixed. In England and on the Continent barley is extensively used for feeding farm stock, including cows and pigs. Barley is the great pig-fattening food of England. In view of this it is strange that many American feeders have a prejudice against this feed and seem afraid of it.

AN OHIO MAN'S EXPERIENCE IN FEEDING WHEAT.

I have twelve cows on pasture, and as there has been but little rain since June, fed some wheat bran. About two weeks ago the bran was out, and as it was not convenient to get more at once, I fed some ground wheat I had intended for hogs. In one or two milkings we noticed an increase in quantity of milk, and I decided to keep up the wheat feed as a sort of experiment. Fed ground wheat about a week, and then fell back on bran. In feeding bran both times, fed a bushel basket full in troughs in the yard twice a day. In that way I suppose the stronger ones got more, and others less than a fair share. The ground wheat was fed the same way, but only about half a basket full twice a day. The last time of feeding bran five yearlings that were running with the cows were not let into the feeding yard, but they had a share of the wheat. As near as I can calculate, I fed about the same number of pounds of wheat and bran—not far from 44 pounds a day.

Wheat is selling at the mill at 55 cents, and I pay five cents for grinding, so that it costs a cent a pound. Bran is worth 75 cents a hundred, or three-quarters of a cent a pound. Then the wheat I fed cost 11 cents more than the bran.

I make cheese, and the difference in favor of the wheat is five to six pounds, or five pounds of cheese cost me 11 cents, and I sell at 11 cents a pound. Eleven cents in feed brought in a clear gain of 44 cents. I intend now to feed in the barn two pounds ground wheat twice a day to each cow, to see what that will do. I have fed also, in this last week, three to six armfuls of corn cut from the field. Its cost should be, but is not, added to the calculation given above.

POULTRY YARD.

A Few Hints on Setting Hens.

As a great many hens are set during September, a few hints on that subject would be in order. We would strongly advise all our readers who start in to raise chickens this month to set pullet eggs only, as the older hens are now all moulting and in consequence chickens hatched from their eggs are almost sure to be sickly and weak.

It is astonishing how few there are among the average run of poultry-raisers who actually know how to set a hen, and do it properly. We are aware this is a broad statement, but it is a fact nevertheless, and a very few subjects indeed are referred to by correspondents more frequently than this. One complains that his hens almost invariably leave the nest after sitting a day or two; another that his hens always leave the nest before over half the chicks are out; another that his setters often try to steal each other's nests, and during the squabble all the eggs are broken; while still another says his hens are so awkward they always kill half the chicks while hatching; and so we could go on giving an almost endless list of complaints against poor biddy, who, the chances are ten to one, would have brought off a nice clutch of chickens had she only been rightly cared for. Our own method of treating setting hens, and which we have always found to work satisfactorily, is as follows:

For this climate, instead of building a setting house, as East, we use what we call setting coops. They are built in rows, each being intended for but one hen at a time, and are three by eight feet and six feet high. The back and roof are made perfectly tight, while the divisions between the coops are of lath; and the front, which is the door, is composed of four and six feet lath alternately, thus making it perfectly solid up four feet. At the back of this coop, on the ground, is placed a frame or box 15 inches square and six inches deep in which the nest is made, using as little straw as possible for this purpose, and shaping it like an egg cut through from end to end. We now place in this nest the same number of china eggs as it is intended to set afterward, and sprinkle a handful or two of sulphur over them; about dusk the hen is put on the nest, and a box the same size as the nest box, but 12 inches deep, and made with graded sides, is placed over her, and a grain sack thrown over it all. In the morning the covering box is removed, and in 99 cases out of 100 she will stick to that nest without further trouble, water and grain being kept where she can go to them at will. The third day we remove the china eggs and give her those she is expected to hatch, not forgetting to again sprinkle a little sulphur over the nest. No more attention is required, except to feed and water until the fifteenth day, when we again sprinkle about two handfuls of sulphur over the eggs, which enables the hen and chickens to leave the nest entirely free from vermin. If the weather has been dry for some time before the eggs are set, pour a bucket of water into the nest box before putting in the straw, and then on the eighteenth, nineteenth and twentieth days of incubation, sprinkle about a pint of

moderately warm water over them. As soon as the eggs commence to hatch we cover the hen with the same style of box used when she was first set, again throwing a sack over it, to keep her quiet; thus we leave her without food or water, till 24 hours after the chicks are hatched, when she is removed with her brood to the coop intended for their use during infancy. Hens treated as above rarely ever kill a chick in the nest.—Rancher in California Cultivator.

Preparing Fowls for Exhibition.

There are to be two poultry shows this winter: one at Petaluma and the other at Los Angeles, with the Midwinter Fair still to hear from. There should be a great "chicken show" in connection with that great display.

There should be at the poultry shows wider participation by amateurs who have good stock. Probably they may claim that they do not know how to get their birds to the show in such fine shape as those of the professionals. This they must learn by observation and trial. A few hints which may be of value are given by the well-known English expert Stephen Beale in the following letter to the *Country Gentleman*:

Young fanciers generally make a mistake when they first exhibit fowls, by sending them to the shows just as they are taken off the runs, with the result that the birds are wild, unused to the confinement of a small pen or to the strange surroundings of a poultry show, not in show condition, and consequently do not find favor with the judges. In the first place, there is the securing of good condition, without which even the best bird is liable to be thrown out, and it will give an inferior bird the advantage over a superior one, if the latter is in worse condition than the former. Condition means perfect health. When in perfect health, there is a bloom on the plumage of a bird, a sprightliness in the carriage, and a bright appearance, which always goes a long way with a judge. Therefore the first object should be to have the birds in this state, so that they may be at and look their best. To secure this they should be fed naturally, kept in a comfortable place, and allowed to have plenty of exercise; but how and where must be decided according to the nature of the bird. Game fowls would not get into condition where Brahmas or Cochins would do well. Judgment is needed.

About a week before a show the birds should be put into a cage rather larger than the ordinary show pens, so as to get accustomed to being in such a place. The owner should go to them twice or thrice a day and stir them up with a stick, just as a judge will do, and before the week is out the birds will have recognized the system in a philosophical way. This training is most important, and I have known birds lose prizes because on the approach of the judge, they have dashed about the pen thoroughly frightened, in consequence of which he would not see their good points. The feeding at this stage must be very careful or the birds will be upset. The best thing is to feed sparingly only twice a day—in the morning some barley meal, oat meal or Spratt's food mixed crumbly, and in the evening a little wheat or barley. Twice, or three times at most, the soft food can be mixed with some boiled linseed, which will greatly help the appearance of the bird. Green food should also be given every day.

Light-colored fowls should be washed the day before they are sent away. For this a large tub must be used half filled with warm water. Into this put the bird, having an assistant to hold it; then, when it is thoroughly soaked through, rub white curd soap through the feathers and see that the bird is thoroughly washed. The great secret is not to be afraid of hurting the bird, while at the same time no unnecessary roughness is used. When the bird is well washed, have some water with the chill just taken off, which pour over the bird, the assistant holding it above the tub, until every particle of the soap is washed away. This is the great secret of getting the birds to look nice. When done, put the bird in a hamper near a fire, if the weather is at all cold.

All sorts of packages are used for sending birds to shows. We have seen poultry sent in soap boxes, simply nailed down, and in the most ingenious contrivances which could only be opened by the owner; but we have in this country a regular exhibition hamper, light, easily handled, readily opened and fastened, and cheap. The sides and top are made of open wicker, to save material and weight, and the basket is lined throughout with a strong canvas, which keeps the birds free from drafts and yet allows sufficient ventilation. These baskets are made either round or oval, and thus when packed in a car there is a margin of space for fresh air. The round baskets are for single birds and the oval one for two or four, as they are divided inside. The advantage of the latter arrangement is that two or more birds can be sent to a show in one hamper, and this is a great saving in railway carriage, as one basket to hold four will only weigh about as much as two single ones. The sizes mostly used are 15 inches high for Bantams, 18 for Hamburgs, 21 for ordinary-sized fowls, such as the Spanish varieties, Game, Polish, French and Dorkings, and 24 or 27 for Brahmas, Cochins and ducks. Geese and turkeys need still larger ones. Of course, all are made proportionately wide. After being lined, the bottom is covered with plenty of nice clean straw, the label put on top, and all is then ready.

About an hour before the bird is packed, let it have a good feed of hard grain (not soft food, as is so often given) as this will support it best on its journey. Wash the faces, combs, lobes and feet with a damp sponge, and dry well; then rub over with a little vinegar, to brighten them up. Put the bird carefully into the hamper, or if there be a couple, see that they do not fight, which is best done by letting them get accustomed to each other's company a day or two previously. If the journey is to be very long, soak half a loaf of bread very slightly in milk and hang it up by a piece of string in the hamper. Lettuce may also be put in, so as to provide for the birds on the journey. Then tie it securely up and send off.

THE HOME CIRCLE.

The Calm That Comes at Evening.

There's a calm that comes at evening,
When the weary day is o'er,
That's as soothing as the lullaby
Our mothers sang of yore;
And though the day be dreary,
I can just forget it all,
In the calm that comes at evening,
When the twilight shadows fall.

I can see my sweetheart's signal
From her waving window blinds;
I can feel her perfumed presence
Wafted to me on the winds;
When I hush my heart to hear her,
I can almost understand
Her sweet welcome in the wimple
Of the wind-wave from her hand.

When she laughs it's like the music
Of the ripples on the rills,
And her breath is like the fragrance
Of the flowers that deck the hills.
And though the day be dreary,
I can just forget it all,
In the calm that comes at evening
When the twilight shadows fall.

Mother.

In all the world—go where you will—
You'll never find another
Who'll stick to you through good or ill
And love you like a mother.

In all the world—where'er you roam—
With sister, wife, or brother,
You'll never know so sweet a home
As that one made by mother.

In all the world—though wealth commands
For you the work of others—
You'll never find a pair of hands
To toil for you like mother's.

In all the world—although you should
In riches nearly smother—
You'll taste no cooking half so good
As that prepared by mother.

In all the world—though friends sincere
Are more to you than brothers—
You'll never for a moment hear
A voice so kind as mother's.

In all the world—although you break
The tender hearts of others—
There is no heart can ever ache
For you as much as mother's.

In all the world—though you create
A pleasure for another—
You can give none a joy so great
As you can give to mother.

In all the world—although a wife
May you in goodness smother—
There's none who'll sacrifice a life
For you as quick as mother.

In all the world—where you in bliss
May soon forget another—
There is no one whom you will miss
When she is gone like mother.

—H. C. Dodge.

Worth Trying.



PLEASE wait a minute, Will."

"What for?"

"I want to get that bunch of blue-bells."

Ned laid down his fishing tackle and sprang over a fence, presently to return with a handful of the flowers, with their dainty coloring thrown out by a background of two or three ferns.

"You're a great fellow for flowers."

"On! they're not for myself, but mother's always crazy over wild flowers."

And all through the walk home, notwithstanding he was already well laden with rod and fishing basket, Ned gave good heed to his flowers, once stopping to wet his handkerchief to wrap about the stems that they might not suffer from the warmth of his hand.

"There she is!" While still at a distance Ned spied his mother and made a dash toward her across the large yard. Will, following more slowly, saw him drop his rod and take off his hat as he offered his flowers with a bow and a smile. A little stir of pain was in Will's heart as he saw them received with a kiss and some words, evidently loving ones, which he could not hear.

"Come round to the barn with your traps and then you stay to supper—mother says so," and Ned rejoined his friend.

"You're different from most boys," said Will, and Ned colored a little, for he was inwardly a trifle afraid of his mother's display of fondness provoking ridicule from the boys.

"How?" he asked, although knowing well what was meant.

"Oh—that," said Will, with an indefinite backward nod over his shoulder. "But I like it—I do really."

"I like it," said Ned, his deepening color due now to feeling. "Don't know how I'd get along if my mother wasn't just that way. And as she is just that way how can I help

being just that way too? Of course it comes natural that I should be."

Ned's mother, if she had heard this, might have smiled in remembrance of the many lessons it had taken to inculcate the grace of politeness which was now, indeed, if not natural, rapidly becoming second nature to the boy.

"If I had a mother I'd like to be so," said Will.

"Well—it isn't only just mothers, you know. That is, of course, nobody else can be like your mother, but I mean you can be it to other folks—in a way. To anybody in your home. They all like it."

Will burst into a laugh.

"All, hey? I wish you knew my Aunt Susan. But you will, for now we're getting settled you must come over. You'll laugh at the idea of such doings for her. Why, if I should bring her a flower or take off my hat to her she wouldn't know what to make of it. She'd think I was crazy."

"I don't believe it," said Ned. "That is if she's a good woman. And of course," he added in quick politeness, "your aunt must be."

"Good! I guess she is. She's so good herself she thinks there's no good in such a thing as a boy. I believe she thinks boys were only made to be a torment to such as she."

"Some boys are, I suppose."

Will colored a little as he inwardly realized that Aunt Susan might be somewhat justified in holding such an opinion.

"Well," continued Ned, "I thought all ladies liked flowers, and liked to be nicely treated, too. And," he added stoutly, "I think so still."

"I don't believe Aunt Susan would take the trouble to notice either flowers or nice behavior," replied Will.

"Have you ever tried?"

Boys are not much in the habit of reading moral lectures to one another, so it is not likely Ned would have enlarged on the subject even if they had not just then been ready to carry in their string of fish, to be duly admired by Ned's mother.

But Ned's lightly spoken and quickly, by him, forgotten question returned to Will's mind as later he walked alone in the direction of his own home.

"Have you ever tried?"

"Well, I haven't, that's a fact. But," he gave a little laugh, "the idea of bringing flowers to Aunt Susan! Fancy her stare. She would not know what to make of it."

But the remembrance of Ned's graceful thought of his mother, and the sweetness of the caressing tenderness between mother and son had touched the conscience as well as the heart of the motherless boy.

"If it wasn't flowers I suppose it might be something else. She's as stiff and proper as a poker and I suppose a boy might smile and bow and be polite all his life and she'd never know but what he was cutting up some new kind of pranks. But then—perhaps it's no wonder. She doesn't know much about any boys but me. I guess she thinks all they're good for is to carry mud in on their shoes and slam doors and leave the fly-screens open, and be late to meals. But, I say I've a great mind to try Ned's way—that is partly—just for the fun of seeing how she'll take it." With which determination Will walked around the house, to find his aunt approaching the side door with a huge parcel in her arms. At any other time he would not have troubled himself about this, but now he stepped up and opened the door for her. She took little notice of him except to ask:

"Do you know where Hiram is?"

"No, I don't."

"I've been looking for him. I want to send this bundle down to Mrs. Brown's."

She passed on through the hall as if speaking more to herself than to any one else. Will was rushing up to his room two steps at a time, when he suddenly paused:

"I'll take it to her, Aunt Susan."

She stopped and looked at him unsmilingly, concluding at once in her own mind that he had some business of his own that way, yet still surprised that he should be willing to include in it a service for herself.

"Well, if it won't bother you," she said.

More intercourse with Ned awakened in Will a more honest resolution to make his best of himself in the matter of grace of manner and behavior. It is a pity that every boy should not reflect how largely his conduct influences those among whom he is thrown. Will increased his efforts to avoid small annoyances to his aunt and began showing her small attentions which sometimes won for him an approving smile.

He began to feel touched and conscience-smitten at perceiving that what he had begun in an unworthy spirit of fun should be making the impression on Aunt Susan which should belong with honest effort. It was pleasant to the boy, whose home life was so lonely, to find himself looking for Aunt

Susan's smile, and for the softened voice in which she answered his good morning. And one day he ran up to his room and laughed by himself till he was out of breath.

"I took off my hat to her as I met her on the corner. And she actually turned red with astonishment."

"More shame to me that it should take her off her feet so," came with soberer reflection. "If I've done it in fun before I'll do it in earnest now. I think it pays for a boy to be decent in his ways, whether anybody notices it or not. It pays just in the feeling he has himself."

Which was as wise a conclusion as a boy often arrives at.

Months later Will went away from home on a visit. On his return Aunt Susan stood on the steps with a face which might almost in its welcoming expression have belonged to Ned's mother.

"O my dear boy!" she exclaimed, "I have needed you so much. No one to hunt for my glasses. No one to bring me the paper. No one to have flowers on the table before I come down. No one to care whether I am waited on or not. I could not have believed I should have missed you so."

Will went upstairs with the warmth of her kiss upon his cheek, trying to remember when anybody had ever kissed him before. And tears came very near his eyes as he saw about his room more than one evidence of Aunt Susan's very tender thought for him.

"It was well worth trying," he said to himself.—Sydney Dayre, in the Interior.

A Simple Matter of Understanding.

Aunt Hannah was noted far and near for her sharp tongue and general fault-finding. Uncle Josh was almost equally well known for his slow-going ways and mild disposition. Naturally, therefore, a great deal of sympathy existed among the neighbors for Uncle Josh.

"Say, Uncle Josh," said a dapper young summer boarder one day, "I wouldn't let that woman boss me around like that if I were in your place. I'd just give her one good setting down; 'twould do her good."

"Would ye naow?" said Uncle Josh, sitting comfortably back against a haymow. "Wal, if I did, I wouldn't hev my way in a tarnation thing. As 'tis, I most alwuz hev it."

"I don't see how you make that out."

"Wal, young feller, ye might know all the ologies in creation, but ye don't know much 'bout human natur'. There's Hannah, now. Ye'll never know her 'thout ye study her pritty cuss. I tell ye (admirably) that woman's got a character. Ye can't see through her in a jiff."

"Naow, as I told ye, there ain't hardly a thing that she sputters an' soaps over but it comes out jest my way. Hannah's mind, ye see, is kinder slow in workin', an' if I make a suggestion diff'runt from her idee, she can't see through it 'tall, an' jest for the minute she thinks I'm kinder idiotic an' don't know nothin', an' course she nat'rally hev to sort o' 'xplain her feelin's. Then I go off an' won't say nothin' more 'bout it, an' bime-by the thing kinder comes to her, an' she does it my way. So ye see I gin'rally git things my own way. But 'f I should give her a settin' down—jimminy, I wouldn't! I know folks pity me, but lor', they needn't. In fact, nobuddy kin handle Hannah but me. An' as fur me, I wouldn't care a fig for a woman as didn't hev to be studied out. Human natur's my hobby, ye see. So, young feller, ye'd better save your sympathy fur somebuddy else."

Thou the old man rose, stretched himself, stuck a straw in his mouth, and went off chuckling, in the direction of the house, leaving the dapper summer boarder something to think about.

Ferris' Great Wheel.

As a mechanical triumph the Ferris Tension Wheel stands out boldly as one of the wonders of the age, born in Chicago and the creation of Mr. G. W. G. Ferris, Pittsburg, Pa. That the Ferris Wheel surpasses Eiffel Tower of the Paris Exhibition there is no doubt, and it is a more wonderful achievement because it was a venture on unknown grounds, while the Eiffel Tower was constructed on well-tried scientific principles. This immense structure, consuming in its various parts over 4000 tons of iron, 2600 tons of this being in motion, under control of two immense engines, rises above Midway Plaisance 264 feet. The 36 coaches are models of comfort and are daily filled with passengers who enjoy the magnificent scenery and the cool, exhilarating amusement. These coaches hold 60 persons comfortably, giving a combined carrying capacity of 2160 passengers.

There is absolutely no danger in riding on

the Ferris Wheel, as every precaution has been taken to provide against accident, and all persons who ride once are anxious to go again and bring their friends to enjoy the beautiful scenery.

The 36 cars used to convey passengers around the wheel are perfect in construction and admirably adapted to this peculiar use. These cars are 13 feet in width and 26 feet long, containing 40 chairs for passengers, although the carrying capacity of each car is 60 people. They are built of yellow pine, with corrugated iron roof, and in all details of construction are strong and durable. The windows are of three-eighths inch French plate glass calculated to resist the strongest wind. There is no great motion in the cars as the wheel revolves, owing to the manner of their suspension on six and one-half inch steel trunnion pins, which pass through the outer cord.

A Woman of the World.

She had been talking pleasantly to two or three women; she made her good-byes all cheerful and bright, and, after she had disappeared, one woman turned to another and said in a tone that was scoffing: "She is a thorough woman of the world." Now in this case the woman who had said none but pleasant words, who had stopped by a bright story the discussion of a petty scandal, was a woman who was as brave-hearted as any that ever lived and who bore not only her own, but the burdens of a good many other people, yet she saw no reason why she should inflict her troubles on her friends, nor why, while she was in the world, she should not be in its best sense a woman of the world.

A woman of the world is one who feels that the story told to hurt your feelings is essentially bad form.

A woman of the world is one who is courteous to old people, who laughs with the young, and who makes herself agreeable to women in all conditions of life.

A woman of the world is one who makes her good morning a pleasant greeting, her visit a bright spot in the day and her good-bye a hope that she may come again.

A woman of the world is one who does not gauge people by their clothes or their riches, but who condemns bad manners.

A woman of the world is one who does not let her right hand know what her left hand does. She does not discuss her charities at an afternoon tea, nor the faults of her family at an afternoon prayer-meeting.

A veritable woman of the world is the best type of a Christian, for her very consideration makes other women long to imitate her. Remember that Christ came into the world to save sinners and to be in the world and among it and the people who make it, and to do your work as a woman of the world means more than speaking from platform or assumed elevation.

A woman of the world is one who is courteous under all circumstances and in every condition in which she may be placed. She is the woman who can receive the unwelcome guest with a smile so bright and a handshake so cordial that, in trying to make the welcome seem real, it becomes so.

A woman of the world is one whose love for humanity is second only in her life's devotion, and whose watchword is unselfishness in thought and action. By making self last, it finally becomes natural to have it so.

—Florence Wilson in Ladies' Home Journal.

Useful Hints.

To make a glue that will stick, take a quart of water, add two pounds of best glue and dissolve by heat; allow this to cool, when add gradually seven ounces of nitric acid; when cold, put into bottles. It will not harden, but form a strong cement.

To renovate velvet, free it from dust by laying face down and whipping smartly; then brush with a soft hair-brush; dampen on the wrong side with borax water, and hang pile inward in the sunshine to dry, taking care that there is no fold or wrinkle on the line.

This is the proper way to peel tomatoes: Cover them with boiling water half a minute, then lay them in cold water until they are perfectly cold, when the skin can be slipped off without difficulty, leaving the tomatoes unbroken and as firm as before they were scaled.

To remove paint from window glass, take a sharp putty knife that has a perfectly even unknicked edge, and scrape off as much as you can without danger of scratching the glass. Then mix a little oil and turpentine with fine pumice-stone and carefully rub off the remainder. Clean with soap and wash and polish in the usual way.

It is frequently asked how much mustard should be given if it is desired to make a patient sick in case of croup or poisoning. A tablespoonful of ground mustard to a

tumblerful of warm water is the rule. Salt is almost as efficacious as mustard if the latter is not at hand. If the first tumbler has no effect, give more and tickle the back of the throat with a feather.

The Fate of the Apostles.

All the Apostles were assaulted by the enemies of their Master. They were called to seal their doctrines with their blood, and nobly did they bear the trial. Schumacher says:

St. Matthew suffered martyrdom by being slain with a sword at a distant city of Ethiopia.

St. Mark expired at Alexandria, after having been cruelly dragged through the streets of that city.

St. Luke was hanged upon an olive tree in the classic land of Greece.

St. John was put in a cauldron of boiling oil, but escaped death in a miraculous manner, and was afterward banished at Patmos.

St. Peter was crucified at Rome, with his head downward.

St. James the Greater was beheaded at Jerusalem.

St. James the Less was thrown from a lofty pinnacle of the temple, and then beaten to death with a fuller's club.

St. Bartholomew was flayed alive.

St. Andrew was bound to a cross, whence he preached to his persecutors until he died.

St. Thomas was run through the body with a lance at Coromandel, in the East Indies.

St. Jude was shot to death with arrows.

St. Matthias was first stoned and then beheaded.

St. Barnabas of the Gentiles was stoned to death by the Jews, at Salonica.

St. Paul, after various tortures and persecutions, was at length beheaded at Rome by the Emperor Nero.

Such was the fate of the Apostles, according to traditional statements.

Advice to an Engaged Man.

If you think that a woman is any weaker minded than a man, stop where you are.

If you intend to treat yourself any better than you treat your wife, don't take one.

If you suppose that running the house consists in paying the bills, don't undertake it.

If you have an idea that you are too good for a picked-up dinner, remain a bachelor.

If you have found it a hard task to be happy yourself, don't try to make any one else happy.

If you have chosen a pretty woman without regard to her other qualities, halt; you are on the wrong road.

If you think a house should have only one head, and that head be yours, postpone your wedding indefinitely.

If you are of the opinion that marriage makes man and wife one, and that you are that one, send in your regrets at once.

If you are one of the men who think that ten per cent of their income belongs to the tap-room, let marriage alone.—Exchange.

Sitting Down.

Mother's motto was, "Always sit down when you can," writes an old housekeeper. Sit to beat eggs, to mix cake, to peel the vegetables for dinner, and I have seen mother with a small board in her lap sit tranquilly ironing handkerchiefs, with her tired feet on a cricket and near enough to the stove to obviate the necessity of rising for a hot iron. Now there are self-heating irons, so that one may not be troubled changing flats. And when at the end of the day I have said, "It has been a hard day, mother," she has replied, "Yes, but I am not so tired as I expected to be." Don't you suppose the few moments rest at every chance was a help in the end? Don't say it won't pay to get a chair for those few moments, for though you may not see it now, it will add to your years and help to keep your strength in the long run.

A Smart Husband.

Stranger (midnight)—"I should like you to go to Breakfast Creek to see my wife."

Doctor—"All right. I'll be ready as soon as I can get my carriage. Wait and you can ride with me."

Doctor (two hours later)—"I can see nothing the matter with your wife except that she seems pretty mad at being waked up."

Stranger—"Remarkable recovery, I must say. Here's your fee."

Wife (five minutes later)—"Why in creation did you bring a doctor to see me?"

Husband—"The cars had stopped running, and was cheaper than hiring a cab."

YOUNG FOLKS' COLUMN.

When Grandma Was a Little Girl Like Me.

She said there was a grea' big lovely orchard, An' everywhere, as far as you could see, Just grass an' trees all full of fruit a-growin', When grandma was a little girl like me.

She said there was a lot of little bunnies, And she telled us just how tame they used to be Eatin' lettuce leaves and clover from ber fingers, When grandma was a little girl like me;

An' pigs, she said, an' cats an' little chickens An' a norful dog 'at barked tremeniously, An' a cunning little calf down in the pasture, When grandma was a little girl like me.

She had some grea' big bruvvers an' a sister An' a baby, just a teeny tonty wee, A little bit o', bit o' baby, 'Cause grandma wan't a only child—like me.

An' 'en she telled us all about 'e attic, Where all 'e little children used to play, An' lots o' room to run around an' holler When it rained outside the whole long living day.

It must 'a been just lovely there to grandma's; The city's just as different as can be, I guess it was a good deal more like heaven When grandma was a little girl like me.

—Grace Duffield Goodwin in Independent.

Willie's Dream.

LITTLE Willie Jones was a meddler. He could not see a box or a bundle but what he must open it and see what was in it. It did not make any difference to whom it belonged. His father had punished him many times for it, but the next box he saw his curiosity got the best of him, and he forgot the punishment and opened the box.

One day his father laid a box of cartridges down on the table while he went into the next room for his gun. He was gone only a minute, but that was long enough for Willie to get up in a chair and open the box. His father came in just as he was taking the cartridges out of the box.

"What are you doing there?" he said, as he took the boy down from the chair. Only seeing what was in the box.

"Was it your box?" "No, sir!"

"Papa must punish you for meddling."

"But I did not mean to meddle, papa, I only forgot."

"Well, I shall not forget that I promised to punish you every time you opened a box that did not belong to you." Then his father told him what the cartridges were, and that if he had dropped one on the floor it might have gone off and killed him. Willie had lots of time to think about it, for he was sent to his room the middle of the afternoon, and had to stay there until the next morning.

For several days Willie was a pretty good boy, because he did not get a chance to look into any more boxes, and when he went to bed he told his mother that he had not meddled.

"I'm glad of that," said his mother, "and if you will not meddle to-morrow I will take you for a ride on the cars Friday."

"Oh, I surely will not," said Willie, and he was so well pleased with the idea of the ride that he did not get to sleep for half an hour. He thought he had not been asleep at all when he heard a funny sound, like the squeak of a mouse. He sat up in bed, and there on the floor he saw five funny little fellows, and they appeared to be in earnest conversation. He listened and heard one of them say:

"I think we had better aim them all at him and kill him at once, for he is not worth keeping alive, he meddles so."

Willie looked to see what the man was pointing at, and saw a lot of cartridges on the floor. Some were standing up and some were lying down. One of the little men had a ball in his hand, which he was about to roll at the cartridges, just as if he were playing tenpins, but he had stopped to hear what the man who pointed was saying:

"I don't think so," said the one who stood nearest the cartridges. "I think we ought to fire them in the air and scare him. That may do enough good to stop him from meddling. If not, we can come again and finish him. What do you say, Professor?"

The professor folded his arms and said: "Well, I don't know. A meddler is the worst boy I ever knew, but this fellow is young and may be he may get over it. I'm in favor of giving him a few days more on trial. What do you say, Doctor?"

The doctor was sitting down with his arms folded on his knees, and Willie waited in breathless silence to hear what he would say.

"Perhaps we might give him one more

chance, though I haven't much faith in his doing any better."

"Oh, I will, I will!" cried Willie. "Just try me once more and I will show you that I can keep my hands off what don't belong to me."

"Oh, ho, the little fellow is awake, is he?" said the professor, as he turned his eyes up to the bed.

"Yes, sir, I am awake, and if you won't kill me I'll promise never to meddle again."

"How are we to know that?" asked the doctor.

"Just give me a chance and see," said Willie, "and if I forget you can come again."

"I think that will be a good plan," said the professor, and the little men gathered up the cartridges and went out of the room.

Willie lay down, and in a few minutes had forgotten all about the little men in a sound sleep. When he awoke in the morning the first thing he thought of was the narrow escape he had had in the night. At first he thought he would tell his mother about it, but he knew she would tell him it was only a dream, and he thought he knew better than that, for it really seemed as if he had seen the men and talked with them. Willie's father noticed the next day that he was rather more quiet than usual, and did not know what to make of it. He knew that his mother had promised to take him on the cars if he did not meddle all day, and so he thought he would try him and see if he had forgotten his punishment. He took a box into the room and put it on the table.

Willie saw him put the box down, but he remembered the warning of the little men and did not go near it, though he heard a noise in the box and wondered what it was. About an hour later his father came in for the box. Willie was still in the room, and his father was pleased to see that he had not meddled with it. There was a live mouse in the box and if Willie had opened it the mouse would have got out, and then his father would have caught it. Willie did not know this, of course, nor did his father for a minute think why Willie did not touch the box, for he did not know of the visit of the little tenpin players.

Willie went with his mother on the cars, and from that day to this he has never been called a meddler.—Henry D. Taylor.

A Doll City.

The little town of Sonneberg, Germany, makes more dolls and children's toys than all the other cities in the world, all put together. It is especially famous for its dolls, and it can produce the noblest ladies, the most life-like men and the prettiest baby dolls you ever saw. At the World's Fair there is a very large and beautiful exhibit called the "Sonneberg Doll Exhibit," in which there is a collection of the most interesting dolls in the world. The dolls are in groups, and, from a distance, you would hardly believe that they were not alive. One of the groups is of a big chariot in which boys and girls are riding, while a big Newfoundland dog barks at their feet. The horse which draws them is a handsome fellow, who looks as if he would run away if he had a chance, while the children are merrily laughing.

Another group of dolls looks like a party of three little girls who have thrown themselves on the floor, tired of their play. They

are so cunning and so pretty that you could look at them all day; and I am sure you would never forget the little town of Sonneberg if you could once have the pleasure of seeing those dolls at the Fair.

About Breathing.

A boy, 14 years old, recently imported from Kentucky, handed the following in as a composition on "Breathing." The instruction was, "Tell all you can about breathing." He said: "Breath is made of air. We breathe with our lungs, our lights, our liver, our kidneys. If it wasn't for our breath we should die when we slept. Our breath keeps the life a-going through the nose when we are asleep. Boys that stay in a room all day should not breathe."

"They should wait till they get out of doors. Boys in a room make bad, unwholesome air. They make carbonic acid. Carbonic acid is poisoner than mad dogs. A heap of soldiers was in a black hole in India, and carbonic acid got in that there hole and killed nearly every one afore morning. Girls kill the breath with corsits, that squeezes the diagram. Girls can't holler or run like boys, because their diagram is squeezed too much. If I was a girl, I'd rather be a boy, so I can holler and run and have a great big diagram."—Washington Star.

Naming Family Pets.

Every boy and girl has, at some time, had a pet for which a name had to be found, and all enjoy the pleasure of teaching the pet to answer to his name. But have you ever stopped to notice how few pets are nicely named?

Suppose you have a little Scotch terrier. Do you not think it would be pretty to name him "Sandy" or "Andy" or "Bruce" or "Wally" or "Campbell" or "Donald" or "Mac"? And if you have a water-spaniel, do you not think he might be called "Lake" or "Paddle" or "Plunge" or "Dip"? And "Paddy," "Rory," "Moore," "Shannon" and "Tyrone" are all good names for an Irish setter; and for the cat family there are such names as "Felina," "Catnap," "Malta," "Softpaws" and "Fleece."

In the city of New York there is a man who makes a business of finding pretty names for valuable pets, and in no case does he ever give the same name twice.

Mark Twain and the Autograph-Hunter.

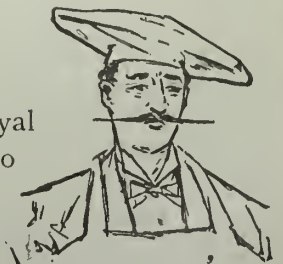
Mark Twain, like many other celebrities, regards the autograph-hunter as an intruder. But at times, it seems, he has been known to so far relax as to gratify the wish of an utter stranger. One such person in existence possesses a singular proof of the humorist's kindness of heart in the shape of a letter, the substance of which is as follows: To ask a doctor or builder or sculptor for his autograph would be in no way rude. To ask one of these for a specimen of his work, however, is quite another thing, and the request might be justifiably refused. "It would never be fair," concludes Mr. Twain, "to ask a doctor for one of his corpses to remember him by."

The letter, it may be noted, was entirely type-written.



IN EVERY Receipt that calls for baking powder use the "Royal." It will make the food lighter, sweeter, of finer flavor, more digestible and wholesome.

"We recommend the Royal Baking Powder as superior to all others."—United Cooks and Pastry Cooks' Association of the United States.



PATRONS OF HUSBANDRY.

The Master's Desk.

Hurry up your business, and be at the opening session of the State Grange at Petaluma, October 3d, 1893.

Several officers have not yet filed their annual reports with the worthy secretary. Are you one of the number? If so, send your report at once, please!

Missouri State Grange meets October 10th, just one week later than our State session. Worthy Lecturer Whitehead is now making a tour of Missouri in the interests of the order.

Wheat-king McNear seems to have complete control of the tonnage now in, or to arrive at, San Francisco. The indications are that he will make a big sum of money this year. He will probably make more net this year than all the wheat-growers in the State.

The only thing that has advanced in price during 1893 is money. Rates of interest have gone up 40, 60 and 100 per cent during the past six months; and the price of labor, agricultural products, live stock and manufactured goods has tumbled down, down, down, and still there is a downward tendency. Where and when will the bottom be found?

The harvest of 1893 is about ended and the fruit thereof is abundant. Now let all who possibly can do so spend a few dollars of the year's earnings, and a few days of time, in attending the State Grange. It will be time and money well expended. During the session it is safe to say there will be some splendid speeches, several well-written essays, and lots of good music, all of which will be well seasoned with hospitality and sociability. There is a silk factory in Petaluma, which will be worth a visit. The only one of its kind in the State. Come to Petaluma and bring some offering in the line of thought!

To reach Petaluma from the city of San Francisco, you will leave via Tiburon ferry. Boats leave at 7:40 A. M., 3:30 and 5 P. M. Fare from San Francisco, \$1.00. Be sure to get a certificate from the ticket agent at San Francisco. Also get a certificate from the S. P. R. R. agent at your home station when you go to San Francisco. It is quite likely that the 5 P. M. boat will be withdrawn before the meeting of the State Grange. You had better make assurance certain and get the 3:30 P. M. boat. Time from San Francisco to Petaluma is just two hours.

If you have learned to put into practice any one of the many lessons taught in the grange ritual, you have been benefited more than the order has ever cost you. There are lessons in economy, in science, in art, in finance, in morality, in sociology, in language, in physiology, in psychology, in pedagogy; in fact, there are so many valuable lessons in each degree that the wonder is how any one can keep from moralizing and studying all of his wakeful hours. If the grange lessons are thoroughly understood, the student finds himself face to face with questions of the greatest importance, and he is sure to find valuable ideas in the subjects proposed. The diction of the ritual is pure, and every word tends to purify and, at the same time, elevate. To him who seeks to gain information, to better himself and his fellows, there is no plan better than the grange; but to the man whose sole aim is self, the grange offers few advantages. The grange makes a good man a better man, and the wise woman a wiser one. Honor the grange and be honored by it.

The season of falling leaves, the shortening days, the lengthened nights, the hush of the birds' songs, tell us of the decay of the year. With the autumn comes the thought of the decay of all things material. There is a soberness comes over one that is not disagreeable, as he ponders on the change. It is, on the contrary, quite refreshing to know of the maturity which the season has wrought. Nature's God, working through Mother Earth, has filled the lap of all her children with plenty and then suggests to them the importance of so improving, that when the autumn days of life shall come, when the seared leaf and ripened tassel shall fall closely about us, that we, too, may be as well prepared for the harvest of the hereafter. These emblems of nature, so numerous at this season of the year, are silent, but impressive, sermons to us of the immortality of the soul. Let us treasure up the suggestions which come to us through the falling leaf and the ripened tassel, through the shortening daylight and the longer hours of darkness, always remembering that as light follows darkness, so will life spiritual follow death temporal.

From Yuba City Grange.

TO THE EDITOR:—The announced special meeting of Yuba City Grange took place yesterday, and there was a fair attendance. Instructions were given in the work of the order, at the conclusion of which there was a recess which was greatly enjoyed in a social way. Time being up, the grange considered the good of the order in a train of subjects that would have done credit to a State Convention.

A motion was made and carried instructing our delegates to present the name of our town as a candidate for the next meeting of the State Grange. The motion gave rise to the discussion of accommodations, which brought on the subject of reform in such matters that is worth heeding. We have at present but two hotels, in size and capacity hardly equal to the Palace or Grand of San Francisco; still, ample to feed all visitors. We are connected with Marysville by street railway less than a mile away, where accommodations are plenty for any crowd. The hall accommodations are first-class; hence there seems no reason why the next State Convention cannot be pleasantly and comfortably entertained in Yuba City.

Some of the speakers entertained the opinion, and the writer is one of them, that through the liberality of the local grange the presence of the State Grange had in some instances become a serious burden, and had actually overworked the willing members and threatened their solvency. Each local community could not be content with equaling the reception extended before, but must do all in its power to excel; which, it was claimed, had reached a point almost unendurable, as was evidenced at the meeting a year ago, when there were no candidates in the field for this year's meeting and the executive committee had to find a place.

Judging from the announcements concerning the preparations in progress at Petaluma, there will be some tired patrons after the meeting. Now, this is all wrong and calls for reform, and the State body should set the example. Of course it is largely the fault of the locality and not of the State Grange, yet the latter accepts the compliment tendered without considering the labor involved. Such, Mr. Editor, is the substance of the sentiments expressed by nearly all present yesterday. Our grange does not hold itself altogether blameless, either, because her efforts in this direction a few years ago have not been forgotten. All our meetings should be so managed as to conduce to our pleasure and recreation, and not to add to our burdens, which are often already quite heavy enough.

The next subject that engaged our attention was in relation to the secret work of the order. Miss Eda Walton moved that our delegation be instructed to do all in their power at the State meeting to cause the work to be abridged, which, after considerable discussion was carried unanimously. The arguments advanced cannot properly be given in public print, but will doubtless be brought up at Petaluma.

The proceedings were interspersed with remarks on minor topics, vocal and instrumental music, and a recitation by Miss Nellie Brophy, our worthy secretary, subject "Friar Phillip." The piece was well rendered and was received with prolonged applause. It is all about a boy baby that grew to manhood among men, and tells how he acted when he first beheld lovely woman, and how he wanted his father to buy him one, etc. The story may not be new to your readers, but the sensation is as old as the hills to all of us and yet never gets stale.

Now about another matter. Several weeks ago a correspondent of the RURAL, writing from Chicago, called attention to the fact that everything from California received great attention, that California literature was sought with eagerness, etc. Here was a strong hint to nimble pens from every part of our State to give the RURAL an account of their locality and thus fill its columns with the very information so eagerly sought after by your Chicago readers and the foreign public generally, to say nothing of the home readers. The locality should be given with its climate and productions, the success attained if not the failures, all of which I venture to say the RURAL would be glad to publish for the benefit of its distant readers as well as for those nearer home. Coming from the hundreds of our progressive agriculturists, the grange department would be greatly improved and popularized thereby, the State's attractions made known and enhanced, and a knowledge of our resources spread abroad that would excel any effort yet made. It strikes me the coming State grange should not adjourn without inaugurating a comprehensive system of descriptive correspondence so that our incompar-

able State and productions may be known by the reading world. Possibly the scheme might cost something, even more than could be borne by the State grange finances. In such an event a combination of interests could do the work at trifling expense to each. Still, if the grange can do it under its own auspices, it should do it alone and have all the say. Some six or eight of our members will attend the State grange, including yours truly,
GEORGE OHLEYER.
Yuba City, September 17, 1893.

The State Grange and Then?

TO THE EDITOR:—Perhaps no session of the State Grange was ever looked forward to with such deep interest as the coming one at Petaluma. Many years ago a master of the State Grange arose from his seat and in a threatening mein and with a voice of thunder declared that "that was the last session the California State Grange would ever hold." We were then trying to depose a master to save the Grange. We succeeded, and the grange still lives, but its continuance depends in a very large degree on the man elected master at Petaluma in October next.

Upon the delegates to that meeting rests grave responsibilities, possibly the very existence of our order in California, will depend upon the man who is elected master. To get the order out of the comatose condition it has been in for a few years past, and put life and animation in it, will be the work of the grange.

What the grange work in California needs is, first, a man of great physical endurance, for in the proper discharge of the duties of master for the next two years will require much hard work to be done largely by the new master; then he should be a brainy man—one of great mental resources; one in close touch with those who toil early and late on their farms; one in full sympathy with the wealth-producers of the country. In fact, what the grange wants and must have if it succeeds is a leader, one who can rally men to his standard and be qualified to lead them on with well-grounded conviction on the side of the farmer; one who, on all suitable occasions, is not afraid or ashamed to stand by the working farmer, and, above all, one who will aid in getting the grange and the agricultural college in closer harmony with each other, in closer harmony with the various agricultural stations throughout the State, gaining all the information from the two sources named on the subject of the newer or most approved method that money and science have developed in farming, and scatter the same broadcast in leaflets to every farmhouse throughout the State. Continue this till that other time arrives when men shall be qualified as teachers at the Berkeley College and sent forth at the expense of the State to every schoolhouse in every agricultural district to teach the rudimentary or basic principles of agriculture, horticulture and kindred subjects. Many farmers throughout the State are cropping land with seeds and plants totally unfit for the soil and climate they are in. Those errors may and should be made known, and possibly corrected through the agency of the Agricultural College to which so much has been given for its support. Other subjects of interest to the farmer will suggest themselves to an active brain.

It is not enough to say that the College of Agriculture is open to the sons of farmers; so are the other colleges at Berkeley open to the sons of men of literature, of medicine, of dentistry and of law, yet professors of the university give lectures on all of these subjects at the centers of population, open to all and free of expense to the listeners, and at the expense of the State. The present active tillers of the soil have some rights that should be respected.

Next in importance to that of Master is the election of secretary, who should be one amply qualified to discharge the duties, and, above all, qualified by nature to perform the duties of the office fairly and impartially. He should be one who could rise above taking advantage of his official position to punish his enemies.

Now, inasmuch as the grange has always been talking and resolving on woman's rights (I except the National Grange, for it seems that woman's rights or woman's suffrage has not yet reached or been considered by that body) and the equality of the sexes, why not give the secretaryship to one of the many qualified women in our order, as many of them are in need of and would greatly appreciate the office? To be consistent, let the grange give us a lady secretary.

After the State Grange, what then? Let the Executive Committee, after first having been empowered by the State Grange, enter immediately into correspondence with Mor-

timer Whitehead, lecturer of the National Grange, with a view of having him, in connection with the newly elected master, canvass the State in the early spring of next year. If anything can be offered the farmers except words, words, words—meaningless as the air that wafts them on—anything that will have even a tendency to ameliorate their social, educational or financial condition—they can be induced to re-enter the grange.

The grange in this State has for many years been doing business on a capital that has long since become threadbare and very much diluted—that of "brotherly love and fraternal regards." Many business enterprises have been loaded down and gone to the bottom with too much capital of this kind on board. Many are seeking now to do business on what the grange has accomplished in former years. This has become a back number and should no longer be used. It is the ever present *now* that we must deal with, and any theory or project that does not take hold of the *present* will prove a failure.

An attempt was made to revitalize the grange through the "trade-card system." While it may be true that in some instances it has worked well for a short time, in many other localities it has been tried and abandoned; and, if the writer is correctly informed, one grange was completely wiped out through the efforts of some grangers to carry out the trade-card system. Many granges and grangers have been talked to death by too much repetition of the "Declaration of Purposes." It has been dished up morning, noon and night; its frequency has become nauseating. One of our good brothers is so zealous to spread the principle contained in the "Declaration" that it is believed that were he about to propose marriage to a lady, he would first pull a bundle of them out of his pocket and ask the lady to wait a moment till he consulted the "Declaration of Purposes" to see what it said on the subject of marriage. The farmers of California are noted for good, hard common sense, and no oratorical displays piled with glittering generalities and meaningless nothings will suit them. Let the powers that be, and are to be, offer them good, healthy mental food—something that will aid them in keeping the wolf of want from their doors—and the grange halls in California will present a different appearance at the meeting of the State Grange in 1894.
AMOS ADAMS.

San Jose, Sept. 18, 1893.

From Bennett Valley Grange.

Bennett Valley Grange held its regular meeting on Saturday last with an average attendance, considering the amount of fruit and hops that have to be gathered at once. At 10 A. M. we instructed a class of four in the work of the third and fourth degrees, and at noon everybody was invited to the banquet hall, where well-filled tables were waiting. After noon the free coinage of silver was thoroughly discussed, after which the resolutions offered by Watsonville Grange were adopted. We are anxiously looking forward to the meeting of the State Grange at Petaluma. Bennett Valley Grange will be well represented. The last day of the session of the State Grange is our regular meeting day, and perhaps many of our members will be at Petaluma; consequently it has been arranged to have our Grange meet at 8 o'clock in the evening.

The late rains and fogs are causing considerable damage to the fruit and grape-growers. The prune crop is about all gathered and in three weeks the grapes will do to commence on.

Some of the farmers have commenced to cultivate for early winter grain. W. L. W.
September 17, 1893.

Three and One-Half Days to the World's Fair.

We take pleasure in advising the readers of the PACIFIC RURAL PRESS that the UNION PACIFIC is the most direct and quickest line from San Francisco and all points in California to the WORLD'S FAIR.

It is the ONLY LINE running Pullman's latest improved vestibuled Drawing-Room Sleepers and Dining Cars from San Francisco to Chicago without change, and only one change of cars to New York or Boston.

Select Tourist Excursions via the UNION PACIFIC leave San Francisco every Thursday for Chicago, New York and Boston in charge of experienced managers, who give their personal attention to the comfort of ladies and children traveling alone.

Steamship Tickets to and from all points in Europe. For tickets to the World's Fair and all points east and for Sleeping-Car accommodations, call on or address D. W. Hitchcock, General Agent Union Pacific System, No. 1 Montgomery street, San Francisco.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rates of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California street San Francisco.

Hay Pressing.

If you are interested in pressing hay write Truman, Hooker & Co., San Francisco. They will save you money.

AGRICULTURAL NOTES.

CALIFORNIA. Fresno.

Fresno Republican: The experience of Allen Barr in employing white men to pick grapes goes to show that the proposition is a paying one. Last year he employed Chinamen to pick 30 acres of vineyard at a cost of \$130. This year Mr. Barr employed seven white men—no hobos, but white men who honestly wanted to work and did work when they got the opportunity. These seven men were paid \$1 per day and board, and were boarded and lodged after the manner of a Christian race of people, with comfortable shelter and plenty to eat. Their record shows that they averaged 90 trays to the man per day, or over one ton of grapes each. The output of the 30 acres was 1000 trays more than last year, and still the wages for the pickers were \$92, being \$38 less than was paid the Chinamen the previous year for picking the same vineyard with 1000 less trays.

Dr. Perrin of Fresno, a wealthy land-owner, owns 40,000 acres of land in Fresno county that is practically worthless, owing to the fact that the soil is strongly impregnated with alkali. The doctor has deeded ten acres of land, covered with alkali, about seven miles west of Fresno, to Messrs. D. G. Overall, W. F. Hall and Mark Lavelle of this city, who own a gypsum mine and mill near Coalingo, and they propose to reclaim the land and make it susceptible to cultivation. They will cover it with ground gypsum and then cultivate the soil, and then give it another covering of alkali neutralizer. They will plant the ten-acre tract to wheat or barley. Dr. Perrin has agreed to purchase all the gypsum the mine-owners can produce if they will demonstrate that the effects of alkali in the soil can be neutralized by the use of gypsum. All he requires is that a crop of some kind be raised on the ground.

Kern.

Kern county is said to ship annually farm and mine products to the value of \$6,500,000.

Californian: A great many people plant peanuts in their young orchards in this State in order to get some small return before the trees come into bearing. There are several methods of planting these nuts and one of the greatest complaints made is of the difficulty frequently met in persuing them to get started. This may be entirely obviated by a simple and easy plan. Instead of planting the nuts whole, shell them out, taking particular pains not to remove or break the thin, dry skin that covers the kernel. When shelled, put the nuts in some receptacle, pour warm water—not hot—upon them and set them away in a warm place. In about 36 hours they will commence to sprout, and may then be planted, each kernel being put in place with the fingers, with spaces of about 12 inches between them in the rows. Every nut will grow, and there will be no unsightly gaps, as is so frequently the case where other plans of planting are adopted.

Kern Co. Echo: A vineyardist was talking about the tariff on raisins a few days ago, and this is the way he expressed himself: "The trouble with us is that there is not enough duty on raisins; the raisin industry in California is not enough protected. The shipments of Spanish raisins are sold as soon as they arrive in New York, not because they are better in quality but simply because they are put up in better style—are better assorted and packed, therefore more salable in Eastern cities. We have to pay \$1.15 a day to men who never before picked grapes, while the raisin industry in Spain is in the hands of vineyardists and laborers who have been brought up in that business. The wages paid are but 50 cents a day. The Spanish raisins are all hand packed—the work cannot be done by machinery—therefore it is impossible for us to compete unless we have more duty on the foreign article. There should be some duty also on crrants, which now come in free. Times will be very hard in California for raisin farmers if the industry is not well protected. How can any laborer say that free trade is a good policy?"

Kings.

Hanford Journal: J. H. Hopkins sold to Charley McJunkin last week 90 head of hogs that averaged 200 pounds apiece. They were city-bred porkers, having been raised within the corporate limits of Hanford. Charles McJ. thinks the heavy weight of the young swine speaks volumes for this city as a health resort, as their large avoirdupois he attributes to the fine climate and the artesian water of this city.

Lassen.

Advocate: Many complaints are made of damage to grain crops down the valley by rabbits. These pests are reported as unusually numerous and destructive this season, and there is a possibility that the board of supervisors will be petitioned to fix a bounty upon them. It is noted that several counties have been induced to take such action, and it looks now like some means will have to be adopted for the relief of farmers in this county. The killing off of coyotes, the natural enemies of the rabbits, has left the field open for the rapid increase of the pest, and some method of extermination should be adopted as soon as possible.

Los Angeles.

Pomona Progress: E. T. Palmer showed us yesterday two Kelsey plums, casually selected from some fruit just brought to his packing-house for shipment, that weighed 8 and 7½ ounces respectively.

Pomona Progress: Several citizens of this place went up to the cannery lately to inspect the preparations for the canning of about four dozen glass jars of peaches, and to see that no sugar or sweetening of any kind was used in

the process. The peach is a new variety, propagated by F. C. Chapman of this place, who claims that not a particle of sweetening is needed in canning, but that the juice from the fruit makes a syrup as thick and as sweet as any one would desire. The fruit was put into the jars, cooked and sealed, in the presence of several men, who were each given a sample jar to keep and to test in due time, and the remainder will be placed in the Board of Trade rooms. The peach is a large, round, yellow clingstone of rich color and of small pit. Though the fruit had been picked from the trees for five days, it was still fairly firm and in good condition. If the fruit is all that it is claimed to be, it will be a very desirable variety to raise, for sugar is an important item in canning. The result of the experiment will be watched with interest.

San Bernardino.

Chino Champion: On one day last week Mr. Gird harvested and delivered 135 tons of beets for a cost of 89 cents per ton. Part of these were from the east camp, three miles from the factory, and the beets were small and thin. Mr. Gird has delivered beets from near the factory for as low as 63 cents per ton. This includes pulling, topping, loading, hauling, etc., complete, with Martin's beet-puller.

Chino Champion: Monday's shipment of sugar from the factory here was the largest ever made in one day. It amounted to 246,535 pounds, or 123½ tons. It filled six large cars, averaging nearly 21 tons to the car. In standard carloads of 10 tons to the car, this would make 13 carloads. The average annual consumption of sugar per capita in the United States is about 63 pounds. This one day's shipment from Chino, therefore, at that rate, would furnish 3913 people with a year's supply of sugar, each.

Santa Clara.

On Friday of last week the Saratoga Packing Co. put up 46 tons of prunes in four hours and fourteen minutes. The work was done with a force of twelve men. Foreman Bracker wants it understood that the Saratoga Packing Company doesn't propose to take the back seat from any other concern and if any one comes up to their last record he is ready to go them one better.

Santa Cruz.

Watsonville Rustler: Beet-tops contain valuable fertilizing salts. The farmer who sells his beet-tops for cattle feed at 25 cents per load makes a great mistake. They are worth ten times that sum per load used on the land as a fertilizer, as they contain a large percentage of salts drawn from the soil.

Watsonville Rustler: The gathering of the hop harvest began recently, and the indications are that a hountifnl yield will be assured. It is estimated that about \$20,000 will be disbursed for labor in harvesting and curing the hops this season. As Chinese labor has been dispensed with, this money will be distributed among white people and the effect will be noticeable in local business circles. The price paid for picking hops is \$1 per 100 lbs., and laborers earn from \$1 to \$2.50 per day, according to their skill and speed.

Watsonville Rustler: M. Cassin finished his season's work last Saturday and laid up his thrashing machine. He reports that the yield of wheat has been very good in the valley, and says he came across some wonderfully heavy stands of harley. The most phenomenal yield of barley ever known was grown on the land of J. McCollum, on the Beach road. It sized up 70 sacks or about 130 bushels of barley to the acre. John McCollum, who is farming the land, says last year the tract was planted to potatoes and beets. He believes in rotation of crops, and as he is a successful farmer, his opinion is worth something.

Pajaronian: The beet-growers of the southern part of the State have sent a very strong letter to Senator White, calling for the retention of the bounty. The beet-growers of the Pajaro have as strong an interest in this matter as their southern brothers, and they should memorialize their representative at Washington to retain the bounty for the prescribed time—to 1905. The bounty advanced the price of beets to \$5 per ton at the Watsonville factory, which is the highest straight price paid for beets in the world, and higher than the average at any other American factory. If the bounty goes off, the price is apt to drop back to the old figure. The beet crop has been a money-maker in this vicinity, its tonnage returns are comparatively sure and its price is certain.

The Chino Champion gives the following interesting figures concerning beet production and the profits thereof this year: The total delivery of beets for the season to date is 21,258 tons. The average daily delivery from Anaheim has been 123 tons, and the total delivery for the season to date from there has been 3382 tons, so that the factory has received to date 24,640 tons. Few of the farmers have the return of their crops footed up yet, but in round numbers we notice the following: C. M. Crow has harvested and delivered a part of his beets. From one six-acre field he hauled 93½ tons of 14 per cent beets. This gives him 154 tons per acre at \$4.30 per ton, or \$66.65 per acre. From another eight-acre field he harvested 86 tons of 14 per cent beets. E. R. Robertson has harvested from 30 acres of his own land west of town 508 tons of beets. These averaged him \$4.50 per ton, or \$2286 for the field—\$76.20 per acre. Nine acres of the crop was very light, and brought the average of the whole down considerably. On 22 acres he harvested 74 tons, or nearly 27 tons per acre. Mr. Robertson says he will plant his land to L R seed next year, and from these 30 acres he counts on getting 800 tons. W. C. Rightmire has finished two of his fields, which have given him very good returns. From 27 acres he harvested 400

tons and 700 pounds, or an average of 15 tons per acre. They analyzed between 13 and 14 per cent sugar, making an average price of, say \$4.10 per ton. This would give Mr. Rightmire in the neighborhood of \$61.50 per acre from this field. Another field of eight acres gave better returns. The eight acres yielded 172 tons of beets averaging 14½ per cent sugar. This makes him 21½ tons per acre at \$4.50 per ton, or a return of \$96.75 an acre for the field.

Tulare.

Visalia Delta: Mike Dutra drove 2700 head of sheep into the town limits of Lemoore for the purpose of watering them from a ditch. An officer, William Burton, captured the sheep and put them in the pound, from which Dutra replevined them, and then commenced suit against the officer for \$500 damages.

Visalia Times: The Woodworth & Pickens thrashing machine broke the record for big work at the Hockett ranch at White river last Wednesday. Twenty-one hundred and seventy-five sacks were thrashed during the usual running hours. One section of this ranch produced 6048 sacks of clean harley, besides the screenings. There were 1608 sacks thrashed from one stack.

Referring to the fact that sheep-owners have been advised to allow their flocks to go unshorn this fall, the Porterville Enterprise says: We believe it would be poor economy on the part of most growers to try to carry the fleece on the sheep until spring. It is impracticable in most parts of this State for sheep to carry the fleece a year without scab, even if the owner gives them his entire personal attention, which he cannot always do, and we all know should scab get into the sheep in the winter with a full fleece, it would be almost impossible to eradicate it, and the year's growth of wool in its scabby condition would not bring one as much per fleece as his neighbor's eight or nine months growth. While prices are very low and prospects for any radical change for the better are slim, a little easier financial condition would cause a demand for wool, both from the dealers, and with the demand there would no doubt be some rise in values.

Ventura.

Venturian: John Bodger & Son, of Santa Paula, are starting in to grow carnations and other varieties of flowers on a large scale. They now have about three acres and a half upon which a number of leading varieties are growing. Next season they will have an addition of 60 acres, 40 of which will be cultivated. Of carnations they have 60 named varieties, and a bed of Marguerites raised from seed. These can be grown from seed to flower in four months time. They do their own hybridizing and in this way bring forth many beautiful combinations. This place is located on River street and is well worth a visit.

Yolo.

The Register's Berryessa correspondent says: Clark Bros.' combined harvester, operated by John Ray, harvested 13,313 sacks of wheat from 1500 acres in 50 days. The balance of their grain, 5383 sacks, was headed and thrashed. They had altogether 12,373 sacks of wheat, 143 pounds to the sack; 2319 sacks of harley, 110 pounds to the sack, and 4004 sacks of oats, 100 pounds to the sack.

Woodland Democrat: There used to be a great deal of seeding of dry summer-fallow land in this vicinity, but of late years the farmers are getting in the habit of waiting until after the rains and plowing the summer-fallow land a second time before sowing the seed. The results have been so satisfactory that the practice has almost become the rule. The farmers of this vicinity have therefore not yet commenced seeding. Mr. Hadley is one of the farmers who plows his summer-fallow twice and does not sow until after the first rains. His crop last year furnishes conclusive evidence that this method of farming is a judicious one. He harvested 20 sacks to the acre, while others on land equally as good, but which was only plowed once and seeded while it was dry, only harvested half as much.

Gentleman Having Practical Experience

In fruit-growing in Fresno, with office in Glasgow, Scotland,

Is Open to Represent Good Cannery

For EXCLUSIVE SALE OF THEIR CANNED CALIFORNIA FRUIT IN SCOTLAND.

Address PATON, 136 Renfrew St., Glasgow, Scotland.

Almond Hullers FOR SALE!

—BY—

A. O. RIX, Irvington, Alameda Co., Cal.

TREE WASH.

"Greenbank" Powdered Caustic Soda and Insecticide.

T. W. JACKSON & CO..

Sole Agents,

No. 5 Market Street, San Francisco, Cal.

MAKE YOUR OWN GAS! BADLAM BROS..

519 Market St., San Francisco,

SOLE MANUFACTURERS OF THE CELEBRATED PEERLESS GAS WORKS. New process, safe and inexpensive, from \$100 upward. Light cheaper than coal oil. Send for catalogue and prices.

An Indiana Miracle.

A CASE THAT HAS ATTRACTED MUCH ATTENTION.

A Well-Known Citizen Whose Life Was Despaired of Is Again Enjoying Health and Strength—The Particulars of His Remarkable Cure as Related to a Reporter of the Crawfordsville Journal.

(Crawfordsville Ind., Journal.)

There is probably no man better known in this city than G. M. Johnson, or "Mit," as he is familiarly called by everybody. Six months ago it was the common remark that "poor Mit had but a few more days of his life," his physical condition being such that not one of his hundreds of friends had the slightest hope of his surviving the summer. He had about abandoned all hope himself, evidently, and was confined to his room and bed, unable to walk or to attend to any business whatever. A representative of this paper, who has enjoyed an intimate acquaintance with Mr. Johnson for a long number of years, met him walking briskly up street to-day, and in astonishment inquired of him what had brought so wonderful a change in his appearance and condition.

"Well," said Mr. Johnson, for a number of years I have had a complication of troubles, the most serious being spinal and nervous trouble, which, as you know, brought me pretty near death's gate. My friends despaired of my recovery, and I had but little hope myself of ever being about actively again. My health kept going from bad to worse until I became perfectly helpless. I was unable to walk a step; could not sleep, had no appetite, I just lived and suffered and could not die to get relief. Physicians did me no good; neither did all the other remedies I tried, and I believe I have taken enough medicine in the last few years to stock a drug-store. I was in this miserable, hopeless and helpless condition when a friend called my attention to a remarkable cure through the use of Dr. Williams' Pink Pills for Pale People and urged me to try them. I felt that perhaps it was a last chance, and procured a supply of Pink Pills from Messrs. Nye & Booe, the well-known druggists. That was about six months ago, and you see what they have done for me. I am a new man now. I had not been taking Dr. Williams' Pink Pills long when I began to find an improvement. I saw that I had at last hit upon a remedy that had virtue in it; hope returned and I continued to use the pills and continued to improve in health and strength, and while I am not the stoutest man in the city I am a new man altogether. I feel well, eat heartily, sleep soundly; the dizzy, nervous trouble has entirely left. I can walk briskly, and am enjoying life as of yore. I consider this Pink Pill remedy a wonderful one, and have recommended it to a number of my friends who have been similarly afflicted. Why, I cannot recommend the remedy too highly. Just think, for nearly a year I could not stand up to take a drink of water without getting blind from dizziness, and the most excruciating pains would seize me, and during these paroxysms I suffered untold agony. I am now entirely free from these pains, and I really have faith that I will soon be as sound as a dollar."

"Well, Mr. Johnson, your friends are gratified to see you so much better, and we hope that others may be benefited by the same means."

"Just say to any one who may want information that I will freely give them any information they may desire on the subject, and will only be too glad to see some of my friends benefited in the same way. I know some who are in need of something right now, and will urge them to try the four p's. There is nothing in my opinion to equal them, and as I said in the start, I have tried all the remedies advertised."

Mr. Johnson can be seen any day at his place of business on Green street, and any one desiring further information in regard to his case should call on him. It is surely almost a miraculous case, and one which attracts a great deal of attention.

Our reporter then called upon Messrs. Nye & Booe, the well-known druggists, who said they considered Dr. Williams' Pink Pills for Pale People a wonderful remedy. It is less than a year since they began to sell Pink Pills, and in that time the sale has grown to such an extent as to be remarkable. Messrs. Nye & Booe said there were many in Crawfordsville besides Mr. Johnson who had reason to be grateful to Dr. Williams' Pink Pills for restored health and strength. Indeed, every one who uses Pink Pills speaks of them in the highest terms.

Dr. Williams' Pink Pills were successfully used in general practice for many years before being offered to the public generally. They contain, in a condensed form, all the elements necessary to give new life and richness to the blood, and restore shattered nerves. They are an unfailing specific for such diseases as locomotor ataxia, partial paralysis, St. Vitus dance, sciatica, neuralgia, rheumatism, nervous headache, the after effects of la grippe, palpitation of the heart, pale and sallow complexion, that tired feeling resulting from nervous prostration; all diseases depending upon vitiated humors in the blood, such as scrofula, chronic erysipelas, etc. They are also a specific for troubles peculiar to females, suppressions, irregularities, and all forms of weakness. They build up the blood and restore the glow of health to pale or sallow cheeks. In men they effect a radical cure in all cases arising from mental worry, overwork, or excesses of whatever nature.

These Pills are manufactured by the Dr. Williams' Medicine Company, Schenectady, N. Y., and Brockville, Ont., and are sold only in boxes bearing the firm's trademark and wrapper, at 50 cents a box, or six boxes for \$2.50, and are never sold in bulk.

A Small THRESHING MACHINE of great capacity for Light Power.

The Columbia something new.

EVERY FARMER can now **DO HIS OWN THRESHING**, with less help and power than ever before. Send for Free Illustr. Catalogue.

We make a full line of Horse Power.

SKILL CITY MFG. CO., Racine, Wis.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

JERSEYS AND HOLSTEINS, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. William Niles & Co., Los Angeles, Cal., Breeders and Exporters. Established in 1876.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Siles, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER Saxe & Son, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS—The best A. J. C. C. Registered Prize Herd is owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

THOROUGHbred SPRING CHICKS, S. C. White & Buff Leghorns, Black Spanish, S. C. & White Wyandottes, Game Bantams, Mam. Bronze & White Hol. Turkeys. Theo. Cushing, Spokane, Washington.

BERKSHIRES & POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. William Niles & Co., Los Angeles, Cal. Established 1876.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

R. H. ORAN, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

SWINE.

CHAS. A. STOWE, Stockton, Cal., (Box 233). Breeder of Berkshire and Poland-China Hogs; Milking Strain of Durham Cattle, and M. H. Turkeys. Write for Prices.

H. J. PHILPOT, Niles, Cal., Importer and breeder of Tecumseh and other choice strains of Registered Poland-China Hogs.

WM. NILES & CO., Los Angeles, Cal., Breeders of nearly all varieties of Poultry, Dairy Cattle and Hogs.

J. E. ALSFORD, Woodside, San Mateo Co. Breeder of Berkshire Hogs and Toulouse Geese.

P. H. MURPHY, Perkins, Sao. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, Low Prices.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.

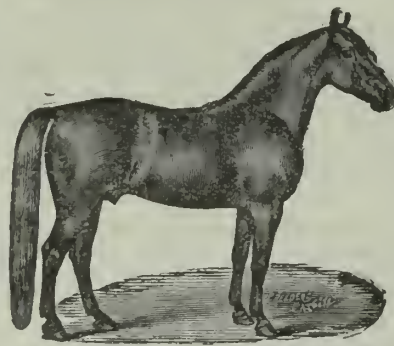


OXFORD DOWN SHEEP FOR THE PACIFIC COAST.

W. A. SHAFOR, Middletown, Ohio, Largest American Importer of O. D. Sheep.

Is prepared to quote prices on the best stock of Oxford Down Sheep to be had in England. Parties wanting first-class stock should write for particulars and induce their neighbors to join them. Import will arrive about August 1st. Write at once.

BACK NUMBER OF THE PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes) \$4. Inserted in Dewey's patent binder 50 cents additional per volume.



DISPERSAL SALE OF ALL THE PRODUCING BROOD MARES, STALLIONS, COLTS, FILLIES, GREAT RACE MARES and WELL-BROKEN ROADSTERS,

THE PROPERTY OF

LA SIESTA RANCH, MENLO PARK, CAL.,

FRANK H. BURKE, PROPRIETOR.

Also, to close the partnership of BURKE & VIOGET,

THE ELECTIONEER STALLION

EROS, AND MOUNTAIN BOY AND SIX OF THEIR PRODUCE,

TO BE SOLD AT AUCTION, WITHOUT RESERVE,

—BY—

KILLIP & CO., - LIVE STOCK AUCTIONEERS,

22 Montgomery St., San Francisco,

AT SALESYARD, MARKET STREET AND VAN NESS AVENUE.

THURSDAY, OCTOBER, 5, 1893,

PROMPTLY AT 11 A. M.

HERCULES.

STEEL AND IRON.

The Best Windmill for Deep or Shallow Wells.

CENTRAL ACTION
DOUBLE BEARINGS

Warranted to run with less oil than any other Windmill.

AUTOMATIC OIL BEARINGS.

THIRTY DAYS' TRIAL, IF DESIRED.

Deep Well Pumps, All Brass Cylinder Pumps.

PRICES ARE LOW—Save money by DEALING DIRECT WITH THE MANUFACTURER.

Improved Davis, San Joaquin and Hercules Windmills, Pumps, Etc.

Patent Non-Shrinkable Redwood Tanks.

Write for Prices.

ONE 15 H. P. OTTO GAS ENGINE FOR SALE CHEAP.

R. F. WILSON, WORKS, COR. MAIN & OTTER STS., STOCKTON, CAL.

PROTECT YOUR TREES

—WITH—

Gilman's Patent Tule Tree Protector

Patented Aug. 1, 1893.

Cheapest, Best and Only One to Protect Trees and Vines from Frost, Sunburn, Rabbits, Squirrels, Borers and Other Tree Pests.

For Testimonials from Parties who are using them send for Descriptive Circulars.

B. F. GILMAN,

Sole Manufacturer of Patent Tule Covers,

420 NINTH ST., SAN FRANCISCO, CAL.

FRANCIS SMITH & CO.,

MANUFACTURERS OF

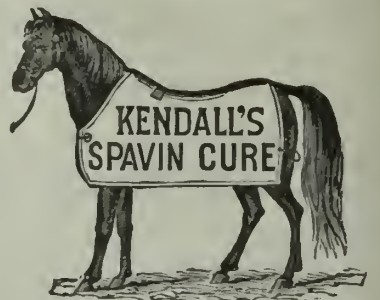
SHEET IRON & STEEL PIPE

FOR TOWN WATER WORKS.

Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes.

NO. 130 BEALE STREET, SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STAR, LANE CO., OREGON, Feb. 8th, 1892.

DR. B. J. KENDALL CO.,

Dear Sirs:—I have used your KENDALL'S SPAVIN CURE for the last twelve years never being without it but a few weeks in that time and I have made several wonderful cures with it. I cured a Carb of long standing. Then I had a four year old colt badly spavined; tried every thing without any benefit, so I tried your liniment, and in a few weeks he was well and his shoulder filled up all right, and the other, a four year old that had a Thoroughpin and Blood Spavin on the same joint, and to-day no one can tell which leg it was on. These statements can be proven, if necessary; the four year olds are now seven and can be seen any day at Cottage Grove, Or.

S. Z. FAYTON.

Price \$1.00 per bottle.

DR. B. J. KENDALL CO.,

Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular.

E. FOUGERA & CO.,

30 North William Street, New York.

ROOFING

GUM ELASTIC ROOFING FELT costs only \$2 per 100 square feet. Makes a good roof for years, and any one can put it on.

GUM ELASTIC PAINT costs only 60 cents per gal. in bulk lots or \$4.50 for 5 gal. tubs. Color red. Will stop leaks in tin or iron roofs that will last for years. TRY IT.

Gum Elastic Roofing Co.,

30 & 41 West Broadway,

NEW YORK.

Local Agents Wanted.



In These Dull Times

You can largely increase your income by buying an incubator and engaging in the chicken business. Send stamp for our cat. logue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember, the best is the cheapest. **PACIFIC INCUBATOR CO.**, 1317 Castro St., Oakland, Cal.

FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank.)

Wants you all to write to him for prices on Young Stock.

MINORAS: White and Black.

LEGHORNS: White, Brown, Black, Buff.

B. P. ROCKS.

Mention the age desired and when shipped. Circular Free.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.

The American Bee Journal,

(Established 1861.)
It's Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages. \$1.00 a year. Send for Free Sample. \$2.00 BEE-BOOK FREE.

GEO. W. YORK & CO., 55 Fifth Ave., Chicago, Ill.



THE HALSTED INCUBATOR COMPANY,

1312 Myrtle Street, Oakland, Cal.

Send Stamp for Circular.

S. H. MARKET REPORT

Market Review.

WEDNESDAY MORNING, Sept. 20, 1893.

The hold Mr. McNear has upon the tonnage situation in this port operates as a new factor in weakening the market and preventing the advance that conditions would otherwise seem to justify. The financial situation has recently shown some improvement, and the shortage in American and foreign crops is a certainty. But a number of things, of which this latest "cinch" of Mr. McNear is but one manifestation, have operated against the grower and have brought about demoralization and uncertainty almost without precedent. The local wheat market has recently shown spasmodic signs of strength, and advances have occurred, but it is so heavily loaded with artificial adverse conditions that it is exceedingly difficult for it to assume its normal shape.

There is no improvement in the tonnage situation. There are but one or two disengaged vessels in the harbor, and the price of charters has advanced to 35s. With the price of wheat about to rise abroad and the price of charters rising here, Mr. McNear may feel very comfortable. He has warehouses full of wheat, and he has engaged ships at prices from 22s 6d to 30s to carry this wheat to England. Charters here have now reached 35s, and the rate is expected to increase. If Mr. McNear has any more ships than he needs to carry his own wheat he might make a fine profit by rechartering. But it is said this shrewd New England grain king needs all the vessels that he has chartered to carry his own cargoes.

The following tables show the range of the Eastern, European and local markets:

LIVERPOOL.

Day	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
Thursday	56 1/2	56 7/8	56 3/4	56 1/2	56 0	56 0
Friday	56 7/8	56 7/8	56 9	56 1 1/4	56 1 1/4	56 0 3/4
Saturday	56 7/8	56 7/8	56 9	56 1 1/4	56 1 1/4	56 0
Monday	56 7/8	56 7/8	56 9	56 1 1/4	56 1 1/4	56 0
Tuesday	56 7/8	56 7/8	56 9	56 1 1/4	56 1 1/4	56 0

To-day's cablegram is as follows:
LIVERPOOL, Sept. 20.—Wheat—More disposition to buy. California spot lots, 5s 9 1/2; off coast, 2s; just shipped, 3s 3d; nearly due, 2s 3d; cargoes off coast, quiet but not steady; on passage, 4s 1/2. Mark Lane wheat, firm; French country markets, generally easier; wheat and flour in Paris, quiet; weather in England, fine.

NEW YORK.

Day	Sept.	Oct.	Dec.
Thursday	73 3/4	73 3/4	73 3/4
Friday	73 3/4	73 3/4	73 3/4
Saturday	73 3/4	73 3/4	73 3/4
Monday	73 3/4	73 3/4	73 3/4
Tuesday	73 3/4	73 3/4	73 3/4

The following is to-day's telegram—per bushel:
NEW YORK, Sept. 20.—September, 73; October, 73 1/2; December, 77.

CHICAGO.

Day	Sept.	Oct.	Dec.
Thursday	67 3/4	67 3/4	71 1/2
Friday	67 3/4	67 3/4	71 1/2
Saturday	67 3/4	67 3/4	71 1/2
Monday	67 3/4	67 3/4	71 1/2
Tuesday	67 3/4	67 3/4	71 1/2

The following is to-day's telegram—per bushel:
CHICAGO, Sept. 20.—September, 67 1/2; October, 68; December, 71 1/2.

SAN FRANCISCO.

Day	New	Dec.
Thursday, highest	\$1 11 1/2	1 20 1/2
" lowest	1 10 1/2	1 18 1/2
Friday, highest	1 11 1/2	1 21 1/2
" lowest	1 10 1/2	1 19 1/2
Saturday, highest	1 11 1/2	1 21 1/2
" lowest	1 10 1/2	1 19 1/2
Monday, highest	1 11 1/2	1 21 1/2
" lowest	1 10 1/2	1 19 1/2
Tuesday, highest	1 11 1/2	1 21 1/2
" lowest	1 10 1/2	1 19 1/2

The following are to-day's recorded sales on Call:
Morning—Informal Session—December, 600 tons, \$1.14; 100, \$1.12; 100, \$1.12; 300, \$1.15. May—100 tons, \$1.26; 100, \$1.24; 100, \$1.24; 300, \$1.27. Regular Session—December, 800 tons, \$1.17; 400, \$1.15; 100, \$1.15; 100, \$1.15; 300, \$1.15. May, 400 tons, \$1.25 per cdt.

Barley.

The sample market eased off for feed during the latter part of the week, and the transactions were rather limited. There was a decidedly weak feeling yesterday. Brewing has been receiving a little more attention from local malsters, and shippers are not now buying as freely as previously noted. Considerable more brewing will be forwarded to New York.

Day	New	Dec.
Thursday, highest	78 1/2	80 1/2
" lowest	77 1/2	79 1/2
Friday, highest	78 1/2	80 1/2
" lowest	77 1/2	79 1/2
Saturday, highest	78 1/2	80 1/2
" lowest	77 1/2	79 1/2
Monday, highest	78 1/2	80 1/2
" lowest	77 1/2	79 1/2
Tuesday, highest	78 1/2	80 1/2
" lowest	77 1/2	79 1/2

The following are to-day's recorded sales on Call:
Morning—Regular Session—December, 200 tons, 75c per cdt.

Other Cereals, Etc.

Oats were moving fairly well at unchanged prices. Consignments have been coming forward more freely quite recently.

Choice Yellow Corn had an upward tendency during the week, but the weaker feeling for Wheat now prevents any further advance.

Beans move slowly at generally weak prices. There have been large receipts of Hay and the market has ruled easy.

Hops continue quiet, buyers and sellers differing to some extent as to market values.

Rye has been very quiet and at weak prices. A very large quantity of Mustard Seed goes to England by the British ship Elginshire, which was cleared on Monday.

OATS—New crop: Common to fair white feed, 95c@1.05 per cdt; good to choice, \$1.10@1.15; milling, \$1.20@1.35; black, 90c@1.15; red, 97c@1.12 1/2.

CORN—Large yellow, 97c@1.05 per cdt; small do, \$1.02 1/2; white, 90c@95c.

BEANS—Pea, \$2.10@2.20 per cdt; Pink, \$2.25@2.40; Bayo, \$1.60@1.65; Small White, \$1.95@2.05; large do, \$1.75@1.90; Butter, nominal; Red, \$2.50@2.65; Lima, \$2.15@2.30.

SEEDS—Rye, 2c@2 1/2 per lb; Hemp, 3 1/4@4 1/4; Canary, 4 1/4@4 3/4 for imported; do California, nominal; Flaxseed, 2 1/2@3 1/4; Alfalfa, 8 1/4@9c; Caraway, 7 1/4c; Mustard, 2 1/2@2 3/4 for yellow; brown do, 2 1/2@2 3/4 for Native and 2 1/2@2 3/4 for Triest.

HAY—Wild Oat, \$8.50@10 per ton; Wheat and

Oat, \$9@11.00; Barley, \$7@9.50; Wheat, \$9@12.00; Clover, \$7@9.50; Allalla, \$8@9.50; Compressed, \$8@11.00.

STRAW—Quotable at 35@42 1/2 per bale.
HOPS—Quotable from 17@20 per lb for new.
RYE—Quotable at 90@92 1/2 per cdt.
DRIED PEAS—Largely nominal.
BUCKWHEAT—Quotable at \$1.45@1.50 per cdt.

Mill Products.

There were no quotable changes in prices during the past week. Bran and Middlings have ruled firm.

BRAN—From \$16.50@17.50 per ton.
MIDDINGS—From \$19@22 per ton.
GROUND BARLEY—From \$17.00@18.00 per ton.

ROLLED BARLEY—From \$17.00@18.00 per ton.

CHOPPED FEED—From \$17.50@18.50 per ton.
FEED CORNMEAL—From \$22@22.50 per ton.
CRACKED CORN—From \$23@23.50 per ton.
OILCAKE MEAL—From \$32.50@35 per ton.

FLOUR—Family Extras, \$3.65@3.75 per bbl.; Bakers' Extra, \$3.50@3.60; Shipping Superfine, \$2.60@2.90.

VARIOUS—Cash prices per 10-lb. sks.: Cracked Wheat, 3 1/2c per lb.; Rye Flour, 3 1/4c; Rye Meal, 3c; Buckwheat Flour, 5@5 1/4c; Oatmeal, 4 1/4@5c; Oat Groats, 5c; Hominy, 4 1/4@4 3/4c; Rice Flour, 7 1/4c; Farina, 4 1/4c; Pearl Barley, 4@4 1/4c; Split Pea, 5 1/2@5 3/4c; Rolled Oats, 5c; Buckwheat Groats, 8 1/4c; Graham Flour, 3c; Normal Nutrient, \$3 per case 1 doz. 1-lb. tin cans; Breakfast Delight, \$3 25 doz. 4-lb. pkgs.

Vegetables.

Onions have further advanced, some even selling slightly above the outside quotation. The receipts were only 333 sacks. Sweet Potatoes are higher, and choice Burbanks were quite steady. The general price for Tomatoes is 25c per box.

ONIONS—From \$1.05@1.10 per cdt.

POTATOES—Early Rose, 35@45c per cdt in sks; Burbanks, 40@55c for river; do San Leandro, 50@75c; do Salinas, 75@90c; Sweet, \$1@1.10.

Various—Green Peas, 1 1/2@2c per lb; String Beans, 50@75c per sk; Lima do, 2@2 1/2c; Cucumbers, 25@35c per box; Pickling do, \$1.50 per 100 lbs. for No. 1 and 60c for No. 2; Summer Squash, 35@40c; Green Peppers, 25@35c; Green Corn, 50@75c for small crates and \$1.50@1.75 for large; do fks, 50@75c; Tomatoes, 25@40c per box; Garlic, 1 1/2@2c per lb; Green Okra, 40@60c per box; Eggplant, 25@40c.

Fruits and Nuts.

There is a large stock of Mexican limes on hand and prices are now low. Bartlett pears sell higher than previously quoted. Berries are lower. Table grapes are weak. There are further arrivals of wine grapes. Dried fruits are moving quite freely at improving prices.

FRESH FRUITS—Strawberries, \$4@5 per cbest for Sharpless; Raspberries, \$4@6; Blackberries, nominal; Huckleberries, 4@5c per lb.

Apples, 35@75c per box; Plums, 20@40c per box as to kind; Bartlett Pears, 75c@1.10; some higher; other Pears, 25@50c; Peaches, 25@50c.

Watermelons, \$5@8 per 100; extra large, higher; Cantaloupes, 75c@1.25 per crate; Nutmeg Melons, 30@40c per box; Crabapples, 25@50c; Black Figs, 25@50c for general offerings; Quinces, 35@50c; Pomegranates, 50@75c.

Grapes—Sweetwater, 25@30c per box; Rose of Peru, 20@35c; Muscat, 20@40c; Malvoise, 20@30c; Malaga, 20@30c; Tokay, 25@40c; Black Hamburg, 20@30c; Royal Isabella, 75c@1.10 per crate; Wine, \$12@14 per ton.

Citrus—Common to good California Lemons, \$1.50@2.50 per box; fancy, Santa Barbara, \$3.50@4.00; Santa Paula, \$3.50@4.00. Limes, Mexican, \$4@5; California Oranges, \$1.50@2.

Various—Bananas, \$1.50@2.50 per bunch. Pineapples—Mexican, \$3@4 per doz; Honolulu, \$2.00@3.

CRANBERRIES—Cape Cod, \$10 per bbl.

DRIED FRUITS—New crop: Bleached Apricots, Royal, 8@9 1/2c per lb and 5@6c for sun-dried; bleached Moorpark do, 9@10 1/2c; Apples, 2 1/2@3 1/2c for qrs and 4@4 1/2c for sliced; do evaporated, 6@6 1/2c; Peaches, bleached, 5 1/2@7c; Pears, 3 1/2@5c; pitted Plums, 4@5c; Nectarines, 4 1/2@5 1/2c; Figs, pressed, 3 1/2@4c; do unpressed, 2@2 1/2c; do sks, 2@3c; Prunes, 5c for the four sizes.

RAISINS—Fresno combination prices crop of 1893: Cluster, \$2 per box; 4 crown London layer, \$1.50; 3-crown do, \$1.30; 4-crown, faced loose, \$1.40; unfaced do, \$1.30; 3 crown, faced, \$1.25; unfaced do, \$1.15; 3-crown, stemmed, loose, \$1.15. Bigs—Three-crown, 4c per lb; 2-crown, 3 1/2c; third grade, 3c; dried grapes, 3c; seedless Muscatel, 3 1/2c; Sultan, 5c. For 50-lb bxs, 1/4c additional.

NUTS—Jobbing prices; Brazil, 9@10c per lb; almonds (new) 10@12 1/2c; Walnuts, California, nominal; do, Chile (new), 9@10c; Pecans, 10@12c; Peanuts, California, 4 1/2@5 1/2c; do, Virginia, 7@9c; Filberts, 10 1/2@11c; Pinenuts, 12 1/2@15c; Cocoa-nuts, \$5@5.50 per 100.

Butter, Cheese and Honey.

The condition of the butter market is better, prices being sustained. Eastern cheese is very plentiful and easy. Honey continues weak, comb being lower. Beeswax is weaker.

BUTTER—Fancy creamery, 28@29c per lb; fancy dairy (rolls and squares), 25@27 1/2c; other grades of fresh, 20@24c; pickled roll, 20@22c; firkin, 18@20c; solid packed creamery, 24@26c.

CHEESE—California, 8@10 1/2c per lb; Young America, 9@11c; New York cream, nominal; western, 11@13c.

HONEY—New: Comb, water white, 8 1/2@10c per lb in 1-lb frames; extracted, 5 1/2c for water white and 5@5 1/2c for amber.

BEESWAX—From 22@23 1/2c per lb.

Poultry and Eggs.

Hens are higher, also young roosters. Broilers are very weak. Ducks and turkeys are lower. Ranch eggs are very firm, sales of selected being reported as high as 46c per doz.

POULTRY—We quote Californian: Hens, \$5.50@7.00 per doz; Broilers, \$2.00@2.50 for small and \$2.50@3.00 for large; Roosters, \$4.50@6.00 for young and \$5.00@6.00 for old; Geese, pair, \$1.50@1.75; Ducks, \$3.50@5.50 per doz; Turkeys, live, 16@17c per lb for Hens and 17@19c for Gobblers; Pigeons, \$1.25@1.50 per doz.

EGGS—California, 18@27 1/2c per doz for store

and 30@35c for ranch; Eastern, 17@22c, some extra, 23@24c.

Provisions.

The overland receipts reported yesterday included 45,500 lbs. Hams and Bacon and 49,100 lbs. Lard. Hams were easy and Bacon firmer.

CURED MEATS—Hams—Eastern, sugar-cured, 14@14 1/2c per lb; A—1—C, 14 1/2c; California, 13 1/2c. Bacon—Eastern, extra light, 19@20c per lb; medium, 15c; light do, 15 1/2c; light, 17c; light clear, 17 1/2c; light medium, boneless, 16 1/2c.

Pork—Extra prime, \$16.00@16.50 per bbl; prime mess, \$17.00@18.00; mess, \$23.00@24.00; extra clear, \$26.00@27.00; clear, \$25.00@26.00; pigs' feet, \$12.50; hf bbls, \$6.50.

Beef—Mess, \$7.50@8.00 per bbl; extra mess, \$8.50@9.00; family, \$11.00@12.00; extra do, \$12.50@13.00; California smoked, 10@10 1/2c.

Wool, Hides, Etc.

The receipts of Wool yesterday were 246 bales. The Eastern markets have been shaping a little better for the selling interest, but locally there has been no improvement.

WOOL—Prices are quotable as follows: California—Spring, year's fleece, 8@9c per lb; 6 to 8 months, 8@10c; Foothill, 9@12c; Northern, 12@14c; Extra Humboldt and Mendocino, 12@13c. Nevada—Choice and light, 12@14c; heavy, 8@10c. Oregon—Eastern, choice, 13@15c; poor, 7@9c; do Vallev, 12@15c.

HIDES AND SKINS—Dry Hides, sound, 5@6c per lb; Kip and Calf, 6c. Heavy Salted Steer, sound, do, 4 1/2c; medium, 4c; do light, 3c. Salted Cows, 3c. Salted Kin, 4c. Salted Calf, 6c. Salted Veal, 4c (all culls 1/2c less). Long Wool Pelts, 75c each; medium do, 40@60c; short do, 25@40c; shearling, 10@20c. Deerkins, summer, 25@30c per lb; do medium, 15@20c; do winter and long-haired Skins, 5c. Goat-skins, prime and perfect, 30@50c each; damaged, 10@15c; Kids, 5@10c.

TALLOW—Refined, 6c per lb; No. 1 rendered, 4 1/2c; country, 4c; grease, 2 1/2@3 1/2c.

San Francisco Meat Market.

We quote wholesale prices as follows:
BEEF—No. 1 Steers, 5c per lb and 5 1/2c for prime; No. 2, 4@4 1/2c; No. 3, 3 1/2@4c.

VEAL—From 5@6c per lb for large; choice Dairy Calves higher.

MUTTON—From 4 1/2@5c per lb; Lamb, 6 1/2@7 1/2c.

HOGS—Hard, heavy to medium, 5@5 1/2c per lb; Stock, 4 1/2c.

The Dried Fruit Market.

Following is the bulletin of the Santa Clara Fruit Exchange for the current week:

SAN JOSE, Cal., Sept. 20, 1893.

APRICOTS.—There has been a constantly rising market on this fruit since the opening of the season. The Exchange has made sales both at low and good prices. For the present it is not accepting orders, believing it to be best to ascertain about the amount remaining in the bands of growers, and its average quality before accepting any offers. All stockholders having apricots still on hand are requested to report the amount promptly to the Exchange, which will then dispose of them to the best advantage at the time. The Exchange is unwilling to make any quotations at this time.

Peaches may be quoted at 6 to 7 1/2 cents for the early varieties. There has been an active demand, but the Exchange having sold all that were on hand for delivery, has accepted no offers for some days. We advise those having peaches for sale to concentrate them in the Exchange as rapidly as possible.

There is beginning to be demand for pears, silver prunes, nectarines and pitted plums, but we can only give nominal quotations which we do not consider very reliable or permanent: Pears, 7 to 7 1/2; silver prunes, 5 to 6 1/2; nectarines, 5 1/2 to 7; pitted plums, 5 to 6 1/2.

On all these goods the best way is to deliver them to the warehouse of the Exchange, with such limitation on price as the owner may determine, and let the Exchange do the best it can with them.

PRUNES.—A very active demand exists for prunes which can be delivered and shipped in September. There have evidently been considerable quantities contracted for September delivery, of which the contractors are not in possession, but must buy. The price of these prunes will be determined by the number of these "shorts;" if the number is large a reasonable advance may be expected for the remainder of the month. The only way to determine the matter is to concentrate the prunes in the hands of the Exchange, and have them ready for any advance that may come. If there is no advance they can be promptly sold on the basis of 5 cents for equal quantities of the four sizes, which is 1/4 better than is obtainable for October delivery, at present.

It is not the policy of the Exchange to make public its sales, or the prices obtained. These bulletins profess only to give the general state of the market, and are uncolored, and as nearly exact as nearly exact as we can make them.

The Exchange does not make any public prophecies, or give any public advice as to sales. A dispatch which appeared in the telegraphic news to the effect that the Exchange had issued a special bulletin predicting an immediate advance in prunes was of course an error. No such bulletin was issued. When some evidence appeared that a sudden demand might arise for September prunes, an official of the Exchange promptly gave the information to a reporter of a local paper, in order that if any advance did come the public might get the benefit of it.

In regard to sales of fruit entrusted to it, the Exchange has a two-fold duty; first to see that farmers obtain for their fruit whatever the market will warrant, and second to make sure that enough of the product is sold at the best rates attainable, to ensure a reasonable supply of funds to enable growers to pay help and other pressing bills. We think both these duties are being performed to the satisfaction of those whose fruit we sell, and who are really the only ones concerned.

SANTA CLARA COUNTY FRUIT EXCHANGE.

Sales of California Fruit in the East.

CHICAGO, September 19.—Porter Brothers' Company sold at auction to-day eight cars of California fruit at the following prices: Tokay Grapes, \$1.90@4.05; half crates Tokay Grapes, 70c@1.65; half crates Malvoise Grapes, \$1.60@1.70; half crates Muscat Grapes, 65c@1.15; Bartlett Pears, \$1.90@2.50; cat Grapes, 65c@1.15; Bartlett Pears, \$1.90@2.50; half boxes Bartlett Pears, \$1.30; Beurre Hardy Pears, 60c@1.15; Howell Pears, \$1.60@1.65; Doyenne

Pears, \$1.30; Onondaga Pears, \$1.30; Duchesse Pears, \$1.15; Gros Pears, \$1.35@1.45; German Prunes, \$1.15@1.20; Egg Plums, 75c@1.20; Fellenberg Prunes, 60c@1.05; Silver Prunes, 50@80c; Piquet's Late Peaches, 65c@1.10; Peaches, 55c@1.05; Orange Cling Peaches, 80c@90c; Nectarines in crates, 65c@1.10; in boxes, 70c.

NEW YORK, September 19.—Porter Brothers' Company sold at auction to-day four cars of California fruit at the following prices: Half crates Tokay Grapes, \$1.05@1.35; half crates Assorted Grapes, \$1.15@1.30; half crates Malvoise Grapes, \$1.25@1.35; half crates Malvoise Grapes, 95c@1.25; half crates Muscat Grapes, 70c@1.20; half crates Purple Damascus Grapes, 90c; half crates Rose de Peru Grapes, 45@80c; half crates Cornichon Grapes, 60c; Bartlett Pears, \$1.35@2; Beurre Hardy Pears, 80c@85c; Pears, 80c@90c; Hungarian Prunes, \$1.15@1.70; German Prunes, \$1.50; Silver Prunes, \$1.35; Coe's Golden Drop Plums, \$1.30; Bradshaw Plums, \$1; French Prunes, 80c@85c; McDevitt's Late Peaches, 55c@80c; Salway Peaches, 35c@70c; Peaches, 30@50c; George's Late Peaches, 40@45c.

Boston, September 19.—The Earl Fruit Company sold California fruit at auction to-day as follows: Tokay Grapes, \$2.75@3.00; half-crates Tokay Grapes, \$1.15@1.50; some bad, 75c; Muscat Grapes, \$1.30@1.75; Purple Duane Plums, \$1.40@1.60; Bartlett Pears, \$1.30@2; Beurre Clairgeau Pears, \$1; McDevitt Cling Peaches, 70c@85c; Susquehanna Peaches, 65c@85c; Salway Peaches, 70c@80c; Late Crawford Peaches 60c@75c; Albright Peaches, 75c; half-crates Tokay Grapes, \$1@1.40.

CHICAGO, September 19.—The Earl Fruit Company sold California fruit to-day at auction as follows: Tokay Grapes, \$1.9@2.10; some small, 80c; Muscat Grapes, \$1.40@1.50; half-crates, Muscat Grapes, 60c@1; Malaga Grapes, half-crates, 70c@90c; Bartlett Pears, \$1.90@2; Beurre Clairgeau Pears, \$1.20@1.30; Duchesse Pears, \$1.15@1.25; Beurre Hardy Pears, \$1@1.10; White Doyenne Pears, \$1.10; Onondaga Pears, \$1.10; Orange Quinces, \$1.10@1.15; German Prunes, \$1.10@1.20; McDevitt Cling Peaches, 85c@1; George's Late Peaches, 80c@90c; Albright Peaches, 70c@85c; Lemon Cling Peaches, 75c@80c.

NEW YORK, September 19.—The Earl Fruit Company sold California fruit to-day at auction as follows: German Prunes, \$1.40@1.60; Gros Prunes, \$1.20@1.30; Kelsey Plums, 75c@1; Tokay Grapes, half-crates, \$1; Peaches, 35c@60c.

</

California Crops.

[Summary of Report of Observer James A. Barwick, for Week Ending September 18, 1893.]

Sutter County (Yuba City)—Cloudy weather is retarding the ripening of crops. Barley is being thrashed and buckwheat is ripening. The early showers have given our farmers better opportunities for working over rough summerfallowed land and to prepare the same for seeding. Some early seeding has already begun on adobe lands where much of a rain would make it bad for grain sowing.

Butte County (Biggs)—The rainfall last week amounted to .52 of an inch, doing some slight damage to fruit on the Rio Bonito which is in process of drying. (Gridley)—It has been so cloudy, cool, dull and showery that fruit has not dried, and orchards along the Feather river have had to rustle at times to protect drying fruit from the rains. Grapes and prunes have been injured by rot. Early peaches have dried well and are mostly cared for. Late peaches are still out, and those on the trays may have become mildewed. Prunes are not so apt to mildew, and if they do, the second dipping in boiling glycerine or syrup remedies that. (Palermo)—The rainfall thus far is half an inch. Tokay grapes are in fine condition and shipping will soon commence. Harrowing and grain sowing on summerfallow will be pushed until finished. A large quantity of hay was down during the recent rains, but none is reported damaged. There has been just enough rain thus far to spoil the dry feed in the fields, and from this time until green grass gets large enough to eat, stock will find very poor picking. (Oroville)—The pomegranates are very fine this season and are unusually large.

Yuba County (Wheatland)—The rain the past week slightly damaged the hay. Hop picking is nearly completed. The average promises to be extraordinary and the quality fine.

Placer County (Lincoln)—Grapes are being shipped in carload lots from this place. (Newcastle)—The shipment of green fruit from this point for the month of September will probably exceed 5,000,000 pounds as against less than 3,000,000 for the same month last year. (Tahoe)—A terrific rain and snow storm set in Monday the 10th and there were two inches of snow on the ground on Tuesday morning. All the vegetation was frozen to the ground. The oldest inhabitants now predict a mild winter. (Auburn)—It was feared the rainstorm had done considerable damage to the grape crop, but owing to the rapidly drying north wind which followed the rainstorm very little damage resulted.

Sacramento County—Forty tons of fine peaches were gathered on P. C. Drescher's peach tract at Orangevale off of four-year-old trees. The rain did no damage worthy of note. The grapes will color better and mature earlier than if no rain had fallen. (Sacramento)—Hop picking nearly over, with a large yield of good quality.

Yolo County (Blacks)—The farmers are busy summerfallowing. (Madison)—Farmers now busily engaged in seeding summerfallowed land; one man has finished seeding 1000 acres. The early rain is hurrying up the farmer in seeding. (Dunnigan)—The north wind is not generally a welcome visitor, but the grape-growers are glad to see it. (Davisville)—So far as has been ascertained, the damp weather and occasional sprinkles have resulted in no damage to dried fruit. (Winters)—The grain farmers are busy harrowing and seeding their summerfallowed lands. (Guinda)—Three hundred pounds of pears picked from three small trees. The prune and grape crops will be exceedingly large ones. (Woodland)—Thrashing machines are now at work in the buckwheat and clover fields along the Sacramento river.

Solano County (Fremont)—Almond-picking will begin next week. (Rio Vista)—Quite a number of ranchers are building sheds in which to store their grain and save warehousing the same until a better price is obtainable.

Sonoma County (Petaluma)—Hop-picking is progressing finely in all the hop yards of the county and are turning out fairly well. The peach crop in Alexander valley has all been harvested. (Santa Rosa)—Grape-picking begun in the northern part of the county. One hundred bales of hops came to this city from the Leggett yard. The heavy rains of the previous week have done considerable damage to the vineyards and it is feared on the bottom lands fifty per cent of the Zinfandel was ruined, says the *Healdsburg Tribune*. The Malvoise were also damaged to a great extent, but there are no fears entertained for much loss of the Golden Shastas and other varieties. The indications are favorable to the viticultural interests in the vicinity of Geyserville.

Seeds, Plants, Etc.

OAK LAWN NURSERY.

90,000 First-Class Fruit Trees
AT LOWEST PRICES.
MUST BE SOLD.
PLEASE WRITE AT ONCE.

HARRY E. HULBERT,
211 THIRD STREET,
SANTA ROSA, - - SONOMA CO., CAL.

Santa Rosa Nurseries.

AN IMMENSE AND WELL
ASSORTED STOCK.

TREES TRUE TO NAME—Warranted clean and raised without irrigation.
PEARS AND PRUNES at about HALF USUAL PRICES till my surplus is sold.
Price List mailed free.

Address R. W. Bell, Santa Rosa, Cal.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrabalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond
Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

ORANGE, LEMON & CITRON TREES.

If you have a Lemon or Orange grove, or wish to start one, remember that the success of your grove depends on the trees you plant. Common seedlings will give you a poor crop. Remember now that you are in time! If you will get your plants from this island, which, in point of fact, is the real citrus producing region in the world, in the course of time you will have a very prolific grove of the best Sicilian varieties. We only ship trees three years old, budded on the sour stock. Real trees and not common seedlings. Our leading varieties are: ORANGE:—Mountain, Aetna, Aderno, Paterno, Blood, Oval and Mandarin. The LEMON:—Messina, Mountain, Aetna. The CITRON:—Citrus Medica, Spadafara, Diamante, Perettone, Lemocella, Turk's Head, Lemanziana, Paradise, Etc. The fruit of the above-mentioned varieties is the one largely exported in boxes to the American markets from this island. We have made several successful shipments of plants to California, Florida and Louisiana. Special care in packing. Give us an order for one case containing 100 or 200 assorted trees. Remember that every dollar you lay out on Sicilian trees is a one hundred dollar bill you have gained in future. Apply:

G. SGROI & CO., Catania, Sicily.

OLIVE TREES.

ALL KINDS OF
Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,
Pomona, Cal.

Pepper's Nurseries.

ESTABLISHED IN 1859.

For Sale at Low Rates, a General Assortment of Hardy Deciduous Fruit Trees.

I do not buy trees to sell; what is offered is grown in my own grounds and free from scale bugs. No scale bugs of any kind to be found in the Nursery. No agents employed. Order direct from the nursery and procure your trees true to label. Order early, as early planting is the most successful with deciduous trees. Prices furnished on application.

Address W. H. PEPPER, Petaluma, Cal.

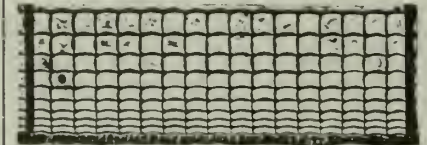
AN INVITATION

IS EXTENDED TO ALL INTERESTED TO VISIT THE SAUSAL FRUIT FARM DURING THE FRUITING SEASON, WHERE ALL VARIETIES ARE TESTED THAT ARE GROWN AT

NAPA VALLEY NURSERIES.

AN INSPECTION OF THE NURSERIES ALSO SOLICITED. CLEAN STOCK, UNIRRIGATED, PROPAGATED FROM BEARING TREES.

LEONARD COATES, NAPA, CAL.



Why Not Advertise Prices?

Many inquirers ask. Well there is so much to say about this fence that we can't attempt to tell it all in a small ad. For years we have published a monthly paper, devoted wholly to the Page Fence. This is sent free with descriptive price list to all inquirers.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.



1838. 55 YEARS. 300 ACRES. 1893.
NEW APPLES, PEARS AND NUTS
Starr, the largest early apple. Paragon, and other valuable sorts. Lincoln Coreless, Seneca and Japan Golden Russet Pears in collections at reduced rates. NUTS—Parry's Giant, Pedigree Mammoth, Paragon and other chestnuts. Walnuts—French, Persian, Japan, English and American. Pecans, Almonds and Filberts. ELEGANT Longipes, Hardy Oranges, Dwarf Rocky Mt. Cherries, free from insects, black knots or other diseases. Small Fruits, Grape Vines, Currants, Etc. SHADE TREES—Immense stock of Poplars and Maples, Ornamental Shrubs and Vines.
ILLUSTRATED DESCRIPTIVE CATALOGUE FREE.
POMONA NURSERIES. WILLIAM PARRY. Parry, New Jersey.

With 23 years of experience in the Watch, Jewelry and Diamond Business, I am in a position to supply the public with goods in the above line at the very lowest figures. Shall be pleased to give estimates on anything appertaining to the line, especially American watches. Goods sent C. O. D. with privilege to examine on receipt of forwarding charges.

J. H. PIERSON,

126 Kearny Street, : : : : : San Francisco.



WEATHER
VANES

COFFEE
MILLS

For the Cheapest
and Best
SCALE

Of any style known
to the trade
Address

Grain & Store
TRUCKS

GROCERS'
FIXTURES

HOWE SCALE CO.

75 Front St., Portland, Or. 3 & 5 Front St., San Francisco.

GRANGERS' BUSINESS ASSOCIATION, SHIPPING AND COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.

Full Cargoes of Wheat furnished Shippers at short Notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

A. M. BELT, Assistant Manager.

HAMILTON FRUIT GRADER.

(PATENTED MAY 13, 1890.)

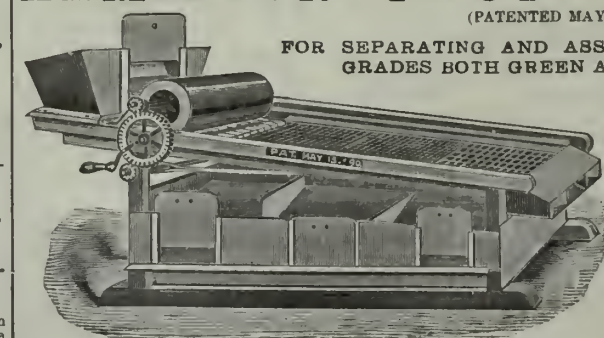
FOR SEPARATING AND ASSORTING IN DIFFERENT GRADES BOTH GREEN AND DRIED FRUITS.

It is Simple, Durable and Efficient.

It has become the leading Fruit Grader of California. Col. Hersey has ordered three of these Fruit Graders this season. Send for catalogue and testimonials.

—A VARIETY OF—

Fruit Cars, Transfer Cars, Turntables and Dipping Baskets
ALWAYS ON HAND.



MANUFACTURED AND FOR SALE BY

W. C. HAMILTON,

SAN JOSE..... CALIFORNIA.

How the Earth Will Die.

M. Camille Flammarion says that, in all probability, notwithstanding all circumstances which threaten it, our planet will die, not of any accident, but a natural death. That death will be the consequence of the extinction of the sun, in twenty million years or more—perhaps thirty—since condensation in a relatively moderate rate will give it on one hand seventeen million years of existence, while, on the other hand, the inevitable fall of meteors into the sun may double this number. Even if you suppose the duration of the sun to be prolonged to forty million years, it is still incontestable that the radiation from the sun cools it, and that the temperature of all bodies tends to an equilibrium. Then the earth and all the other planets of our system will cease to be the abode of life. They will be erased from the great book, and will revolve black cemetaries around an extinguished sun.

Will these planets continue to exist even then? Yes, probably, in the case of Jupiter and perhaps Saturn. No, beyond a doubt, for the small bodies, such as the Earth, Venus, Mars, Mercury and the moon. Already the moon appears to have preceded us toward the final desert. Mars is much further advanced than the earth toward the same destiny. Venus, younger than us, will doubtless survive us. These little worlds lose their elements of vitality much faster than the sun loses its heat. From century to century, from year to year, from day to day, from hour to hour, the surface of the earth is transformed. On the one hand, the continents are crumbling away and becoming covered by the sea, which insensibly and by slow degrees tends to invade and submerge the entire globe; on the other hand, the amount of water on the surface of the globe is diminishing. A careful and reasonable calculation shows that by the action of erasure alone all the land on our planet will be covered by water in 10,000,000 years.

Big Pumping Feat.

For 16 months pumps have been at work drawing the water from Lake Angeline, near Ishpeming, Mich., and the water is all gone. The lake lies near the southern part of Ishpeming, covering 160 acres, and was 70 feet deep in the middle.

Under the bed of the lake lie the largest iron ore deposits ever discovered. The ore was discovered some ten years ago, when a diamond drill was set on the frozen surface of the lake one winter and a hole drilled 600 feet down below the bed of the pig iron. Large ore bodies were cut by the drill, and the three mining companies owning the ground under the lake began devising means to secure this valuable ore.

Work was begun last spring before the snow left the ground, when a rotary pump with a capacity of 20,000 gallons per minute was anchored in a barge in the center of the lake and began pumping water into a big flume elevated 20 feet above the surface of the water. The pump has been going day and night, allowing for occasional breakdowns, and the water has only recently been drained all out. Now, however, a serious question remains to be settled. There is a bed of mud from 2 to 40 feet deep over the bed of the former lake. This mud is kept moist by underground springs, from which the water bubbles up. Big tubular stand-pipes, pierced with myriads of small holes hardly larger than a needle's point, are being forged into the mud, and into these the water filters and is pumped out. The surface of the bed of the lake is more treacherous than quicksand, for any heavy object thrown on it is quickly engulfed. Several narrow escapes from drowning have taken place. It will take 16 months longer to get rid of the mud.

A SUBSTITUTE

Advantages of this Paper for a Drying Surface.

ABSOLUTELY ODORLESS.

WATER, ACID AND ALKALI PROOF.

WILL IMPART NO TASTE NOR ODOR TO FRUIT.

CHEAP AND DURABLE.

ITS BRILLIANT BLACK SURFACE, which absorbs the heat, drying both sides of fruit at the same time, and rendering the labor of turning unnecessary.

E. G. JUDAH, Agent, 221 South Broadway St., Los Angeles.



FOR TRAYS!

Unequaled for

DRYING GRAPES.

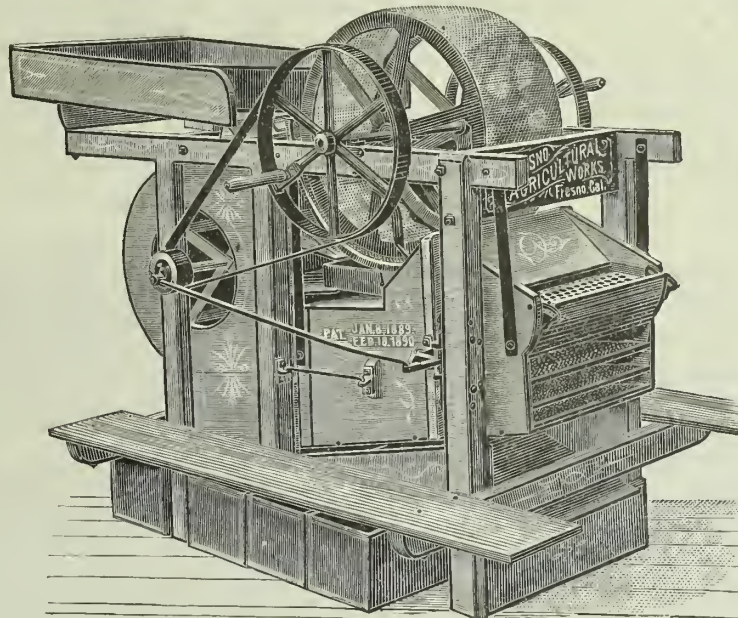
Write for

SAMPLES AND CIRCULAR

Paraffine
Paint Co.

116 Battery St.

SAN FRANCISCO



SEND FOR CATALOGUE OF RAISIN MACHINERY TO
FRESNO AGRICULTURAL W'KS, FRESNO, CAL.

ONLY 25 YEARS OLD
AND A GIANT!

THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because It is the best for Man or Beast.
- 2d—Because It is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.

DEWEY & CO.
AMERICAN AND FOREIGN PATENT SOLICITORS
ESTABLISHED 1860.
OFFICE OF THE "Mining and Scientific Press" Pacific Rural Press
No 220 Market St.
TAKE ELEVATOR No 12 FRONT ST.
SAN FRANCISCO, CAL.

Send for Price Lists

OF GUNS

And all Articles used by Hunters and Anglers.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.



GUNS SENT ON TRIAL.

OLD GUNS TAKEN IN EXCHANGE.

Commission Merchants.

ALLISON, GRAY & CO.,

501, 503, 505, 507 & 509 Front St.,
And 300 Washington Street, SAN FRANCISCO.

—GENERAL—

Commission - Merchants,
GREEN and DRIED FRUITS,
Poultry, Eggs, Game, Grain, Produce and Wool.

P. STEINHAGEN & CO.



404 & 406 DAVIS ST. S.F.

MOORE, FERGUSON & CO.

WOOL, GRAIN, FLOUR

—AND—

General Commission Merchants,

310 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

LINDSAY & CRAIG,

Crocker Building.....San Francisco.

Mortgages Bought, Loans Negotiated.

Several buyers on hand for desirable Fruit and Grain Ranches.

GRANGERS' BANK
OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 187



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 800,000
Dividends paid to Stockholders.... 720,000

OFFICERS.

A. D. LOGAN.....President
I. C. STEEL.....Vice-President
ALBERT MONTELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary
General Banking. Deposits received, Gold and Silver.
Bills of Exchange bought and sold.
Loans on wheat and country produce a specialty.
January 1, 1893. A. MONTELLIER, Manager.

C. H. EVANS & CO.,

(Successors to THOMSON & EVANS.)

110 and 112 Beale Street, S. F.
MACHINE WORKS,
Steam Pumps Steam Engines
And All Kinds of MACHINERY.



DEEP WELL PUMPS



FOR THE BEST IMPROVED
ARTIFICIAL LIMBS
ADDRESS
MENZO SPRING,
9 Geary St.
SAN FRANCISCO, Cal.
OFFICE 5.

HEALD'S

BUSINESS COLLEGE.

24 POST STREET.....SAN FRANCISCO.
FOR SEVENTY-FIVE DOLLARS

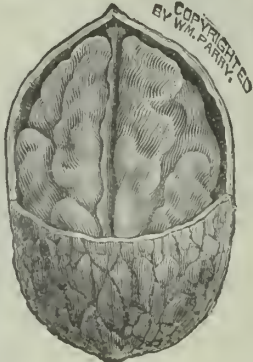
This College instructs in Shorthand, Type-Writing, Book-keeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR. E. P. HEALD, Pres. O. S. HALEY, Sec.

CALIFORNIA If you want to know about California and the Pacific States, send for the PACIFIC RURAL PRESS, the best Illustrated and Leading Farming and Horticultural Weekly of the Far West. Trial, 50c for 3 mos. Two sample copies, 10 cents. Established 1870. DEWEY PUBLISHING CO., 220 Market St., San Francisco.

WE GIVE ESPECIAL ATTENTION TO

Fruit Trees! Deciduous Fruit Trees!**ALEXANDER & HAMMON'S**

Rio Bonito Nurseries, Biggs, Butte Co., Cal.

KAGHAZI**PERSIAN****SOFT SHELL WALNUT!**

Our Stock of TREES and VINES is Most Complete in EVERY CLASS of Fruits.

Early Shipping Plums a Specialty. Large Stock of Thompson's Seedless Grapes

SHIPPING, CANNING and DRYING Fruits of all Kinds.

The Best Assortment of RAISIN and TABLE GRAPES in California.

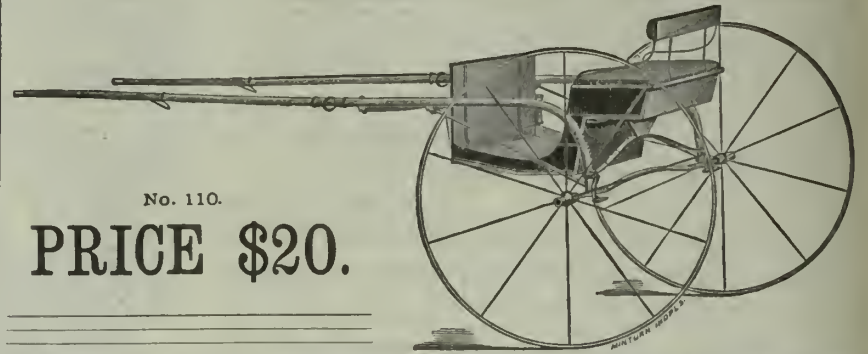
SPECIAL PRICES FOR TREES IN LARGE QUANTITIES.

DURING the last three years, trees grown on the FEATHER RIVER BOTTOM LANDS, at RIO BONITO, BUTTE COUNTY, have been much sought after, and the demand for them is increasing all over the State where they have been planted. Owing to the peculiar adaptability of the soil and climate of this section for growing nursery stock, the trees making a very large and well-furnished system of root growth, and maintaining a correspondingly strong and vigorous top, maturing the wood thoroughly, we are enabled to supply our patrons with the best of trees, healthy in every respect, entirely free from insect pests, and in perfect condition for transplanting.

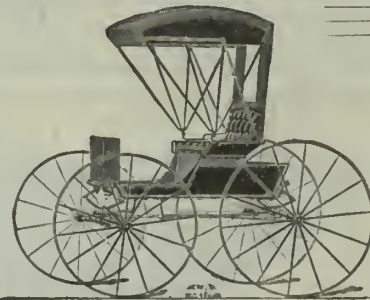
If You Are Going To Plant Trees, Write Us; Our Answer Might Interest You.

ALEXANDER & HAMMON,

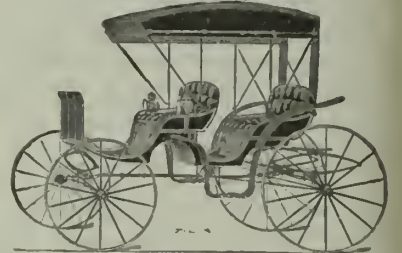
BIGGS, BUTTE COUNTY, CALIFORNIA.

50% SAVED.

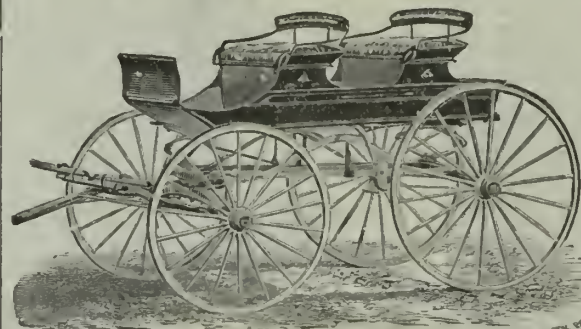
No. 110.

PRICE \$20.**HARNESS, \$7. BUGGIES, \$75. SURREYS, \$130.**

No. 60. Price \$80.



No. 201. Price \$195.



No. 10 Cal. 4 Spring,

1 1/2 Concord Axle,

1 1/2 Steel Tires,

This wagon is made here by us of Select Timber.

PRICE, \$110.**TOP, Extra, \$30.**WRITE FOR
CATALOGUE
OR CALL**CALIFORNIA WAGON & CARRIAGE CO.,**

36 1/2 to 44 1/2 FREMONT STREET

SAN FRANCISCO, CAL.

SEEDERS OF ALL KINDS.

SUPERIOR DRILLS, DEERE FORCE FEED SEEDERS, PACIFIC, CYCLONE, GEM and CAHOON BROADCAST SEEDERS.

IMPROVED SUPERIOR SHOE DRILL.
Built With 12, 14, 16 and 20 Shoes.SUPERIOR HOE DRILL.
Built With 12, 14 and 16 Hoes.

The frame of these machines is made of a single bar of high grade angle steel, with solid cold rolled steel axle, steel roller bars and steel draw bars. The corners are bent cold and are reinforced with a steel plate, making the frame very strong.

DEERE IMPLEMENT CO.,

305 and 307 MARKET ST., SAN FRANCISCO.



Thompson's Seedless Grape.

We hope our readers will not conclude that our photographer has caught the two spies who looted the vineyard at Eschol, for the picture certainly suggests such a capture. For a fact, however, the engraving simply shows two Sutter county lads laden with the fruit from a single vine of Thompson's Seedless grape, a variety not unknown to readers of the RURAL. It has, however, such an interesting history, and has recently been so largely planted in the raisin regions of California, that we give the facts at the risk of repetition.

This variety was brought to this State from Ellwanger

& Barry's nurseries in Rochester, N. Y., about 1872, and was by them said to be from Constantinople, and named Lady Decoverly. No work on European grapes accessible here has any grape by that name, and the Eastern importers can give no further information about it. The vines were planted by Mr. Thompson, of Yuba City, and for a long time impressed no one with its value because it was short-pruned, as were the other vines around it, and such treatment prevents its hearing. By chance one vine

was neglected and it immediately bore a vast amount of very desirable fruit. Soon afterward other grape-growers around Yuba City began to secure cuttings from Mr. Thompson, and one grower, Mr. J. T. Onstott, set about systematically to propagate it for sale and to convince the public of its value. In this enterprise he was very successful. As the true name of the grape seemed beyond reach, the Sutter County Horticultural Society renamed it Thompson's Seedless, a title which it still bears. It has recently been widely planted and a considerable acreage of it is now coming into bearing.

Dr. Eisen, in his "Raisin Industry," gives this description of the grape: Oval, greenish yellow, as large as Sultana, seedless, with thin skin, good but not strong flavor, and without that acid which characterizes the Sultana grape and raisin. The bunches are large or very large, and the vine is an enormous bearer. When sundried and cured these raisins are bluish and dark like Muscats, but narrower and more tapering and only a quarter the size. It ripens evenly, the whole crop coming in with the first ripe Muscats, or possibly earlier. Owing to its smaller size it dries quickly, and the crop can be handled before the weight of the Muscat season comes in.

There is now some difference of opinion as to the desirability of the grape for uses to which cooks put the Sul-

tana, but as a sweet, seedless raisin it seems likely to make its own way as soon as its desirability is fully recognized.

The Meeting of the State Grange.

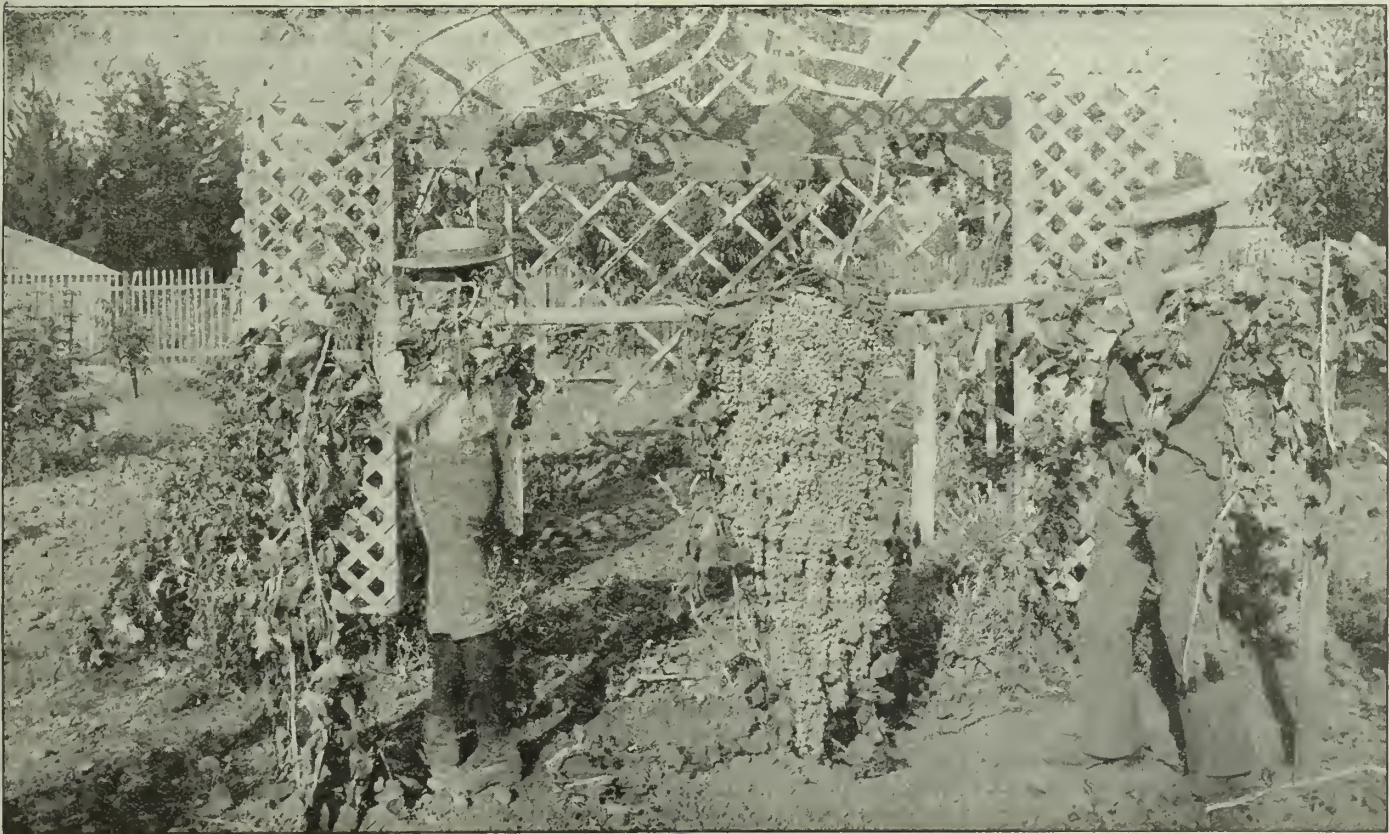
On Tuesday the State Grange will assemble in the beautiful and thriving city of Petaluma. It is an eminently desirable place for such an assemblage, and we anticipate a meeting of much pleasure and profit. We would urge all members of the order who can possibly do so, to take this brief and inexpensive outing and gather to themselves strength and encouragement from the proceedings they will participate in and the friendships they will renew or

The Slow Freight Evil.

The fruit-shippers are putting lots of rods in pickle for the railway managers this winter, though of course it is doubtful whether they can land any of them on the hides of those agile individuals. Slow time and irregularity seem to be working general disaster. E. L. Goodsell says: "I attribute the low state of the market chiefly to the condition of the fruit, which has been on account of the fact that cars are from 13 to 15 and sometimes 16 days in transit, showing that railroad service is thoroughly demoralized." The Earl Fruit Co. are even more outspoken. They say: "The wretched railway service is seriously

hindering the prompt delivery of California fruit, and hardly a sale of the week has been called as advertised. While the offerings are not very heavy, there is a serious dullness in the trade and much complaint from dealers on every side. This condition, it is hoped, will soon improve, but we cannot look for satisfactory values on even moderate offerings unless shipments are delivered promptly. Almost all pear stock is coming ripe, and peaches as a rule are very much out of condition."

This is certainly disgrace-



A CENTAL OF GRAPES FROM ONE OF J. T. ONSTOTT'S VINES OF THOMPSON'S SEEDLESS.

make. There are many questions of deep importance to the order and to the general welfare of the farming interests which will arise for consideration, and all will be edited thereby.

Our grange columns are largely occupied this week with affairs pertaining to next week's assembly. The personnel of the accredited delegates, the programme of the week's work, etc., are given and will, we trust, prove of assistance to our readers and promotive of the objects of the assemblage.

The RURAL is deeply interested in the success of the Order of Patrons of Husbandry. From the beginning our paper has labored to advance its best interests and considers them far higher than any individual concern. Such will, we trust, be the general disposition of all who attend the meeting. It is the year for the choice of officers to conduct the affairs of the order for the next two years. It is important that wise counsels and broad ideas of the general good should prevail. Let all make some sacrifices, if need be, to ensure this mastery of the general good, and a large and representative gathering is the prime condition to that end.

A GERMAN has taken out a patent for producing varnish from linseed oil by means of an electric current.

We understand that all the consolation shippers get on complaint is the assurance that the time is "very fair speed for freight." This is the way the railway is encouraging this great and growing interest which has brought so much business to their lines right in these dull times. But the railway gets the freight money all the same whether the grower gets the cost of his boxes or not. And yet such mole-eyed wisdom seems to suit the companies. It is a wonder they don't see that in some of their goose-killing enterprises they chop off their own thumbs.

NEVER before in the history of Davisville, says a correspondent of the Woodland Democrat, when so many men were employed in the immediate vicinity of town as are now working in the prune orchards and vineyards, has there been such good order in town. This speaks volumes of praise in behalf of the class of white men who are glad to accept any kind of decent employment this season.

ARIZONA is happy. The timely and well-distributed rains during the past three months have given an abundance of feed for live stock. Cattle in excellent condition and are being shipped into California at very fair prices. Considering the drawbacks of the past few seasons live stock is in excellent condition.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half Inch (square).....	1.00	2.50	6.50	22.00
One Inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, September 30, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—A Cental of Grapes from one of J. T. Onstott's Vines of Thompson's Seedless. 229.
EDITORIALS.—Thompson's Seedless Grape; The Slow Freight Evil; The Meeting of the State Grange; Miscellaneous, 229. The Week; The Irrigation Convention; Mild Winters and Animal Growth; Two Popular Visitors; Miscellaneous, 230. From an Independent Standpoint, 231.
CORRESPONDENCE.—Those Blessed Bugs Again, 232.
MISCELLANEOUS.—Fighting the Gas-Treatment Patent; Dried Fruit by Water to the East; Russians Viewing Our Irrigation Works; Change of Head at the Baden Stockyards; California Gets Some Lumber Prizes; Scaly Oranges; Sustaining the Raisin Tariff; Direct Shipment of Hops; Farms and Homes of Utah; Highest Mountain in North America; Miscellaneous, 232. Crop Reports, 235.
HORTICULTURE.—Honest Nurserymen; A Retiring Writer's Views of Nurserymen; An Australian's Notes on Leading California Fruits, 233.
THE APIARY.—Bean-Honey Production in California, 234.
SHEEP AND WOOL.—Angora Goat Breeders' Association; A Dealer's View of the Situation, 234.
THE IRRIGATIONIST.—The Irrigation Congress in Los Angeles, 234.
AGRICULTURAL ENGINEER.—How to Build Good Roads, 235.
THE HOME CIRCLE.—Miscellaneous, 236.
DOMESTIC ECONOMY.—Miscellaneous, 237.
YOUNG FOLKS' COLUMN.—Miscellaneous, 237.
PATRONS OF HUSBANDRY.—The Master's Desk; Pescadero Grange; San Jose Grange; New Hope Grange; Sutter County at the State Fair, 238. Secretary's Notes, 239. California P. of H. Directory, 242.
AGRICULTURAL NOTES.—239.
MARKET REPORTS.—241.

BUSINESS ANNOUNCEMENTS.

(NEW THIS ISSUE.)

	PAGE.
Agricultural Implements—Baker & Hamilton.....	244
Nursery Stock—Sacramento River Nursery Company.....	243
Nursery Stock—E. C. Clowes, Stockton.....	243
Horse Blankets—Wm. Ayers & Sons, Philadelphia, Pa.....	242

See Advertising Columns.

The Week.

The Midwinter Fair in this city seems to be advancing with satisfactory strides. Three prominent buildings are now under way, the great electric tower is being constructed, grounds are being prepared for the concessions, four main buildings are under contract, and before long the fifth and last will be in the hands of the builders. Cash to the amount of over \$135,000 is now in the hands of the treasurer from voluntary subscriptions, and money, it is said, is accumulating from concessions and other sources. Much interest is being manifested on all parts of the coast. Those who doubted the enterprise seem to be gaining confidence and a large and creditable affair seems assured.

Unquestionably the fair will prove the greatest advertisement the State has ever had, and will awaken our own people as well as entertain and interest visitors. All should aid toward its fullest success.

Mild Winters and Animal Growth.

The industrial value of the mild winters of California is often suggested, but it is probably not fully appreciated. The horticulturist recognizes it, of course, in his ability to grow fruits which cannot be carried through a cold-climate winter without glass or other protective covering. The stock-grower and dairyman who have worked with housed stock through a long Eastern winter cannot ever forget that long season of disagreeable toil and rejoice that California gives them so little of it. Probably all do not reflect, however, that a climate which allows live stock to comfortably pass the winter in the open air contributes notably and directly to the economic advantage of the grower in the results secured from the feed supplied, and thus makes his work not only pleasanter but more profitable, if investment and market values are similar. The value of good shelter for live stock through severe winters is no longer questioned. The increased thrift of a well-housed animal and its greater product either in live weight or in milk have been so well demonstrated that even the most shiftless farmers of the cold-winter countries do far more for animal comfort than they used to think necessary, and the more enterprising and careful stock-growers have stables which for resistance of low temperature, adequate ventilation without chilling drafts, water supply and thorough cleanliness are models of construction and arrangement. All such investments

have been found wise and to yield satisfactory percentages of increased profit. Without such conveniences and facilities it is not wise to undertake a live-stock industry in a country where snows and ice and sleet and winds, which pierce to the marrow, are winter manifestations.

But in a climate of mild winters the housing of live stock for any considerable part of the time may be neither desirable nor profitable. The following are brief notes of some comparative tests conducted by Prof. J. W. Sanborn of the Utah Experiment Station, which will be read with interest:

During the winter of 1890-91, steers feed in the barn consumed 2375 pounds of food, gained 1.16 pounds per day and required 15 pounds of food for pound of growth. A lot tied up but turned out daily, ate 2337 pounds, gained 1.42 pounds each per day, and required 12.1 pounds food for pound of gain. A lot fed loose in stalls ate 2339 pounds, gained 1.73 pounds per day, and required 10.4 pounds food for pound of gain. A lot in the open air ate 2667 pounds food, gained 1.96 pounds per day, and required 10.1 pounds food for pound of gain.

For 1891-92, a lot in the open air ate 5881 pounds, gained 471 pounds, and required 12.54 pounds for pound of growth. Lot fed in box stalls ate 5033 pounds, gained 349 pounds, and required 14.41 pounds for pound of growth. Lot tied up ate 4295 pounds, gained 219 pounds, and required 19.5 pounds food for pound of gain.

During the winter of 1892-93, lot in box stalls required 16.1 pounds food for pound of gain. Those in the open yard required 18.8 pounds food for pound of growth. Those under open sheds required 20.9 pounds food for pounds of growth.

It will be noticed that the figures for last winter do not arrange themselves in the same order as for the preceding two years. This may perhaps be due to some change in the surroundings or in the character of the winter. It is a notable fact that the interior of the continent is subject to far greater winter changes than is our coast, and it might be that some winters would approach the line where housing becomes profitable.

We present these observations in Utah as matters of interest, and we believe that they afford some measure of our own conditions, but we trust they will not be misapplied. If they should be taken to signify that, in such a climate as ours, it is not desirable to provide protection for stock, it would be a sad misuse of the facts. If the shiftless or careless man should find in them an excuse for neglect, he would seriously err. It is both humane and good business sense to provide protection against the long storms which we sometimes have, and during which the protracted drenching becomes a greater burden upon animal endurance than a much lower temperature with dry air would be. While then for fattening stock as well as for dairy cows it is not desirable to follow continual housing and stall feeding, it is wise to afford good shelter during inclement weather.

And in providing shelter it is desirable that it should be good and effective. There are experiments on record showing that animals in loose sheds may fare better than in the open air. In the Mississippi valley a trial was conducted in a low shed with cracks between the boards and wind circulating beneath the floor. The cattle confined in stanchions having a temperature of ten degrees warmer than those outdoors, were so chilled without exercise as to appear to the eye to suffer more from low temperature than those in the open air. They gained less than those outdoors.

The conclusion seems to be that in good weather cattle will have good appetites and will gain more weight from the food supplied when kept in the open air than they will if stall-fed without exercise. This is but a common-sense conclusion. At the same time no amount of the most balmy air in the world will compensate for scantiness in the feed. To turn out cattle on bare fields, even under the most glorious sunshine, will not cover their ribs nor fill their udders. Our climate is a glorious endowment of our live stock industries, but do not let it be an excuse for neglect or stinginess.

Two Popular Visitors.

California is indebted to the World's Fair for visitation by distinguished people from all over the world. In the agricultural and horticultural lines there has been a procession of the people we read about in the class literature of many countries. They have all apparently been pleased with what they have seen and their reception by the California people. Out of the throng of guests two stand pre-eminent from the fact that they came not merely to see, but to study California, and their stay, covering something like three months, has given them opportunity to become fully informed in the special directions in which they sought information. These two are Fred C. Smith of South Australia and P. J. Cillie of South Africa. They are gentlemen of such genial manners, integrity, earnestness and social excellence that they easily won the friendship of Californians and a welcome to our firesides. The cordiality with which they have been received impressed them with a desire to make manifestation of its appreciation, and just before their departure from the State they entertained their California friends at a banquet in this city, which was a very enjoyable affair. Those partici-

pating were the following: Fred C. Smith, P. J. Cillie, A. T. Hatch, Alfred Holman, E. W. Maslin, B. M. Lelong, Alexander Crow, and Messrs. Fitzsimmons, Isaac, Childlow, Douglass, Thane and Wickson. After a pleasant sojourn of several hours around the festal board, the healths of Messrs. Smith and Cillie were proposed, their virtues extolled and their journeys speeded around the world. We are glad to assure our readers that Mr. Smith has kindly consented to continue his acquaintance with Californians through correspondence in the RURAL columns. He will visit Portland, the British possessions, the Eastern and Southern States, England and the Continent, the Mediterranean region, India, Java and Japan, thence home, employing about a year and a half in his course around the world.

The Irrigation Convention.

We give space on another page to a review of the topics which will in all probability form the leading themes for discussion at the great assembly of those interested in irrigation, in Los Angeles on October 10th. The movement which calls this convention originated beyond our State lines. It is not Californian, but it is an offspring of the great west, and by extension of invitation through the Government to foreign nations, becomes a sort of a world-wide affair. The position of California in the enterprise seems to be that of an exemplar. Having carried irrigation works and irrigation enterprises farther than any of our sister States and Territories, our achievements have become an incentive to the development of the great arid region of the interior of the continent, by the pouring of mountain and subterranean waters through vivifying streams from rivers, reservoirs and wells. To afford all who are interested in these great schemes and enterprises the opportunity to profit by personal inspection of irrigation works and practices, as well as to advance their undertakings by united action, the meetings will be held in California.

The course of the RURAL with reference to such enterprises has always been a conservative one. To us there seems greater danger in hasty and ill-considered undertakings than in too slow progress in desirable directions. We long and labor for the development of the grand west as the country of the future, the home of millions, the surety of the ultimate greatness of this favored land, but the truer the conception of the future of the west, the less will be the impatience and restlessness for its attainment. Even in our own State and on a comparatively small scale we have seen some ill results of legislation and enterprise which aimed to work miracles with desert areas. We have seen considerable portions of the public domain pass into personal ownership on pretexts and pretenses. We have seen thousands of people tricked and despoiled through visionary schemes or by deliberate land and water frauds. If such things have been possible here what greater dangers lie in schemes which are far greater and in the nature of things more obscure and dangerous. Even where the highest and most statesmanlike motives rule, there are dangers in the enterprises themselves if they are sent booming across the face of the desert. The problems involved, the humane considerations connected therewith, the good faith of the country toward coming generations, all these and more, demand the most wise and cautious proceedings on the part of those who address their energies to the development of the west.

But as we look upon it, this the greatest undertaking of the decade, if not of the history of the country, is now advancing along proper lines. California achievements and California experience of success and failure will afford a fair sample of what the greater work should be. In such an assemblage as will convene in Los Angeles there should be the safety of numbers and a wide experience from which sound generalizations can be drawn. Our sympathies with the work of the convention and our interest in its transactions are deep and wide. We trust it will be representative in numbers and in character. This can be in some sense assured by the delegations which are selected by the various organizations entitled to representation. Let such delegations be composed of wise and progressive men. Neither obstructionists nor visionaries are desirable to such an assemblage.

The convention will be of much advantage to California. It will give to the world a truer idea of our resources and our accomplishments. Aside from this consideration, it is our duty as a hospitable community to extend the warmest welcome to the hundreds who will come to us from the uttermost parts of the earth. California will no doubt be true to her history and reputation in this respect.

THERE has been so great an increase recently in the growth and exportation of Jaffa oranges that that town now stands next to Beyrout in importance among the ports on the Syrian coast.

From an Independent Standpoint.

Prominent among the daily horrors transpiring is the dreadful murder committed last Saturday night in this city, wherein, by a fiendish explosion of dynamite in front of a non-union sailor boarding-house near the water front, half a dozen unfortunates were torn in pieces, their only crime appearing to be their non-membership in a sailors' union.

Trades unions have had many monstrous crimes laid at their doors, some, doubtless, unjustly, but in many cases evidence, direct and circumstantial, points plainly, as in this last, to complicity, if not direct participation, on the part of members of a "union."

The spirit that prompts such action deserves the severest condemnation and repression. The law that those demons defy should be invoked to insure the fullest measure of justice. Such outbursts of anarchy as this latest in the streets of San Francisco are the bitter fruit of blossoms blown to us from across the sea; they are the result of misrule in the Old World, and perversion of the spirit of liberty. For such miscreants as those midnight murders of innocent men there is not the palliation accorded the members of a mob wreaking vengeance through lynch law; for them should be stern, relentless death—bodily destruction as sure as that to which they so cruelly devoted their victims.

Our idea of liberty in this country is that a man has a right to do what he pleases—provided he doesn't interfere with anybody else's right to do as he pleases. Viewed even from this liberal standpoint, it would seem that such creatures as those who manufacture and throw dynamite bombs have forfeited all right to life.

There are currents in the streams of time and of national life that, though sometimes broken and temporarily checked, yet turn and double in their course with tremendous power and disastrous effect. Such currents are flowing noiselessly yet powerfully through America to-day, and threaten to smother in hideous depths the fair growth of the century that has passed.

The advocates and active agents of the doctrine of dynamite must perish that the Republic may live.

Viewed in the abstract, this whole subject comes under the head of what may be called, for want of a better term, "the American problem."

Before any real solution of the American problem can be reached, before any exact statement of that problem can be made, the confusion of political with social and personal equality must be removed. A republic can never be comprehended either by its own citizens or by foreigners so long as it is supposed to be an invention for raising or reducing all men to a level instead of being what it is, an invention for permitting all men to find their own level.

From all parts of the State and Nation come reports of better times. Times are always hard with some of us, but not for a generation has there been such a general squeeze as we have all had in financial matters for the last ninety days. It does not seem to be so much a matter of over-production as want of consumption, and people generally precipitated the very thing they feared by withdrawing money from active circulation at the very time it was most needed. If there be any merit in the much vaunted faith-cure, a little of that mental medicine would do the whole country good just now. Of course the whole country has given up whatever faint expectation it had that the extra session of Congress would do it any good. Just as in a stampede, the biggest donkey in the rush can wave its ears the highest and bray the loudest, so sundry politicians North and South have seized upon the situation as an excellent time to attract attention to themselves, apparently fearing that the great American public would forget they were fools if they themselves did not direct frequent and vociferous attention to the fact. Just now Congress has strayed away from the topic that called it together and is discussing the Federal election bill, a purely partisan discussion and one that has no possible bearing on the present pressing problems of national legislation. But, happily, this is a great country, with wonderful powers of recuperation, and in spite of Congressional inactivity, rather than because of it, the Nation is righting itself, and every breeze that blows across the Sierras brings sounds of reviving industry and renewed confidence.

Senator Stewart, the senior representative in the American "House of Lords" from the Silver State, has fresh claims to notoriety, if not distinction. The political sensation of the week is his attack on President Cleveland. Believing that "eternal vigilance is the price of liberty," and that now is a good time to get even with the Executive for possessing positive opinions contrary to his own, the Nevada Senator pours out what the dailies dub a "scorching denunciation" of the Chief Magistrate of the Republic. According to Senator Stewart, President Cleveland is a usurper; he is trying to make himself a

higger man than the constitution and limitations of his office permit; he believes in his own personal infallibility, snubs Congress, refuses to enforce laws, and uses the patronage of the Government to secure favorable legislation on schemes of his own.

If, as the school-books inform us,

Freedom shrieked when Kosciusko fell,

She must have emitted a doleful squawk on beholding the bad designs of the President, who, according to Senator Stewart, is a villain and almost a traitor.

But as in all other things there are two sides to all this, and, without entering at length into a discussion of the matter, it may be said that it is time enough for Senator Stewart or anybody else to pick the President up when he has fallen down. In these matters it is as difficult to keep politics out of business as it is to keep religion out of politics. Senator Stewart is not so much imbued with reverence for the genius of Liberty as he is filled with wrath on account of presidential opposition to his own pet plans.

But they are both very well able to take care of themselves. The point is, regardless of the motive, how much truth is there in Senator Stewart's charges against the Chief Executive?

As every one knows, ours is a Government of checks and balances; it is divided into three departments, whether State or federal—the executive, the legislative and the judicial. The gravest charge against President Cleveland is that he does not mind his own business; that he attempts to run Congress as well as the White House. Granting for the sake of argument that the charge is true, the remedy is effective and at hand. That remedy is applied in that last great court of final resort—public opinion—a court whose verdict can set aside the dictum of the President or Congress or even the judiciary; a court from which there is no appeal. Two or three times in the history of our country that court decided mighty questions, and since such decision, the verdict has been accepted and acquiesced in.

Whenever it is manifest to the nation at large that its chief magistrate abuses the great power entrusted to him; whenever it appears that he is false to his oath and a usurper of the joint prerogatives of his co-workers in the public service, retribution, swift, sure and fatal awaits him and the party responsible for him.

President Cleveland has faults; in common with all other men, he lacks the attribute of perfection—an attribute ordinarily denied to poor humanity—but so far he makes a better showing than the bitterest of his accusers. If, intoxicated with power, or deaf to the dictates of prudence, he attempts to do all that his enemies charge him with, he is amenable to the law, and can be promptly checked and controlled. Any attempt on the part of an American President to coerce Congress or debauch the judiciary cannot be concealed, and discovery entails defeat and ruin.

Comment has been made on the fact that Mr. Crisp, Speaker of the House of Representatives, has given the greater number of committee chairmanships, and all the principal ones, to brethren of the same political faith as himself, and who reside south of Mason and Dixon's line, and, incidentally, comment is also made, wondering in this assigning of House committees how the Speaker is able in a few days after Congress has been convened to assign 356 men to fifty committees, without giving one man too much or omitting to employ somebody. The work is done so systematically, however, that it is only by a gross blunder that anybody is altogether omitted in the distribution of places. The Speaker begins by setting up a sort of chart, ruled one way for fifty places, and at right angles to those lines are 356 others corresponding to the number of members. As a man is assigned a check is made in the space over the name and a committee line inserted. As the work progresses the Speaker can see at a glance who has been chosen and who is to be provided for. When a change is made the checks are rubbed out, and the transfer made by more checks in other places. While members are not supposed to ask for places, they do it, and the expression of preference, though not quite proper, in a strict sense, is helpful to the Speaker in aiding him in furnishing members with congenial occupation. A certain degree of caution is observed in refusing to put men on committees where they are too seemingly concerned about pet schemes to come before them.

If ever a poor fellow had hard work to win his laurels, and still harder to hold on to them, it was Christopher Columbus. Sundry right reverends and wrong reverends are now endeavoring to prove by addresses at the Chicago Exposition and elsewhere that Columbus was not the real discoverer of America. It is possible that Lief Erickson, the Iceland voyager, did set foot on the eastern coast of North America long before Columbus landed. So did the Indians, but the world was not benefited by it. It was different with Columbus. His achievement produced greater revolutions and grander results than ever before attended the efforts of mere man born of woman. With

his discoveries old ideas which had held the human understanding in bondage passed away. The bold Genoese adventurer was the John the Baptist of the sciences which so brilliantly illuminate the world to-day. He established the fact that the world is a spherical body and in an age, too, when it was considered blasphemous to hint at such a theory.

When Columbus lifted the veil of darkness which hung between the old and new worlds a flood of strange light poured in upon both. Knowledge on all subjects followed like a sunburst in the morning of a new day. Practically, it makes no difference who first landed on American shores. Columbus alone is entitled to the honor of the grand results of American discovery.

In the latest political scandal which has developed, President Cleveland has a fine chance to display some of that firmness with which he is popularly credited.

The facts are these: The President has sent to the Senate for confirmation the name of J. J. Van Alen, of Rhode Island, for Minister to Italy. It transpires that Mr. Van Alen belongs to that class of Americans who are ashamed of their country: he appears to have been unfortunate in his choice of a father, and condones the matter by living in Europe, remarking that "the United States is not fit for a gentleman to live in." Mr. Van Alen, who, by the way, is possessed of several millions of American dollars, omits to say whether his statement relative to this country is a fact, or whether it is just his own private opinion. In common with others he has a right to be wrong on this point.

Last fall when the principle of purity in politics was at stake, Mr. Van Alen gave \$50,000 to help Mr. Cleveland carry the State of New York, and like a thrifty man exacted a pledge from Mr. W. C. Whitney, who managed the matter, that should Mr. Cleveland be elected he should be appointed Minister to Italy. Common ordinary people fit only to live in the United States would consider this a disgraceful matter of bargain and sale, degrading to both parties and deserving of the severest condemnation. To sell important offices for so much cash in hand is looked upon in some quarters as criminal, but Mr. Whitney and many others who were representing purity in politics and constructing ladders to heaven made of honey and chopped straw, were satisfied. Purity in politics as represented by Mr. Cleveland, vicariously, was triumphant: he was elected President, and now Mr. Van Alen claims his reward.

Several prominent New York Democrats, possessed of old-fashioned notions regarding propriety in politics have begged Mr. Van Alen to withdraw his name from consideration, and have offered to give him back his \$50,000 if he will relieve Mr. Whitney of the pledge given him. But Mr. Van Alen is not that kind of a man. He bought and paid for that Italian appointment just as one would buy and pay for a seat at the circus, and he wants to see the show, and won't take his money back. Wicked Republicans in and out of Congress are making political capital out of the matter and saying unpleasant things about Mr. Van Alen and Mr. Whitney and others.

It is a sorry sight to see such things, and one not calculated to inspire enthusiasm for the future in a well-wisher of his country.

The Senate has not yet acted upon Mr. Van Alen's appointment, but it is thought that he will be confirmed by a strict party vote, some of the Democratic majority in the Senate voting for his confirmation because they think it will please Mr. Cleveland to indorse his nominee, and others of the Democratic majority because they don't like the President and take this means of humiliating him.

It is but just to say that Mr. Cleveland himself was not a party to the transaction. He is represented as being disgusted with the idea of appointing Van Alen and trying to avoid it, but, deeming himself bound by Mr. Whitney's bargain, has carried out the agreement. The right thing, the manly thing, for President Cleveland to do is to break the web these political spiders are weaving round him, and rescind Mr. Van Alen's nomination before the Senate has had time to act upon it.

Were he to come squarely out and say he didn't consider himself bound by any such compact as that existing between Whitney and Van Alen, and refuse to recognize the Shylock claim of the latter, the country would applaud him, and he would retain a high place in the honor and esteem of all good men in every political party. Otherwise, otherwise.

The exposition at Chicago is the greatest event in these sunset years of the nineteenth century. And the greatest and most marvellous spectacle presented there is the present Parliament of Religions. Enthusiasm and reverence combine when such incongruous elements meet and mingle. With the remembrance of the cruelty and intolerance of former years, it is with surprise and delight the liberal lover of his fellow creatures learns that peace and good-will have won so signal a victory as to enable a Roman Catholic cardinal, a Presbyterian prelate, a Brahmin, a Mohammedan, and a disciple of Confucius to amicably, on the same platform, discuss theological dogmas and, in the broadest charity, tender each other friendly greeting. Amid the many marvels of the great exhibition this stands the most marvellous, and the event speaks to the advanced thought of the world in tones more eloquent than living voice can utter.

Those Blessed Bugs Again.

TO THE EDITOR:—I desire to call your attention to an erroneous statement which originally appeared in the Los Angeles Herald, and was republished in your last issue, regarding the reputed turning over to the State Board of Horticulture of the colony of steel-blue ladybirds on Mr. Kercheval's place in this city. Either Mr. Craw deliberately misstated the facts, which seems hardly probable, or else the Herald reporter did not report him correctly, since the National Department of Agriculture still exercises a certain right in this colony, as the following facts will show:

When the sensational report of the reputed wonderful increase in this colony of ladybirds first appeared in print, it was feared that this would cause a rush to this colony after specimens for colonizing in the different orchards, and that the parent colony would thereby become depleted, while at the same time the chances for establishing other colonies were not at all favorable. It being possible for the writer to remain upon the premises all the time and protect this colony, the Board of Supervisors of Los Angeles county was appealed to and consented to employ a man for this purpose until I could communicate with the proper authorities at Washington. In due course of time I received a letter from Prof. Riley, inclosing the following commission from the Secretary of Agriculture:

SIR:—You are authorized to employ a man to guard the colonized Australian ladybirds near Los Angeles for a period of three months, beginning August 20th. You will be allowed for this purpose the sum of \$50 per month at the outside, but if you can secure a man for a smaller amount you will do so. The amount will be paid from the fund for the investigation of the history of insects. Yours respectfully, (Signed) J. STERLING MORTON, Secretary.

Accordingly, on the 17th of August I made a contract with the same man whom the supervisors had engaged to guard this colony of ladybirds, giving him \$40 a month, the contract being signed by both of us. Twelve days later the quarantine officers of the State Board of Horticulture, without having consulted with me or any other representative of the department, commissioned the same man whom I had employed, and gave him an additional salary of \$40 per month for doing the same work that he was and still is doing for the department. While the object of the department in employing this man was primarily to preserve this colony of ladybirds from destruction and also to relieve Los Angeles county of this expense, the object of the State board in giving him an additional salary must be left to other heads to determine.

In regard to the reputed wonderful increase of the *Rhizobius ventralis* at Mr. Cooper's place, near Santa Barbara, I cannot speak from personal experience, since no living specimens of this ladybird were received by me. It is true that in his report to the Secretary of Agriculture Mr. Koebele mentions having repeatedly sent me specimens of this insect, but my notebook shows that not a single living specimen reached me. It may be stated, as a matter of history, that all of the packages of insects sent me by Mr. Koebele passed through the hands of the officers of the State Board of Horticulture at San Francisco; letters and telegrams now in my possession abundantly attest this fact.

It is encouraging to learn that at least one of the recently imported ladybirds is doing well upon the ranch of the president of the board. D. W. COQUILLET.
Los Angeles, Sept. 25, 1893.

Fighting the Gas-Treatment Patent.

Last week there was a well-attended meeting of orange-growers at Santa Ana to unite the orange-growers into an organization, the purpose of which was to resist what is termed the "Twilight patent for fumigating with hydrocyanic acid gas," and owned by Wall, Bishop & Jones. The meeting elected Joel B. Parker president and A. Y. Wright of Tustin secretary.

After much discussion the following agreement was adopted and recommended to all fruit-growers of southern California:

The undersigned, each for himself, does hereby agree with and promise all other persons whose names are subscribed hereunto or duplicates hereof, that he will pay on demand to either one of the trustees duly appointed by the county or section in which said subscriber lives, and at a meeting of the orange-growers in such county or section, all equitable assessments, not exceeding five cents per tree subscribed, made upon himself jointly by such trustees of the several counties or localities entering into this compact, proportioned by the number of trees now owned by each subscriber, as set opposite his name hereunto, and the aggregate number of trees owned by all the subscribers hereunto, for the following named purpose:

First—Of defending to the uttermost any such subscriber against the recovery of damages or any other prosecution of claim under alleged United States Letters Patent No. 445,342 of Messrs. Wall, Bishop & Jones by reason of his using hydrocyanic acid gas at any time or in any manner, for destroying insect pests on fruit trees.

Second—Of paying all costs and necessary expenses connected with the suits or judgments, if any therefor, or connected with, or all prosecutions under such patent by reason of such use.

Third—Of obtaining legal counsel concerning said letters patent, and of annulling the same if possible.

Fourth—Of paying all proper expenses and charges of said trustees in the premises.

And we do hereby authorize the trustees so appointed to assume full management and control of all interests, suits and other matters herein comprehended, or pertaining to the resistance of all claims or demands against any subscriber to the foregoing compact made under, or by reason of, said letters patent.

W. B. Heron resigned as a member of the executive committee, and D. H. Thomas was appointed in his place. It was decided at once take steps to annul the Wall, Bishop & Jones patent.

A. B. Wright of Tustin was elected permanent secretary. The meeting then adjourned, after which the executive committee met and elected Joel B. Parker of Orange as president and Ray Billingsby of Villa Park as secretary.

Dried Fruit by Water to the East.

There seemed to be some doubt whether dried fruit could be safely sent east by sea. Some fruit-growers considered the experiment doubtful, and before trying the new line wanted to see how the fruit shipments would turn out.

The experiment has proved a success. About 1500 cases of fruit shipped by the Keweenaw August 10th reached New York in first-rate shape, as is evidenced by the following letter from Stamford, Parry, Herron & Co., general agents of the Columbia Steamship Line at New York, to the Johnson-Locke Mercantile Company, under date of September 14:

"We take pleasure in advising you that your fruit ex Keweenaw has arrived per Columbia and is in excellent condition. It is evident that we can carry this cargo when proper attention is given to it from San Francisco through to New York."

The secret of carrying dried fruit by sea is proper stowage. It must not come in contact with other cargo, and room must be left for ventilation. In the steamers of the North American Company the fruit is stowed between decks and at least one foot of space is left on top.

The success of the shipment by the Keweenaw has already stimulated further traffic via the isthmus, and though the matter is known only to a few merchants, the offerings, in one day, of dried fruit exceeded 1800 boxes.

"There is no reason why every succeeding shipment will not turn out as well as the last," said Secretary Haswell to a Call reporter. "All we have to do is to be careful in stowing, and we will look out for that."

"Is there a profit to you at 50 cents a hundred?"

"Yes. It makes a compact cargo, stows well and pays about as well as anything else we handle. The saving of half a cent a pound to the grower will, I think, throw us all the dried fruit we will be able to handle."

Russians Viewing Our Irrigation Works.

Colonel Constantin Comodzinsky and wife of St. Petersburg, Russia, were in San Bernardino last week. He is a representative of the Czar to look into the American system of irrigation, and will attend the Irrigation Congress which meets in Los Angeles next month. He was the Russian delegate to the International Congress of Engineers, lately in session at the World's Fair.

He was taken by Colonel Adolph Wood, manager of the Arrowhead Reservoir Company, and F. T. Perris, chief engineer of the Santa Fe in southern California, to the works of the Arrowhead Company in the mountains north of this city, where three immense reservoirs are being put in together, with canals, at a cost of \$1,000,000. He expressed himself as highly pleased with what he saw. He says the steppes of Russia are very similar to the deserts in this country, and it is his purpose to introduce a system there, if possible, whereby they can be irrigated.

Colonel Comodzinsky is a pleasant-looking gentleman, over six feet tall, but does not speak English. He is one of the most prominent engineers in Russia. He has examined the most extensive irrigation works in India, Egypt and southern Europe, and while he says they are larger, they have not the perfect system found here.

He had a long talk with County Surveyor Maude, and in the course of his remarks stated that he would recommend the Czar to secure the services of an American engineer for the prospective work in Russia. His Government contemplates extensive irrigation works in the farming districts to prevent crop failures.

Colonel Comodzinsky, accompanied by several prominent local engineers, will visit the different large dams and irrigation systems in San Bernardino and San Diego counties.

Change of Head at the Baden Stockyards.

A change has taken place in the management of the South San Francisco Land and Improvement Company by which C. W. Smith, vice-president and general manager, retires. He has been succeeded by A. C. Foster, who came hither from Omaha about a week ago. Smith was a railroad man and had been vice-president of the Santa Fe lines. Foster, the new manager, is a practical packer, having been familiar with the business for years. He has been associated with G. W. Swift and Nelson Morris in various enterprises, and until lately was president of a bank in Omaha. Among his ventures was a rendering factory, which will probably be a feature of the company's work at South San Francisco hereafter.

Mr. Foster will take entire charge of the interests of the company at Baden, including the abattoirs, packing-house and the 3600-acre tract. He will also look after the warehouses in this city, Oakland and San Jose. He intends to build up a town down near the yards. A number of new enterprises will probably be started, including factories in which numbers of workmen will be employed.

Mr. Foster is at present looking over the field. One of the first problems which he will attend to will be the boycott against the company on the part of the wholesale butchers. What action he will take in regard to it he has not yet determined.

California Gets Some Lumber Prizes.

The list of awards for the department of forestry at the World's Fair has been made public. The exhibits in the department of forestry do not include lumber in its many manufactured forms, the idea being to show timber in its natural state. The following awards were given to California: F. Korbet & Brothers, San Francisco, redwood tanks; Thomas Hatch, San Francisco, samples of wood, bark, etc.; Moodyville Land & Sawmill Company, Moodyville, collection of timber sections and sawed lumber.

Farms and Homes of Utah.

WASHINGTON, Sept. 25.—The leading results of the investigation of farm and home proprietorship in Utah are contained in a bulletin just issued by the census bureau in regard to farms. The conclusion is that 9.43 per cent of farming families hire and 90.57 per cent own the farms cultivated by them; that 5.55 per cent of the farm-owning families own the land subject to incumbrances, and that 94.45 per cent own free of incumbrances. Among 100 farm families nine hire their farms, five own with incumbrances and 86 without incumbrance. On the owned farms there are liens amounting to \$546,245, which is 24.93 per cent of their value, and this debt bears interest at the average rate of 10.13 per cent, making the average annual interest charge \$93 to each family. Each owned and incumbered farm on the average is worth \$3670 and is subject to a debt of \$915.

Corresponding facts for homes are that 39.35 per cent of home families hire and 60.65 per cent own their homes; that of the home-owning families, 91.49 per cent own free of encumbrance and 8.51 per cent with incumbrance. In 100 home families, on an average, thirty-nine hire their homes, five own with incumbrance and fifty-six without incumbrance. The debt on owned homes aggregates \$1,428,698, or 28.70 per cent on their value, and bears interest at the average rate of 9.71 per cent, so that the annual amount of interest to each home averages \$100. An average debt of \$1028 incumbers each home, which has an average value of \$3711.

Sealy Oranges.

On her last trip to this city the steamer Newbern brought 1157 boxes of oranges from San Jose de Cabo, Mexico. The quarantine officer of the State Board of Horticulture placed the entire lot of oranges in quarantine because they were distinctly affected by scale insects. The freight and duty had already been paid, but on proper representation to the Government officers the duty was refunded, and, according to law, the oranges were placed on sale at auction. They were bought by a local dealer for \$105.

The purchaser now desires to land the oranges, but Quarantine Officer Craw insists that they shall be fumigated until not one living insect can be found upon the oranges. The scale with which these oranges are affected is known commonly as the long scale, technically as the *Mytilapsis Gloverii*. It is the most active and deadly agency in the destruction of oranges.

Highest Mountain in North America.

The much vexed and much disputed question of the loftiest mountain on the North American continent has at last been settled. John Partridge, secretary of the Geographical Society of the Pacific, has received a letter from the chief of the United States Coast and Geodetic Survey, Washington, D. C., stating that Mt. Orizaba, in Mexico, is the highest.

Mt. St. Elias, Alaska, has for many years past been considered the highest, but Orizaba has been proved to be the higher by 299 feet. The exact figures, as forwarded to Secretary Partridge, are: Mt. Orizaba, 18,314 feet; Mt. St. Elias, 18,015. "These figures," said Assistant Secretary Trenor, "are authentic; and doubtless it will interest every one to know that the question has been settled by so undoubted an authority."

Sustaining the Raisin Tariff.

Col. Wm. Forsyth, M. F. Tarpey and John D. Gray have been appointed a committee to go to Washington in behalf of the raisin industry of California, to ask Congress to retain the tariff on raisins, and also to put a tariff on Zante currants. Telegrams were sent to each of California's Representatives, informing them that the committee will come, and asking them to co-operate. The committee will not start for some days yet.

Direct Shipment of Hops.

The hop growers of Ukiah valley have organized for the purpose of chartering a vessel to load hops for England. The prices which have thus far been offered to Mendocino hop-growers have not been satisfactory. The light continental yield is an assurance of better prices on the Pacific coast, and the growers of this portion of the country propose to take advantage of it.

Of Interest to Many Readers.

Beginning with the first issue in October, the PACIFIC RURAL PRESS will furnish a veterinary department, which will be in charge of Dr. E. J. Creely, D. V. S., of this city. Any questions relative to diseases of cattle and horses, stock, hogs, poultry, etc., will be answered promptly and intelligently, the idea being to furnish free information to our readers that will be of value to them. Direct questions and communications to "Veterinary Department."

ALL work has been stopped on the San Diego and Phoenix railroad. The main cause is attributed by President Reed to the apathy of the people of San Diego. He recalled the magnificent offer of one prominent capitalist, who offered to subscribe as much cash as any one of a dozen men, and who, when the time came, backed up his word to the extent of \$5.

GOVERNOR HUGHES has appointed the following Arizona delegates to the Southwestern Irrigation Congress, which will meet in Los Angeles October 10th: Edward M. Boggs, Tucson; Dr. S. M. Hurley, Florence; Jerry Millay, Phoenix; I. L. Vanderworker and L. A. Hicks, Yuma.

HORTICULTURE.

Honest Nurserymen.

TO THE EDITOR:—It is to the nurserymen's interest to be both careful and honest. He cannot afford to sell stock not true to name, taking the chance of paying a damage bill and at the same time injuring his reputation. A great deal of the trouble among planters has been caused by getting trees and vines from men who were more dealers than nurserymen. There are so-called nurserymen who depend more on buying their stock where they can get it cheapest than they do on raising it. The parties from whom they buy could be careless and dishonest, with less fear of suffering for it than the nurseryman who sells direct to the planter.

The traveling tree agent is another source of fraud on the planters. He usually canvasses the country with samples or pictures of them of exaggerated sizes, and is a glib talker, purporting to represent some prominent nursery. The said nursery or company may not be in any way responsible for his transactions. He usually gets in his work on the small planters, selling them a number of "rare" fruits at high prices. One such man was through this community a few years ago. His trees are now bearing and none of them are true to name.

As to every farmer raising his own trees, that is not practical or even possible. I have known many to attempt it among the farmers and colonists here, but I have not known of a single instance of success. There are several details pertaining to the propagation of fruit trees which the novice does not understand. Besides, the planter does not know that he will plant or what he will plant two years hence. The bulk of the nursery stock will be grown by the nurseryman as heretofore.

The planters should patronize the nurseryman whom they have the best evidence attends to his business personally and grows his own stock.

W. T. KIRKMAN.

Atwater, Merced Co.

A Retiring Writer's Views of Nurserymen.

TO THE EDITOR:—I am getting to be quite a writer, but it is seldom that my productions see the postoffice, much less the editor's waste-basket. Hating notoriety as I do the evil one and his works, my efforts are usually read to my wife and thrown into the fire. But I will contribute the following, with the understanding, on my part, that my name will be withheld from that slight and fleeting gaze which is so distasteful, and which is not worth having:

It was five or six years ago that I ordered several hundred Picquet's Late peach trees from a prominent nurseryman in this State. After they had grown one summer, it was easy for me to tell, by the leaves, that about 90 of them were not true to name. I pronounced them to be Alexander, and wrote to the nurseryman accordingly. He consulted something he called his register, and admitted that both those varieties were planted in the same row, and that his hands might have got them mixed. After a little parleying, through the mail, he offered to refund the money or replace the trees. I took the trees, and thought myself lucky, but it cannot be said that complete justice was done, or that it is ever voluntarily done in such cases.

Did you ever notice the dismal array of fruit varieties that are sometimes planted in gardens for family use? Well, an agent once told me that he had received orders from his principal to sell no more of those worthless cherries to orchardists, but to peddle them out in the mountain towns and among people who wanted to plant for domestic use. Trickery of that kind has probably caused many a man to believe that his land would not produce good fruit.

ORCHARDIST.

An Australian's Notes on Leading California Fruits.

How our fruit varieties impress an expert foreign observer may be learned from the following correspondence of Mr. Fred C. Smith of South Australia, of which we have been kindly supplied with an advance copy:

My letter this time will give the result of my observations with regard to the varieties of different fruits that are either quite new to Australia or not in general cultivation there, and of course I have only troubled in most cases to specify those that are of some special value and that would be well worth testing in Australia. It must not be supposed that I have been able to see all the new and valuable sorts or that I have sampled all that I mention, but I know that where any district has some new variety which is extensively cultivated there, though not perhaps elsewhere, that there is good reason for its cultivation. It is very frequently found that what will succeed admirably in some districts is often no good in others. Owing to the vast extent of the industry in this country, there is some encouragement for work such as that of Mr. Luther Burbank of Santa Rosa, Cal., who has been systematically laboring for many years to hybridize sorts that each possessed some desirable qualities that the other lacked. Then the great many chance seedlings that are raised and fruited increase the possibilities of improvements upon existing varieties. Of a long list given me by Mr. Geo. Neilson, of the Burnley Horticultural Gardens, I found very few were known here, most of them being English or continental.

PEACHES.

Picquet's Late peach is a good very late sort. Key-port white, freestone, white to the pit, and a good canner. White Heath cling, white all through. This is probably the best white cling peach for canning and is well worth testing in Australia. This would be a fine peach for preserving in glass jars in sulphur water for shows. Diamond Cling is another good variety. Susquehanna has a fine flavor and color and is a freestone. Mother Porter is a small though very fine flavored and colored variety; Hardy White Tuscan, a very heavy fruit and fair bearer. The

Early Crawford, though a beautiful fruit and in some places of good flavor, is in very many places of quite an inferior flavor and quality to many other kinds; it dries well, though not so satisfactorily as the Muir, shrinking up about one-fifth more than the latter, being more juicy. It has been the standard peach for years in this State for canning, and certainly seems to taste better when canned than fresh. It has many good points, but there are peaches, and the Muir is one, which have even higher qualifications.

The Muir peach is, I find, in all places, preferred above all others for drying, and in many places is esteemed above the Early Crawford for canning. It is a heavy bearer and needs drastic thinning and pruning. It has the quality of keeping comparatively firm in flesh while hanging nearly dead ripe upon the tree, is very sweet, and dry in flesh, and comes in between the Early Crawford and the Salway. Its only drawback is its furry skin. This is partly gotten rid of in some cases by putting it through a wire-netting revolving drum when dry, to rub the fur off. If dried ripe it has a beautiful color, but where dried green and only half ripe it is quite a second-rate dried fruit. It is a freestone.

The La Grange peach, a freestone, is an immense bearer, of good size and flavor, a good canner and white flesh.

Allbricht's Cling and Gen. Bidwell are good peaches that must be given a trial. The latter is an immense fruit.

Nicholl's Orange Cling is a very fine-flavored, large, firm and well-colored fruit.

The Wiley Cling is recommended by some shippers as a very superior fruit.

McKevitt's Cling is highly esteemed as a canner and shipper in some localities, and is a fine, large, white-fleshed fruit and good bearer, but not in all places.

Foster is another popular favorite.

Peach seedlings of merit are so easily and frequently raised that the list of really good varieties is inordinately long.

APRICOTS.

The Roulier peach apricot has been very strongly recommended to me by Mr. Kells of Marysville, as it suits his district better than any other sort. At Rancho Chico, Gen. Bidwell's place, the Royal and Blenheim varieties are preferred to the old Moorpark for drying and evenness of ripening.

I found that in many places experience had proved that the Moorpark was not the best variety for either canning or drying. I had the opportunity of seeing the Vestal's Late Moorpark at San Jose in Mr. Vestal's orchard. It is a very fine, large fruit and fully a fortnight later than the old original Moorpark, an immense tree and good bearer. I was disappointed at first in its lack of flavor, but on sampling some Moorparks that had been left hanging on a tree near by I found that they were distinctly inferior to the Vestal; so that I think if the latter is grown is a situation where the Moorpark itself is naturally of a superior quality that it too will prove to be a first-class fruit. Its lateness should make it a very valuable variety for fruit-driers, as it will lengthen the season and so enable less hands to do all the work at a very busy time. The very early apricots, Pringle and Newcastle, are far too small for either drying or canning.

NECTARINES.

The Byron nectarine is a fine flavored fruit, white to the pit, but a half cling. Rivers White and Boston are the sorts most favored here for drying and canning. At Rancho Chico the New White nectarine is their best white variety, while the Lord Napier is the best red kind.

PEARS.

Of course the Bartlett is the leading variety for packing and shipping for the early season. The growers here pick this fruit and have it placed upon the market in June, and fully ripe fruit in July. This is equivalent to our having ripe Bartletts or Williams Bon Chretien in Australia in January, but the fruit is picked when not half-grown, and in many cases not one-third grown, but instead of withering up and being worthless as 99 varieties in a hundred would be, it just matures with the color and aroma of a perfect fruit, but a little lacking in flavor.

In addition, the fruit left upon the trees will increase in size and be worth so much more, and while the early shipper gets \$3 to \$4 per 40-pound case for his early-picked, he is fortunate if he gets \$1 or \$1.50 for the same pear in mid-season.

Again, while the Bartlett is by far the best canner known, it is also fully as much ahead as a drying fruit, and is a heavy bearer to boot.

For exhibition purposes there is no fruit that looks better than a large jar of Bartletts very carefully peeled so as to show no mark of the knife, and preserved in sulphurous acid water, whole with the stem adhering, say a glass jar 15 or 18 inches high and 9 or 10 inches in diameter. Like all other fruits, however, it must be ripe to make a really first-rate dried sample. The best I have seen here were dried in halves with the peel on, sulphur-bleached by Mr. Campbell of Vacaville. I have been hoping to find a pear that would lengthen the pear-canning season by two or three weeks or a month, and at Mr. Thurber's ranch, near Vacaville, I was shown and tested samples of the Idaho pear, which in most respects is fully equal to the Bartlett and a few weeks later. It is smooth, not grainy in texture, of medium to large size, fine flavor and color of flesh. Mr. Thurber had grafted some trees over with it two years ago, but had only gathered a few cases of fruit this season from them, so has yet to prove its bearing qualities. It is the nearest approach to the Bartlett that I have seen. A peculiarity in regard to it is the way that its stem is sunk into the fruit and the deep depression of the calyx. It is not a pear-shaped fruit at all. The Doyenne du Comice and the Souvenir du Congress are fine pears, the latter in shape and size like the Bartlett, but I have not been able to test their qualities. The most peculiar-shaped pear I have seen is the De Jongh's Maiburn, shaped somewhat like a custard marrow.

To a limited extent the Beurre Clairgeau, Beurre Hardy and Vicar of Winkfield varieties are grown. Mr. John

Rock, of San Jose and Niles, some years ago imported 50 different new varieties from Germany and found that not one of them was any better than the sorts in favor here, and he grafted several hundred trees over to the P. Barry, a California seedling. This alone proves that that kind is, at any rate, worth our while testing. I, however, drove through an orchard, a few miles from Mr. Rock's, where there were some hundreds of old bearing Barrys and they bore so much at the ends of the branches that the owner had some thousands of props to keep them up. Under one tree I counted 40 props, and the block looked like a forest of poles. This certainly is not a desirable feature in any fruit. The Keiffer, a cross of the Bartlett and the Chinese sand pear, has proved to be so valuable that it is very highly thought of in the Eastern States, while it is hardly planted at all here. Both the Keiffer and the Le Conte have a flavor entirely foreign to the European varieties, but their very pleasant sub-acid flavor and aroma reminded me somewhat of the pineapple; there is quite a peculiar acidity about them. The Keiffer is slightly gritty about the core, but the Le Conte is less so. Both are astonishingly vigorous growers and would make good stocks for top-grafting the heavier bearing and more dwarfed varieties upon. The fruit of both is small, however. I hope to mention apple varieties in a later paper.

PLUMS.

I have followed the common mistake of including prunes and plums under the heading of plums. The common rule is that any plum that dries well is a *prune*, but plums that only dry indifferently are called *dried plums*. Of course, the great plum of the State is the French prune—the petite prune d'Ente and d'Agen. These varieties we have not, until the last three or four years, had in South Australia nor, I'm inclined to believe, anywhere else in Australia, in general cultivation. The fruit here most similar to what we have in South Australia is the German prune. The real French prune it is impossible to mistake for any other variety, its delicate pink color apparently showing through the skin, instead of the skin being pink like most plums. It tapers evenly down to the stem all round, quite differently to the German prune.

It is a uniformly heavy bearer and if we want to compete with California or France in the prune markets of the world we must plant these two varieties. Robe de Sergeant is a prune that is planted to some extent; it is very much indeed like the blue gage as grown in S. A., but does not bear so well as the d'Ente.

Mr. Ehrhorn of Mountain View, one of the brightest horticulturists in this State, has planted a 14-acre block to prunes, alternating the Robe de Sergeant and the d'Ente or d'Agen, in rows, his object being to prove on a comparatively large scale the good effect of the proximity of a very prolific and fertile bloomer such as the d'Ente or d'Agen upon the bearing of a naturally infertile bloom such as that of the Robe de Sergeant; he deserves much credit for testing what has been only at best a partly proved theory, and the result is being watched by many of the leading prune men with great interest.

An accident sometimes leads the way to important changes and improvements, and apropos of this Mr. Frank McKevitt of Vacaville, while driving Mr. Cillie of South Africa, Mr. Brooker of Adelaide, and myself for a 32-mile trip out and back through the Vacaville valley, told us how he had put a man at work grafting over some rows of plum trees to two sorts. The man had, perhaps fortunately in this case, imbibed rather too freely, and his ideas and the grafts, too, got mixed, and Mr. McKevitt did not discover until too late that a number of his trees had two kinds of plums upon them; when they came into bearing he noticed that one of the sorts which was naturally a shy bearer was bearing heavily upon the mixed trees, while upon the original trees the crop was practically a failure. Possibly many fine varieties of fruits now infertile and unprolific, if tested in this manner, would be found to be very valuable additions to our lists of profitable sorts.

Many instances have been noted in this State of the effects of cross-fertilization. A proper nomenclature of the fruits here is as badly wanted as with us. The old Pond's Seedling plum has been wrongly named Hungarian prune and Gros prune, and although John Rock, Leonard Coates and other nurserymen know that it is misnamed they have to sell what the public asks for, and as is the case here and in Australia, too, with many kinds of fruit, it is called by whatever name it sells best under. As there is an immense fresh fruit market in the East, a great deal of attention is naturally paid to those varieties of fruits best fitted to ship in good condition. In Australia our future largely lies in the fruits best adapted for canning and drying or jam-making, so that I have not paid so much attention to the early varieties as I otherwise should. The Clyman, Tragedy, Pond's Seedling and Columbia Peach plums are some of the most popular shipping plums.

For canning, only the same old standard sorts that we have in Australia are used, viz., Coe's Golden Drop, Jefferson, Green Gage, Magnum Bonum and Washington. The Reine Claude de Bavay is often sold here and canned also for the Green Gage. Coe's Golden Drop and the Silver prune are so very much alike that very few growers even profess to be able to distinguish between them. They are both first-class canners and driers, dual qualities that few other white plums cannot claim. It is stated that the Silver prune is a much heavier bearer than the Golden Drop, but all that I have seen must have been either all Silver prunes, or there is no difference between them in respect to bearing.

At Mr. Rock's nursery at San Jose, I saw a very fine white plum in his stock rows, in bearing, and a particularly sweet fruit, named Decaisne; it should be tested for canning and drying. The Golden prune, Mr. Coates says, is much ahead of the Golden Drop for canning and drying. It is a freestone, very sweet, firm and fleshy, with no surplus juice, and a heavy bearer.

A distinctly valuable addition to our horticultural knowledge during the last few years has been the introduction of

the Japanese plums. Foremost among these is the Kelsey, a very large fruit and a most prolific variety. I saw several acres of it on Mr. Leonard Coates' orchard in Napa. The fruit is very broad at the base and comes to a point at the top; a good sample would stand two and a half to three inches high upon its base. A peculiarity of this plum is that its peach-like leaves keep on till midwinter and it blossoms and the fruit sets before the leaves appear late in the spring. The Kelsey flourishes best in a cool climate, and if picked before ripe it ships well and will ripen up with a beautiful color and become just full of a most peculiar flavored juice. In San Francisco I have been assured that the principal market for this plum is among the Chinese population. The other dark-colored Japanese plums that I have seen are Prunus Simoni, a perfectly round and flat fruit, very much like a small Mikado tomato in color and shape; also Burbank, Botan and Satsuma or Blood plum. The first two are very much like many plums that we already have, in outward appearance, but the latter has a solid flesh as red as blood, through to the pit; the juice also is red and the flavor is not very marked like other Japanese plums.

Two yellow Japan plums that I must specially notice are the Ogon and Normand. The first, when not too ripe, has a most delicious flavor and an aroma that suggested apricot strongly to me. It is a fine, vigorous grower, a large plum and a very fair bearer, with a very small pit.

The Norman was, if possible, even more markedly flavored and scented than the Ogon; both are of a lovely, bright, clear yellow and have pits very little larger than a good-sized cherry pit. I personally consider that the Norman has as fine a flavor of its sort as the Green Gage and think it is the only yellow plum that compares with it. The two points that appear to specially mark off the Japanese plums from the whole of the European plum family are their unmistakable and indescribable flavor and the very minute pits. A great deal of attention is being given, among Eastern nurserymen in particular, to the crossing of the two plum families, and most important results may be looked for from their efforts.

FIGS.

At Strong & Co.'s nurseries at Sacramento I sampled some—to me—new varieties of figs—the Verdona and San Pedro. The White Marseilles I did not taste. The Verdona is a very rich, sweet fruit with white flesh, and green skin, and thick, meaty pulp.

The San Pedro is like the White Provence, but has a much tenderer skin and a more delicate flavor.

The White Marseilles is externally very much like the Verdona, and both are similar to the White Adriatic. Some of these should prove good driers.

CHERRIES.

The cherry I have referred to in a previous letter, but may say here that the Centennial seemed to me to be the only white cherry originated here that could stand alongside the Napoleon Bigarreau, and even it is found fault with for cracking or splitting too easily. I have not seen a black cherry in this State that can compare with our Waterloo.

ALMONDS.

Three varieties seem to stand pre-eminently above all others. They are I K L, Ne Plus Ultra and Nonpareil.

Mr. Coates recommends Lewelling's Prolific also as a first-class nut.

WALNUTS.

Most of the growers whom I have consulted recommend Ford's New Improved soft shell. This nut can quite easily be broken apart with the fingers.

THE APIARY.

Bean-Honey Production in California.

M. H. Mendleson of Ventura writes to the *American Bee Journal* as follows:

Some time ago I received the following communication from Wm. A. Pryal of North Temescal:

I saw a clipping to-day, taken from the *Venturian*, which connected your name with a matter that I have taken some interest in since I was at the World's Fair a little over a month ago. It is in regard to bean honey. I wanted to get some facts about such honey. The last time I was in the California building on the Fair grounds, I ran across an exhibit of a bee-hive and a quantity of rather fair-looking honey from your county. A Dr. Archer was the exhibitor. The honey was said to have been gathered from the blossom of the bean. This sort of honey was new to me. Though I have seen beans in greater or less quantities for years, I do not remember ever having seen a bee on one of the blossoms.

My attention was drawn to the bean honey a few years ago by our Congressman, Mr. Cannon. He has a beautiful home out in the Santa Clara valley, partly surrounded by hundreds of acres of fruit trees and thousands of acres of the bean fields. He caught many stray swarms of bees, many of which I bought from him, and of late years I have bought all that he caught by furnishing the hives, etc. I noticed the honey from these colonies was mostly of a superior quality, of light color and good flavor. I thought at the time that it was from the fruit-bloom, but Mr. R. Wilkin and others called my attention to the fact that their bees had filled up from the bean bloom, consequently I investigated on a small scale, and Mr. Archer, a year later (1892), on a larger scale. The year 1892 was rather dry for the bean fields, and a failure with the sages, still the experiment proved that if they filled their hives in a dry year, a wet season ought to prove better, or give considerable surplus. Mr. Archer had done well.

A number of my friends wished to discourage me from a further venture. This season I have several hundred colonies in various places in the heart of the bean fields, with good, portable extractor houses. The results I shall give at the close of the season.

One apiary of nearly 300 colonies I moved 19 miles during nights, never losing any time from the sumacs till evening to the bean blossoms the next morning. The ma-

jority of these colonies were too strong for single story hives, filling two stories. One week later many of them were nearly full, proving a success in moving without loss.

There were, last season, 22,000 acres planted to beans, and the crop amounted to nearly 1000 carloads. These figures I have gotten from the bean men.

This season was late for bloom. I noticed the first bloom the last of June, but not much honey is gathered from the first two weeks' bloom; one of my apiaries has been gathering honey for only two weeks back—now all colonies are crowding their queens with honey of light color and good flavor.

I should mention that the main varieties of beans planted are Limas and small whites, but there are many other varieties planted.

SHEEP AND WOOL.

Angora Goat Breeders' Association.

The annual meeting of the Angora Goat Breeders' Association of California was held in the Senate Chamber at Sacramento on the 15th day of September, 1893, President C. P. Bailey in the chair.

President Bailey in his annual address spoke of his recent visit to the East and the World's Fair in the interests of the association, and stated that the demand for mohair in the manufacturing centers was greatly in excess of the supply and that while the price of wool had been seriously affected by the present financial panic the price of mohair has steadily improved, and that all the breeders who had taken pains to grade up their flocks were now receiving their just reward. He greatly deprecated the policy of the Turkish Government in prohibiting the exportation of Angoras and stated that on this account he had just been compelled, at great expense, to import bucks from South Africa. He read the following extract from a letter from his commission men, Messrs. Cilley & Marshall of New York City:

"We can encourage you by confirming all we have said before about the improved condition of the mohair manufacturing industry and its certain increase. We see clearly that a good, continuous and even larger use for domestic mohair is ahead of us in the future, and if the growers will only send in mohair with some staple in it—real good, clean, well-grown stock like your Nevada or Monterey clip—we know and are certain that we can make a better place for California and other domestic stocks than they have now or ever have had. There is no question but that you can raise mohair just as good as Turkish and some even better by proper breeding and care. We hope and expect that the next domestic clip will fetch 40 cents plus for No. 1 grade, other qualities in relative proportion. Stir up the growers; make them get better bucks and improve their stock." In conclusion, the president congratulated the Angora breeders upon their past and present success and upon their brilliant prospects for the future.

Senator W. C. Bailey, an honorary member of the association, made an eloquent memorial address dwelling upon the distinguished services of the late Julius Weyand to the association and paying a handsome tribute to the sterling qualities of the deceased. On motion of T. H. Harlan of Colusa county, the following resolutions of condolence upon the death of Julius Weyand, secretary of the Angora Goat Breeders' Association of California, were unanimously adopted:

WHEREAS, The Great Shepherd, in his all-wise providence, has, since our last meeting, seen fit to remove from our midst our beloved brother and esteemed secretary, Julius Weyand, and

Whereas, We deeply deplore our loss and wish to place upon the permanent records of this association some slight token of our appreciation of his true worth as a man, and his valuable services as an officer of this association, now therefore be it

Resolved, That by the death of Julius Weyand, this association has lost a man who by his brilliant, well-balanced mind, brightened by thorough education, his conscientious devotion to principle, his long experience and unflinching energy, his boundless charity and warm-hearted sympathy, has greatly endeared himself to us all and contributed largely to the upbuilding of a useful industry upon this coast. And be it further

Resolved, That in his death, the nation, the State and the county of Colusa have lost one of their brightest and most valuable and patriotic citizens; that this association has lost a secretary whose place it will be impossible to fill; that his wife has lost a loving husband, his children a kind-hearted and indulgent father, and the world a friend.

Resolved, That a copy of these resolutions be furnished to the *RURAL PRESS*, the *Colusa Sun*, and the family of the deceased.

It was decided, in view of the fact that the Turkish Government prohibits the exportation of Angora goats, thus greatly impeding the growth of the industry in this country, to memorialize Congress to retain the present tariff on mohair, unless they desire to ruin the industry in the United States.

The following officers were then duly elected for the ensuing year: President, C. P. Bailey of San Jose; vice-president, T. H. Harlan of Colusa; treasurer, J. M. Wimmer of Shasta, and Secretary, C. E. Bailey of San Jose.

A Dealer's View of the Wool Situation.

"There is some wool moving," said F. P. McLennan, a large commission man, to a *Call* reporter, "but it is being handled on a free-trade basis entirely. That is, if Congress should absolutely repeal the tariff on wool the price would not decline below present quotations.

"There is nothing which can effect prices in the least, except something definite from Congress, and the moment that the word is given out saying that the tariff will not be changed the price of wool will go up like a rocket.

"So I say the market has improved to this extent that there is some wool moving. There were two reasons for the utter paralysis of business during the last few months. Of course, one was the fear of tariff legislation and the other was the condition of the money market, which made it impossible to get means with which to move the wool

on hand. This latter cause of depression has been removed and money is much easier, which accounts for the fact that wool is moving at all.

"But the manufacturer cannot be blamed for going on the only safe basis for him. The Democratic party is pledged to a reduction of the tariff, and it is only fair to assume that it will keep the promise until the contrary is proved.

"In four months the price of wool had dropped from 55 to 60 cents a scoured pound to 35 to 40 cents, and the latter figures are not far from the prices now ruling in foreign markets. The amount of the decline corresponds almost exactly with the tariff on wool.

"Of course, if Congress should take no action, the manufacturers are going to make some money, for they will be able to sell the finished product with the advantage of being protected, while they bought the raw material on a free-trade basis; but this will not do the producer any good. He will be none the richer because the manufacturer has made something.

"The reduction of the price in the raw wool is not the only step toward preparing for active competition with foreign goods. This is just a good sample of many notices now appearing in our trade journals," and Mr. McLennan produced the following clipping:

The Wilson woolen mills at Trenton, N. J., have resumed operations with a reduction of ten per cent in the wages of their 800 employees.

"Wages have to come down on the same basis, for it is not to be expected that our manufacturers can afford to pay any more for their work than their competitors are paying, and it is nothing but what we must expect.

"The people who are wool-growers must compete with producers who have no capital invested in land, but rent them from the crown for a cent and a half an acre, and those who are employed in the mill, cannot expect to receive better wages than persons doing the same work in the mills of England.

"It is with that in view that the manufacturers are accommodating themselves to the circumstances. We are already having all the effects of free trade itself, and there is no power that can alter the conditions until Congress says that the tariff shall not be reduced. It would be infinitely better if it would say so in a manly way, rather than pretend to be doing something and do nothing, for then the effect would be instantaneous, and every mill which is now in enforced idleness would be at its full capacity in 30 days, and the producer who cannot now dispose of the stock on hand at actual cost would find a ready market."

THE IRRIGATIONIST.

The Irrigation Congress in Los Angeles.

The International Irrigation Congress at Los Angeles, beginning October 10th, is certain to be the greatest event that has occurred since the cause of reclamation became a distinct movement in our national life. The people of Los Angeles have displayed remarkable energy in organizing and pushing the congress, and it seems now quite certain that the event will triumph over the only thing that could possibly prevent its complete success—the hard times.

It is evident that the discussions will be much more varied and interesting than at the Salt Lake congress, and that this session will make a much deeper mark on public thought. This is only natural, as there has been a steady and wonderful growth of interest in the cause during the past two years.

A BROAD PROGRAMME.

The first session of the Irrigation Congress, held in Salt Lake city in September, 1891, dealt exclusively with the public land question. By deliberate design the Los Angeles congress will take a much broader range. Much time and thought have been expended upon the preparation of the comprehensive programme, and some of the brightest minds in the West are now engaged upon the papers and addresses which will open the discussion on various days. While it is not proposed to have a cut-and-dried programme in the any sense of the word, and while the fullest scope will be given to discussion, it was clearly seen to be necessary to have a well-defined plan in order that the many important phases of the subject should be satisfactorily dealt with in the five days allotted to the congress and definite results arrived at. Not only that, but it was also important that gentlemen especially fitted to speak on certain branches of the irrigation subject should have ample notice of the fact that they would be depended upon to present their subjects.

THE NATIONAL GOVERNMENT AND IRRIGATION.

A topic that will certainly arouse the greatest interest and to which it is proposed to devote an entire day, is "The National Government and Irrigation." Secretary Hoke Smith has notified the Committee of Arrangements that the Interior Department will be represented by an official especially designated for the purpose. Major J. W. Powell, the distinguished director of the Geological Survey, has also announced that he will be present.

This will be especially gratifying to everybody, as the policy of his bureau is by no means as well understood as it ought to be. While there is ground for difference of opinion as to the merits of the plan he has proposed for the solution of the arid land question, it is very certain that the value of the enormous work accomplished by him has not been appreciated as its full worth. He will have an opportunity at this convention to explain his views at length and his audience will be sure of a forceful and eloquent address. If a better understanding between the director of the Geological Survey and the people of the West is reached, this alone will be a result of sufficient importance to render the holding of the congress profitable to the friends of irrigation. Mr. F. H. Newell, one of the ablest

and most fertile of Major Powell's assistants, has also announced his intention to be present.

While it is understood that Secretary Morton is not especially favorable to the extension of the agricultural area, it is certainly to be hoped that he will give his consent to the appointment of a representative of his department to go to Los Angeles. The Agricultural Department has done much good work in the interest of irrigation, but it has done so on lines of its own, and it would be interesting and important for an official who is thoroughly familiar with it to explain its past work and future plans.

It is quite possible that gentlemen who go to Los Angeles to represent the Government may hear some plain talk, but it will be well worth their while to meet the men of the West face to face and learn just what their needs and demands are.

THE FINANCIAL ASPECT.

Irrigation is a many-sided question. One of the most important sides relates to the subject of investment. This is a phase that is beginning to attract great attention in the money centers of this and other countries, and yet the Western people have never given proper expression to their confidence in irrigation securities.

Several gentlemen who have made a special study of this branch of the subject and have most successfully presented the merits of important enterprises to the investing public, have been invited to prepare addresses. The congress will do good service, alike for Eastern capital and Western enterprise, if it shall lay down in its resolutions the fundamental principles which underlie good irrigation securities and point out the class of undertakings which are to be regarded with suspicion.

A DAY FOR THE ENGINEERS.

Another prolific subject will be that of irrigation engineering. It is hoped that not only the most eminent American engineers, but also some prominent men of foreign countries, will present papers and addresses to the congress on the day set apart for the discussion of this subject. The delegates will be able to see several of the famous works of engineering in their excursions about Los Angeles, and this will add a special interest to the discussion.

IRRIGATION LAW WILL BE DISCUSSED.

The day devoted to the discussion of irrigation law ought to be entertaining as well as instructive. It may well be surmised that the famous District Law of California will be the storm center of this discussion. Doubtless the Hon. C. C. Wright, the jealous father of this law, will be on hand to defend his offspring. It will be remembered that Mr. Wright was president of the last congress and did not have the best opportunity to discuss the subject. It is to be hoped that on this occasion the friends and opponents of the District system will have the fullest opportunity to discuss it, to the end that the people of the other States and the country at large may form an idea of its merits. The law has now been in operation more than five years and it is time that some conclusion was reached concerning it.

There is an opportunity for a valuable discussion on the general subject of irrigation law, and it is to be hoped that some progress will be made toward the adoption of a code common to all the States, at least in its main features.

THE ARID PUBLIC DOMAIN.

But the greatest of all subjects will be the question of what to do with the vast empire of arid lands that still remain the property of the Government. In mapping out the programme the committee has wisely undertaken to prevent this subject from monopolizing all the time and attention of the congress, as it did at Salt Lake. Nevertheless, the subject is bound to arouse the utmost interest and to be discussed with great animation.

About all the land that remains as the heritage of the American settlers of the future belongs to the arid public domain. It is an empire of more than eight hundred millions of acres. Much of it is susceptible of reclamation, while the rest of it is important for range purposes and forest reservations. The administration of this great public estate at the hands of Eastern men is a farce and a nuisance. By some means homes for millions of future citizens must be conquered from these deserts. They will be the homes of the freest and most independent men that ever lived upon the earth. Here, upon these forbidding deserts of Arid America, civilization will reach its highest mark in the twentieth century. To reclaim, to settle and to civilize these waste places is one of the sternest, and at the same time one of the most inspiring, tasks that ever confronted American statesmanship.

The Salt Lake congress resolved that these lands ought to be ceded to the several States in which they lie. It is easily to be foreseen that the opponents of this proposition will be somewhat more numerous at Los Angeles. Major Powell will be on hand to explain his plan, and doubtless many other ideas will be advanced. The discussion of this subject will be most interesting, and the importance of it cannot be overestimated.

NO LUKEWARMNESS THIS TIME.

It is remembered that at the last congress the two Dakotas, Arizona, New Mexico, Washington and Oregon were all but unrepresented. All these States have the most vital interest in the triumphant progress of the irrigation idea, and it is certainly to be most earnestly hoped that they will be present with full delegations. They are needed in the councils of this convention, which must surely have a very potent influence upon the future of their greatest industrial interest. It would be a shame for them to fail of their duty at this time, and the fact that business conditions are so discouraging will not be accepted as an excuse by their friends. On the contrary, the fact should make them all the more aggressive in the interest of irrigation development.

OUTSIDE OF THE CONVENTION.

People who go to Los Angeles during the week beginning October 10th will find something to interest and benefit them besides the sessions of the congress itself. Elaborate

preparations are being made to show them the beauties of that most charming of all American communities, southern California. They will also have an opportunity to inspect some of the noblest irrigation works that have been constructed upon this continent. They will find the hospitality of the people boundless. It may thus be confidently predicted that the social side of the congress will be most enjoyable.—The Irrigation Age.

AGRICULTURAL ENGINEER.

How to Build Good Roads.

An Essay Read at the Recent Road Convention at Sacramento.

[The following paper on how to build good roads, and what are the best and most economic roads, was written for the late Road Convention by W. E. McClintock, C. E., of the Massachusetts Highway Commission.]

It would be of little use to one who has gained his experience in the study and manipulation of the roads of Massachusetts to attempt even an outline of the necessary policy to be pursued in the management of California roads. There are, however, some few general principles that must be borne in mind and which will apply equally well to any location.

THE WEATHER.

It must be remembered at the outset that the weather is a very important factor among the numerous agencies which are constantly at work tending to destroy a road. By far the greatest wear of an ordinary country road is from the falling rains, the strong, dry winds, or the expanding and contracting influence of frost.

The effect of the rain is twofold: First, it washes the surface; second, it passes to the foundation.

THE WASH FACTOR.

The surface wash is of three kinds, viz.: First, by the water accumulating in the side gutters. These are made so deep and wide as to encroach on the roadway, when they become dangerous. Second, by flowing from the center of the roadway to the gutters, channels are formed which gradually become a source of annoyance and soon render the way unsafe. Third, by following small wheel-ruts on a falling grade the center of the roadway is slowly but surely made the gutter, and is thus destroyed.

The rain water reaches the foundation of a roadway either by passing directly through the surface, if it be loose and porous, or by soaking in from the sides. In making a study of the effects of water on a roadway, it is well to bear the above facts in mind, and then determine what action is necessary to prevent waste and destruction.

FEATURES OF A PERFECT ROAD.

In this connection we find that the two essential features of a perfect road are a porous foundation and non-porous surface.

With a porous foundation all water will quickly pass downward; none will stand to soften the ground and the frost can do but little harm to the roadway if it be free of water. Underground water which flows toward the road will be powerless to harm it, if its foundation is porous, so as to permit the same to pass downward, or if it is intercepted by a drain or drains and thus carried to some convenient water course. If the road traverses a sandy or gravelly location, no precaution need be taken to secure a drainage of the foundation, as nature has already furnished it. On such a soil we shall need no heavy stone, no extra depth of any kind of stone, and no drains. If the natural soil over which the road is laid out be clayey or loamy and impervious to water, then we must take those precautions which will furnish an artificial porous foundation. If the road be on a hill-side, a drain constructed on the uphill side will prevent any water from passing underneath it.

DRAINAGE.

If the road traverses level ground, one drain on each side must be built; or instead of these, one in the center, with a slope of the impervious material toward the center from both sides, the proper crown being made by the top covering. The drains may be built of rough stone, laid in the bottom of a trench from two and a half to three feet deep, or of common tile or vitrified pipe with open joints. Small stone or fairly good-sized gravel stone should be filled in over the drain to the top of the trench. The drain must lead to a water-course or to the surface of the ground at a point where it can readily flow away; otherwise the water will pass to the lowest point of the road and there stand until it so softens the foundation as to render it unable to bear up the traffic. Open side ditches will accomplish the same results as the drains, and if the road be through a farming country, or, in fact, any section where the open ditch will not be an objection, it can be built for far less money, and may, on the ground of economy, be adopted. If the natural soil be heavy clay it may be necessary to put in a center drain, or to place coarse stone carefully under the whole width of it, so as to permit the water to easily pass to the side ditches or center ditch, whichever may be used. Our motto at this point should be, keep all water from the road foundation.

EFFECTS OF RAIN ON ROADS.

We will now pass to the effects of rain falling on the surface. If the wash of the gutters be great, the only remedy will be to pave them with any kind of rough stone which may be most conveniently obtained. Such a pavement is comparatively inexpensive, and will save enough to more than pay for it. At times the water may be removed in the grass gutters, with no expense for pavement. If possible, the growth of grass should be encouraged at the sides of the road and the gutter made rather broad and flat, as by such an arrangement the water will be spread out more and its velocity be greatly reduced, thus preventing wash-outs.

We have already discussed the question of how to keep

the water out of a foundation when it flows toward it from the sides. We will now treat of that part of the rain which falls directly onto the road.

WATER ON THE SURFACE.

It is well to bear in mind that too much water passing over the surface washes away the finer material which bonds the coarser and holds it firmly in place. By passing through the surface it reaches the foundation and softens it, so as to render it unable to bear up the load. We must consider the roadway itself as a roof which is to keep the water away from the foundation, exactly as the shingles on a roof prevent the ruin of the interior of the building. If the top surface be water-tight, we shall have a perfect road, as far as its ability to bear up a load is concerned. If we, at the same time, get a durable and smooth surface, we have got the most economical road we can build. If we are seeking a road which will be good during all seasons of the year, we must reject all material that is fibrous, or which absorbs water or does not let it flow off quickly. All loams and clays come under this class. They are good (if the traffic be light) when they are just moistened. During a long dry period they are all dust, and when it is wet there is nothing but mud. The fibrous nature of the material holds the water, and it evaporates instead of draining off. This is a slow process, and during the rainy season one evaporation is not completed before another wetting takes place, and we have a continuously muddy way.

THE ROOF OF A ROAD.

The three materials which may be employed to obtain a water-tight roof are gravel, broken stone and pavement. The material to be used should be selected with reference to the volume and character of the traffic, and its applicability to the exposure and grade. When the cost of repairs on the cheaper material exceeds the interest on the excess of cost of the higher over the lower-cost work, then it is poor economy to retain the cheaper material and methods. This can only be determined by a study of the local conditions.

It is not our intention to touch on pavements, but we will discuss roads made of gravel and of broken stone. We have already said that the road must be a roof over the foundation. This roof has to serve the double purpose of keeping all water from the foundation and of affording a good smooth surface over which a loaded wagon can be hauled with the least expenditure of force. If a cubic foot of gravel be passed through screens of varying size of mesh, we shall find that what measured one cubic foot will have increased in size to a considerable extent. This will be even more perceptible if the finer screenings be placed at the bottom, with the coarser on top.

SOLIDITY A DESIDERATUM.

What we desire in a road is solidity, in order to get imperviousness. Whatever we do should be done with the end in view of placing our material in such a manner as to fill the void spaces in the coarse material as much as possible with the fine, and at the same time obtain an equality of hardness. If the gravel be dumped on a roadway from a cart just as it is taken from the bank, the coarser stone will roll to the outer edge of the heap while the finer will remain in the center. We thus get an uneven degree of texture, which will be more and more apparent as it begins to wear a little. A little labor expended in screening the gravel into say two grades will be of great benefit. If we first take out the larger stones, or what will not pass through a one-inch screen, we will get a better, because a more even, mixture. The larger stone will be arranged together, and furnish a solid foundation, while the finer gravel will simply fill the void in the coarse and bind the mass together. If this can be firmly rolled it will make a much better road than will the natural unscreened gravel, and at a price but very little greater. It must be remembered that sand is not gravel. Sharp sand cannot be made into a road. The more of such material to be found in any gravel the poorer is such gravel for road-building purposes.

GRAVEL ROADS.

Probably the best gravel for road-building purposes is the "blue gravel," which is made up of angular fragments of stone of varying sizes and a fine stone dust, with a slight quantity of clay, in the shape of fine powder. If the larger stones be removed entirely, and a little care be exercised in laying on the remainder, this makes a splendid road for all kinds of light travel and even a moderate amount of heavy. This gravel is found in banks which are very hard to work, and it is somewhat expensive to pick out and remove the larger stone. Of the rounded, water-washed gravel, that which has an excess of quartz in any shape is less valuable, as it is very brittle, and at the same time has no good bond. A slaty gravel makes a firmer and smoother road than the harder quartz, as there will be sufficient powder made by the action of the wheels to at all times give a good bond to the whole mass and make a smooth surface.

A MAIN POINT.

The main point to remember about gravel is to place the material in layers, with the fragments of each layer as near the same size as possible, the coarsest at the bottom, and bind them with the finer stuff placed on top. If this cannot be rolled, it should be carefully watched as it begins to compact, and all ruts at once filled, either by men with rakes or shovels, or by the use of a road-scraper. If the gravel ever compacts with hollows or ruts in the surface, it will be a very difficult matter to fill them so as to have a good, even road. The extra cost of this raking and leveling is but slight, while its effect is to give a smoother and more durable roadway. It is better policy to build less and to have it right than to cover a long stretch and have none of it good.

There are but few gravels which will make a good road. But, by careful manipulation, a comparatively poor gravel can be made to give fairly satisfactory results.

(Concluded in our next issue.)

THE HOME CIRCLE.

In the Morning.

"Grind your ax in the morning, my boy;"
 'Twas a gray old woodcutter spoke,
 Beneath whose arm, on his backwoods farm
 Had fallen the elm and the oak.
 The hickory rough and the hornbeam tough
 Had yielded to wheat and corn,
 Till his children played 'neath the apple tree's shade,
 By the cabin where they were born.

"Grind your ax in the morning, my boy,"
 He said to his lusty son,
 "Or the heart of the oak will weary your stroke
 Long ere the day is done.
 The shagbark's shell and the hemlock knot
 Defy the dull, blunt tool,
 And maul as you may you will waste your day,
 If you have the strength of a fool.

"Grind your ax in the morning, my boy,
 Bring the hard, bright steel to an edge,
 The bit like a barber's razor keen,
 The head like a blacksmith's sledge;
 And then through maple, ironwood and ash
 Your strokes resistless shall drive,
 Till the forest monarchs around you crasb,
 And their rugged fibers rive.

"Grind your ax ere the sunrise shine,
 With long and patient care,
 And wet with oilstone, sharp and fine,
 Till the edge will clip a hair.
 And whet, though you reel o'er the stubborn steel,
 Till the toil your right arm racks.
 Pray, how could you cut the white oak butt
 If you had but a pewter ax?"

"Grind your ax and be ready, my lad,
 Then afar in the forest glen,
 With a steady swing your stroke shall ring,
 Keeping time with the stalwart men;
 But if you miss your grinding at dawn,
 You'll never know manhood's joys;
 No triumphs for you the long day through,
 You must hack the brush with the boys."

"Grind your ax in the morning!" I heard
 Life's watchword, rude but clear;
 And my soul was stirred at the homely word
 Of the backwoods' sage and seer.
 Oh, youth, whom long day lies before,
 Heed, heed the woodman's warning!
 Would you fell life's oaks with manly strokes,
 You must grind your ax in the morning!

And he who dawdles and plays the fool,
 Nor longs for virtue or knowledge,
 Who skirks at work, plays truant at school,
 Or "cuts" and "ponies" at college;
 Whose soul no noble ambition fires,
 No hero purpose employs,
 He must hoe life's fence row among the briars,
 Or hack the brush with the boys.

—George Lansing Taylor.

Aunt Rachel's Treatment.



RASH! An ominous sound came from the kitchen as I was sitting for a quiet talk with my friend, Mrs. Morrison. We had just been enjoying a well-prepared dinner at her table, and the two or three gentlemen guests had gone.

"Something's broken," I said.

"It sounds like it," she replied.

I expected her to get up and run nervously to the kitchen, but she quietly continued the conversation. A moment after there appeared at the door a Swedish servant with a most woe-begone look on her face and a tear on either cheek. I could not forbear an exclamation of dismay at perceiving that in her hand she held the fragments of my friend's largest meat dish, belonging to her fine dinner set.

"Broken?" asked Mrs. Morrison, looking at it as she might have looked at the wreck of a kitchen bowl. "You might have selected something else to break, seems to me, Lena," she added, with a little shake of the head, but still with a smile.

"It slipped right out of my hands," said the girl in great distress.

"Oh, don't stop to fret over it, Lena. You don't break many dishes. No, it's no use to save the pieces. It can't be mended."

"Well, Ruth!" I exclaimed, as Lena, greatly comforted, took her departure. "Pope must surely have known some ancestress of yours when he wrote,

'And mistress of herself when china falls.'

Any one would think to see how coolly you take the ruin of that handsome dish that you could have a new set any day if you want it."

"Which is very far from being the case, as you know," said my friend, soberly. "I am afraid I cannot match the dish, and if I can, I can scarcely afford the money for it just now."

"But you do not seem to mind the accident at all," I persisted, unable to understand her equanimity.

"Oh, yes, I do—after a fashion," she went on very deliberately. "That set was a present from dear old Aunt Rachel, and I am sorry to see any piece of it broken. But if you are wondering because I do not fret over what can't be helped, I can only assure

you, Eleanor, that I cannot afford to. It is bad enough to lose the dish without that."

"Any one will admit that fretting is of no use," I said. "But you are about the only woman I have ever seen who really lived up to the idea."

"I didn't begin that way," replied Ruth, settling back into her chair with a thoughtful expression on her pleasant face. "I was very much given to fretting over small annoyances when I was a good deal younger. It was that same dear old Aunt Rachel who cured me by vigorous treatment."

"I should like her recipe if you can give it to me."

"Oh, it's only the same one you may hear or read any day of your life: 'Don't fret; it is thankless, rebellious and utterly useless, never does a bit of good, and always does harm,' with plenty more such plain truths. I think it must have been the sturdy administration which affected me. When we were first married, Fred and I began housekeeping in our pretty little house with everything nice about it, and were as happy as young people usually are. But my habit of worrying over trifles began putting little blots here and there on the smooth surface of our lives. A broken dish, a stained tablecloth, a poorly ironed article, the flies, the dust, the soot, any petty annoyance, would bring a cloud over me which shut out the brightness all about me. I could see that Fred was hurt and fretted by it."

"Well, real trouble came at last. Our baby was sick for weeks and weeks, and we thought he never would get well. How I looked back on the days which had been blessed, and I wondered how I had ever been able to find trouble in trifles! As I prayed that the shadow of death might not so early darken our home, I believed I should never again allow myself to be moved by small troubles. I did not have an opportunity to test my resolution very soon; for as baby recovered I became ill. For many a day I lay far beyond the hope of any future, so far as this world is concerned. The winter had passed before I won back my way to life, and began to take up its cares again one by one."

"I held well to my good resolution as I rejoiced in being able to oversee the housecleaning, until I came to the parlor carpet. The room had been shut up for months, and had not been properly aired and swept, and the moths had made fearful ravages all around the edges of the carpet. You'll be astonished to hear, Eleanor, that all my equanimity broke down at sight of it."

"No," I said sympathizingly. "I don't wonder at all. I've known women who would be fairly sick over such a thing."

"It was a beautiful carpet and I had been very proud of it. I did not find that anything else had suffered from neglect through my illness; but forgot all the other pleasant facts in view of this distressing one. Even when baby had crept over it, crowing in delight at the bright flowers, and trying to pick them with his chubby little hands, I forgot how much I would have given, not so very long ago, to hear a merry note from him. Well, just as I was at the very culmination of my 'pet,' Aunt Rachel's kindly face beamed upon me for a week's visit."

"Thankful to see thee so well, dear," was her greeting. "The Lord has been good to thee. Not that I don't mean that He would have been good if thee hadn't got well."

"Yes, I'm very well now, thank you, Aunt Rachel," I said, after the first inquiries were over. "Well enough, you see, having got past my great troubles, to settle down to small worries. Look here— isn't this enough to turn the soul of a housekeeper sick?"

"It is a pity," she remarked, viewing the mischief.

"Of course some things had to be neglected while I was sick," I continued petulantly, "but I never dreamed about such a thing as this."

"She looked at me with her quiet eyes, always so full, I used to think, of the very peace of heaven."

"Surely, Ruth, thee isn't going to make the matter worse by vexing thy immortal soul over a mishap?"

"Oh, it's very well for you to talk that way Aunt Rachel," I replied. "But I can't afford a new carpet just now."

"Thee doesn't need one. The bad places don't show much."

"But I shall always know they are there, and it will take away all my peace of mind."

"The eyes looked straighter into mine as she talked on, something like this: 'Thy peace is worth little, to thee or to any one else, if it can be so easily broken. Ruth Harvey, thee is starting out in life; beware that thy disposition to fret thyself about small things does not prove a curse to thee and thine. Every thought of discontent about matters beyond thy control is not only a sin against the God who orders for thee, but a sin against thy own soul, and an added

weight to every annoyance. If cherished, such thoughts become a pest of stinging serpents in thy breast. Thee will grow old and wrinkled before thy time. Thee will be peevish, complaining and fault-finding. Thee will be a terror to thy husband and children."

"Yes," continued Mrs. Morrison, "she said all that, and more. She said: 'Is one thread of that carpet woven into thy real peace of mind? Can it, or other small things really concern thy welfare, or that of those dear to thee, either for this world or the next?'"

"I never heard it quite so strongly before," I said thoughtfully, as my friend paused. "And if I hadn't seen you, I should have said it was very good talk indeed, but that no woman could live up to it."

"I had a week of it, you see," said Mrs. Morrison. "When Aunt Rachel went away, one of the last things she said to me was: 'I want thee to bear in mind what I said, dear—that every fretful thought thee wastes on small accidents is only so much added to their burden.'"

"I think I took it well to heart, for I concluded, Eleanor, that life's burdens are heavy enough without any such addition. And I will tell you one thing I have observed," she added with a laugh, "I do believe that four-fifths of the women that fret, do it because they think it a solemn duty."

"Nonsense!" I exclaimed.

"They do," she persisted. "You notice the next woman you meet to whom some mistake occurs. See if a great part of her worrying is not because she thinks she is expected to worry, and that it might be taken ill of her if she didn't."

I wonder if Mrs. Morrison is right!—Sydney Dayre, in the Congregationalist.

Hints on Dress.

Capes are to be worn, after all, says the *Philadelphia Record*, in every shape and style, though invariably small. They will be made of cloth, velvet, velveteen, black plush, and, in fact, of a great variety of material. The trimmings will be as varied as the stuffs used for making. In colors the dress goods shades prevail, brown, tan, dark and greenish blue, old rose, green, black, purplish tints and dark red. The linings are of surah, satin, or glace taffeta.

The capes are full and vary in length from just above to just below the waist line. The full trimming around the neck and collar-ette effect over the shoulders are still the style and vary according to the wear, being round or slightly pointed back and front. Short capes and mere collar-ettes to match the costume will be quite a feature.

Hoods are introduced on to the round cloaks with double capes. This innovation indicates what the future fashions are to be. A charming double cape of a brown tone was entirely covered with close-set rows of the like silk braid, but of graduated coloring toning from black to fawn.

Double-breasted jackets are much in fashion with three buttons, but the basques are not long. They are trimmed in quite a novel fashion with half-inch wide silk braid in treble sets, headed by narrow bands of Astrakhan. One was made in dark blue cloth with black braid, the sleeves full and the collar turning downward.

For traveling and the country the short cape of Amazon cloth in some pretty shade of beige or gray will be found very useful. The cape comes down a little lower than the waist and is lined with surah of some light shade of blue, pink or mauve, with a tiny ruche on the inside and a trimming of passementerie outside. The yoke may be covered with a single or double collar pleated in hollow pleats and finished round the neck with a turned-up collar, or pleated and trimmed with passementerie or some fancy galloon. A simpler style is merely trimmed with a light braid pattern around both collars.

There seems no definite style in the present modes. The skirts are close on the hips, and full at the base, the upper part of the corsage and sleeves very much ornamented and frilled, so as to widen the shoulders and make the waist look small. These toilettes are rather becoming when not exaggerated. However, there is a novelty, or rather a reappearance, coming in again, namely, trimming round the lower part of the corsage, either basques or tabs. These are timidly appearing, and very small; but it is not unlikely they will come into favor again.

Another change is that, having trimmed the skirts round all the season, they are beginning to introduce the ornament going down the skirts and embroidering the seams, or putting a row of passementerie down them or even a colored piping or binding. The large ruffs, called Henry II, or Valois, are very general, made of light material, such as mousseline, net, tulle, lace, the black net ones often edged with a narrow white or

ecru lace edging. They are worn at home or out, with mantle or without mantle, according to fancy. They furnish the neck well, but are rather warm-looking this weather. The double skirt is in great favor. It consists of two deep flounces, the upper one coming down from the waist and just overlapping the other. We also see the treble skirt, formed of three superposed flounces over a foundation skirt. If, however, the skirt is plain, it is trimmed in circles, three or four narrow flounces put on at equal distances, or else bands of embroidery, lace insertion, zephyr, velvet or moire ribbon, passementerie or galloon put on in the same way. If the material is wide enough, there is only one seam at the back; if not, there is one on each side as well, and for narrow-width fabrics, we have the umbrella skirt, formed of a number of gored widths, all tapering up to the waist.

Machine-pleated gauze, guipure lace, fancy galloon and ribbons are all much used in trimmings. Bodices are the reverse of skirts, trimmed so as to be extremely full about the shoulders, plain and clinging at the waist. Sleeves are enormous at the top, and quite tight over the forearm.

Baby's Habits.

Baby is a bundle of habits, and whether they be good or bad ones depends almost entirely upon the first few weeks of his existence. I have known a few babies with regular habits to have occasional unaccountable fits of crying, but I have never known one with irregular habits who did not have regular crying spells, which its poor mother called the three or six or nine months' colic, according to the age of the baby.

A baby has just one thing to do for the first few months of its unsolicited existence, and that is to grow. In order to do this to the best of his ability, and under the most favorable circumstances, he must eat, sleep, be held and bathed by the clock.

Few monthly nurses have the sense to begin right with a baby, and the mother must see to it that the utmost regularity is enforced. If you have a set time for each of his youthful occupations you can be certain, when he cries, what he is crying for; if it is near the time for feeding, he will know it without the clock as well as you do with it. If you have no regular hours you will be much more likely to force food upon him when he is not hungry and try to make him sleep when he is not sleepy.

Don't let your dearest friend peep at him when he is asleep. Mothers owe many hours of care and painful nursing of their fretful infants to their own vanity, which prompts them to show their precious charge to a caller, who must kiss the "pretty dear," and generally succeeds in awakening him from his peaceful slumber.

It is a very mistaken plan, too, to try to accustom a baby to noise. Mothers often declare that their babies must get used to the distractions of family life and try to sleep through the rackets of the older children, the rattling of papa's newspaper and the hum of the sewing machine. This is a most unparalleled piece of idiocy. If you can by any means compass a quiet corner for baby's cradle and you value your peace of mind or his health, by all means do so. How would you like to be forced to take your naps in a boiler factory?

I always lose my temper, and very justly I think, with mothers who declare that their babies shall not be rocked. There is no sense in joggling a baby as constantly as if you were churning butter, but the gentle swaying motion of a hammock lightly touched never did harm to young or old. See to it that the baby acquires good and regular habits, but don't allow yourself to have absurd whims.—Recorder.

Mrs. Julia Ward Howe.

Mrs. Howe is a slow writer, elaborating with great care, and only publishing when every one of the half dozen critics who frequent her boudoir have pronounced her every word the best that could have been selected. She was 10 years in writing "Later Lyrics," and often two days in correcting a single word or line of some one of its poems. From her contributions to the periodical press she has not realized a fortune. For the "Battle Hymn" she was paid \$5 by the *Atlantic*; for "Our Orders," \$10 by the same liberal journal. Fifteen dollars for fire enough to set a continent in a blaze!

But Mrs. Howe is more than a poet; she is a thinker and a scholar, and these are rare things in a woman. She reads half a dozen different languages, and has outstripped most men in the higher walks of philosophy and literature. She is familiar with Hegel, Comte, Goethe, Dante, Swedenborg and all the great masters of song, faith

and metaphysics. She has also mingled with cultivated society and traveled extensively, both in this and the old world. But she is not an artificial "lady." She is a large-hearted woman—one whose soul has been energized by study, elevated by reflection, chastened by sorrow and sanctified by faith.—Boston Journal.

Gems.

The union of energy and wisdom makes the most complete character and the most powerful life.—Phillips Brooks.

Dress yourself fine where others are fine, and plain where others are plain; but take care always that your clothes are well made and fit you, for otherwise they will give you a very awkward air.—Chesterfield.

To be happy at home is the ultimate result of all ambition, the end to which every enterprise and labor tends, and of which every desire prompts the prosecution.—Johnson.

Say nothing good of yourself, you will be distrusted; say nothing bad of yourself, you will be taken at your word.—Joseph Roux.

In religion, as in friendship, they who profess most are the least sincere.—Sheridan.

Truly, this world can go on without us if we would but think so.—Longfellow.

Some will always be above others. Destroy the inequality to-day, and it will appear again to-morrow.—Emerson.

Covetous men need money least, yet most affect and seek it; prodigals who need it most do least regard it.—Theodore Parker.

To a woman the romances she makes are more amusing than those she reads.—T. Gautier.

Glow-worms are the image of women. When they are in the dark, one is struck with their brilliancy; as soon as they appear in the broad light of the world, one sees them in their true colors, with all their defects.—Mme. Necker.

I could never pour out my inmost soul without reserve to any human being without danger of one day repenting my confidence.—Burns.

Weight of an Eagle.

Said C. K. Stout of the treasury office, as he sat before the scales with \$8000 or \$10,000 in double eagles at his elbow: "How many \$1 bills do you think it would take to weigh as much as one of these coins?"

The reporter considered a moment and made a guess.

It takes just 27, unless the bills are trimmed close. Twenty-eight new \$1 bills always weigh a little more than a double eagle. Don't you believe it? Just wait."

He disappeared in the vault for a few minutes, and presently emerged with a package of brand new \$1 bills in his hand. Then he counted out 27 of them and said to the reporter, "Choose any coin you will."

The reporter chose a coin which Mr. Stout put on one of the scale pans. Then he put the 27 \$1 bills on the other pan. The long needle that moves on the index showed that the beam was almost level. The man of money added another bill to the 27, and the coin went up.—Cincinnati Commercial Gazette.

Cow Poetry.

A New Mexico exchange some years ago indulged in a little cow poetry that fits the present time well enough to reproduce it. It goes into the dreamy mazes of rhythm thusly:

"A short time since the cow was sad; she scarce could raise her head begad. Her hoofs were sore, her tail was limp; her mane and bangs had lost their crimp, and miles she trudged from grass to drink, with scarcely strength enough to wink. The owner, too, looked blue and glum, and he cursed the business some. But since the grass is tall, the cow can raise her head and bawl; her hide is slick, no bones protrude, she prances like a Tuscon dude. Her tail erect, her eyes are bright, she snorts and dares the crowd to fight. Her owner, too, digs up the chink, and asks the boys to take a drink. God bless the rain, the gentle rain; it makes a man feel young again. He feels like tossing up his hat and howling like a Democrat."

The Big Elms of New England.

Dr. Oliver Wendell Holmes still retains, at the age of eighty-four, his youthful passion for ascertaining and recording the measurement of the big elms of New England, which he so pleasantly revealed in the early papers of the "Autocrat of the Breakfast Table." But long practice has enabled him at times to dispense with the former peremptory use of the tape measure, and he is able to estimate very closely by the eye the dis-

tance round the big trees of the estates near his summer home at Beverly farms. He always carries his tape line with him, however, in his rides, and when he sees a tree that comes up to his standard of fifteen feet around, he measures it carefully. He says he has lately found only four such, and not one that reached sixteen feet in circumference. He usually measures the tree about five feet above the ground.—New York Times.

The Noisiest Animals.

What animal can make the most noise? The elephant. During the breeding season in the forests of India and Ceylon the trumpeting and roaring of the animals is continuous and terrific, and can be heard for miles. The feline family are wont to scare their prey thoroughly by their overpowering noise. Thus the roar of the adult lion is terrific, the windpipe being enlarged so as to give the animal a larger volume of air, proportionately, than any other animal. The male gorilla has an awful, loud-sounding voice. When attacked it utters a short, jerking, acute bark, like that of an angry dog. To this succeeds a low growling, which might be mistaken for distant thunder.—Baltimore American.

Ivy on Walls.

The growth of ivy on the walls of houses renders the walls entirely free from damp, the ivy extracting every particle of moisture from wood, brick or stones for its own sustenance, by means of its tiny roots, which work their way into the hardest stone. The overlapping leaves of the ivy conduct water falling upon them from point to point until it reaches the ground, without allowing the walls to receive any moisture whatever from the beating rain.

Welsh Americans.

The Welsh in the United States claim that they are in number as many as their countrymen in Wales, and they also claim that one of their ancestors forestalled Columbus in the discovery of America by 272 years. They base their assertions on historical traditions and the manuscripts of old Welsh bards on the one hand, and on the prevalence of Welsh in many of the languages of the Indians, both of South and North America, on the other.

DOMESTIC ECONOMY.

SWEET PICKLE APPLES.—Take one teacup of vinegar and two of sugar, and make a syrup of them, adding cinnamon and cloves. Pare and core sweet apples, drop them in the syrup and let them cook until tender, not soft. Put in a jar and pour the syrup over them. They are ready to eat as soon as cold, and will keep any length of time.

CANNED PLUMS.—Sweet plums require about half a pound of sugar, and sour plums from 12 to 14 ounces, to a pound of fruit. Wash the plums, and, if large, prick each one in several places, to keep the skin from bursting. If the plums are not very soft, and the skins are tough, put them in a wire basket, a few at a time, and plunge it into boiling water and then into cold water. The skins may then be peeled off easily. Make the syrup according to the acidity of your plums, using as little water as possible. Boil and skim it. Drop the fruit in carefully, cook until tender, then drain and put into jars. Seal at once.

SPICED CRAB-APPLE JAM.—Wash six pounds of good crab-apples and put them in the preserving kettle with just enough hot water to cover them. Cook until the fruit is so tender that a broom straw will pierce it; then rub through a coarse strainer, having both the fruit and liquid pass through. Return the strained mixture to the preserving kettle and add three pounds and a half of brown sugar, one tablespoonful of ground clove, one tablespoonful of salt and one of pepper. Cook gently for one hour and a half, stirring often. Put into little jars or tumblers. This is to be eaten with cold meats.—Maria Parloa, in Good Housekeeping.

PRESERVED QUINCES.—Wipe the quinces, cut them in quarters, and remove the skins and cores. Weigh them, and allow an equal weight of sugar. Cover with cold water, and as soon as it begins to boil, put in a little of the sugar. Do not stir them, but press them down under the syrup and remove the scum. Add the sugar by degrees until it is all in the kettle. Let them boil slowly until perfectly tender and of good color. Drain them well as you take them out, and pack in the jars, then fill up with boiling syrup, and

seal. The syrup that is left may be boiled longer, then strained into glasses, and you will have jelly. This is thought by many to be the very best way of preserving quinces.

PRESERVED PLUMS.—Allow equal weight of sugar and plums. Wash the fruit and put it in a large bowl or jar. Make the syrup with as little water as possible. Boil and skim it, then pour it over the fruit. The next day pour off the syrup and boil again. Repeat this on another morning and after the last time turn the plums and syrup into the kettle, let it boil up quickly, and then simmer about 20 minutes. Pour into jars, and seal.

YOUNG FOLKS' COLUMN.

The Little Lad's Answer.

Our little lad came in one day
With dusty shoes and tired feet.
His playtime had been hard and long
Out in the summer's noontide heat.
"I'm glad I'm home," he cried, and hung
His torn straw hat up in the hall,
While in a corner by the door
He put away his bat and ball.
"I wonder why," his auntie said,
"This little lad always comes here
When there are many other homes
As nice as this and quite as near."
He stood a moment, deep in thought,
Then with a love-light in his eye,
He pointed where his mother sat,
And said: "She lives here, that is why!"
With beaming face the mother heard;
Her mother-heart was very glad.
A true, sweet answer he had given—
That thoughtful, loving little lad.
And well I know that hosts of lads
Are just as loving, true and dear;
That they would answer as he did:
"Tis home, for mother's living here."

What Katy Did.

"Katy-did-it! Katy-did-it!" sang the kate-dids in the trees. Who was Katy, what did she do, that all night long the insects sang about her? Who was Katy? Why, a pretty little girl six years old. Such a merry little girl, that every one loved her. Katy had come out to stay with Grandma Lee. Mamma's sister was very sick, and mamma had gone to nurse her. Papa had sent Katy and Little Tom, with their nurse, to grandma's.

Grandma Lee lived in the country, with a large house with a beautiful garden to it. Back of this garden was the barn, where Katy liked to hunt for eggs and play in the hay. So Katy played from morning till night at grandma's, and was very happy. One warm afternoon she thought she would go into the parlor and get a book that had beautiful pictures in it. It was on a table that had a scarf hanging over the edge. When Katy reached to get it she pulled the table scarf off. Down went the book and a large vase, which was broken all to pieces.

"O, dear!" said Katy, "grandma will be so very angry, I am afraid to tell her." Little Tom had followed Katy in and now

stood beside her. Just then Katy heard grandma coming and ran out on the porch. She heard her grandma say: "You naughty boy to break grandma's pretty vase!"

Then Katy thought, grandma will never know it was I who did it; for Tom cannot talk and he is always breaking things. I won't tell her I did it. So she ran away and did not come in till grandma called her. Then grandma told her that Tom had gone into the parlor, and broken the vase by pulling the scarf off the table. Katy did not say a word, but she could hardly eat her supper. When little Tom came up to kiss her "Good night," before nurse put him to bed, she almost cried. But she thought it would not do to tell then. She was glad when bedtime came, she felt so unhappy.

Katy slept in a little room that opened into grandma's. In the middle of the night she heard a noise and waked up. The moon was shining into the room, and it was almost as light as day. She heard something which sounded like, "Katy-did-it! Katy-did-it! Katy-did-it!"

She pulled the sheet over her head to shut out the noise, but still she heard the singing "Katy-did-it!"

"They mean me," said Katy. "I wish they would stop." But they only sang the louder.

Katy could stand it no longer. She jumped out of bed and ran into grandma's room, crying, "O, grandma, grandma, Katy did it."

Grandma jumped up, saying, "Why child, what's the matter?"

"O, grandma," sobbed Katy, "Tom did not do it; Katy did it."

"Did what?" asked grandma.

"I broke the vase," replied Katy, "and then let you think Tom did it."

Then Katy told grandma how the kate-dids would not let her sleep till she had told her all about it. Grandma said she hoped Katy would never be afraid again to say, "Katy did it," when she had done wrong. I think after that she never was.—Our Little Ones.

Saved by Its Song.

A little thistle bird in Monmouth owes its life to its perseverance and habit of singing while in trouble. A man in that village had heard the small songster's persistent notes near his window for nearly a month, and at last called the attention of a friend who makes a study of birds and their ways to its song. This friend soon made the discovery that the bird was a prisoner to its nest. A ladder was brought and the bird and nest were taken down and examined. One leg of the little sufferer had become ensnared in the wool with which the nest was lined, and it was only after 20 minutes of painstaking efforts with sharp instruments that the limb was loosened from the snarl. This done the spectators were surprised to see birdie fly away, apparently as well as though never tied to a near-by apple tree. The bird's parents or some other of his feathered friends had kept it supplied with food during its imprisonment.—Lewiston Evening Journal.

California State Analyst.

Royal Baking Powder is Superior to all in Purity and Strength.

"For purity and care in preparation the Royal Baking Powder equals any in the market, and our test shows that it has greater leavening power than any of which we have any knowledge."

W. B. Rising

Prof. Chemistry, University of California,
Analyst California State Board of Health, etc., etc.

No careful housekeeper can afford to use any baking powder but Royal.

PATRONS OF HUSBANDRY.

The Master's Desk.

Fare Thee Well.

With this number of the RURAL the master takes official leave of his desk and friends. For four years it has been a work and a pleasure, weekly, to meet the many readers of the RURAL and to try to say something for the upbuilding of agriculture and the betterment of humanity. The man who attempts this line of work must needs be patient and forgiving. To see a plant grow is out of the question, but to note its growth is perfectly natural. Who ever saw a rosebush grow? Who has not seen the rose-slip of to-day, the blooming bush of next spring? So with the work of the pen. Its growth and fruit are not momentary. If the thought advanced is exactly right it will grow with the lapse of time and yield a fruitage alike creditable to the writer and beneficial to the reader. To be conservative, yet positively progressive, has been the aim. Some of our readers may have thought the tone of conservatism too pronounced, and others no doubt believe no progress has been made. With these there shall be no contest. Let time decide the weakness, as well as the strength, of what has been done. To attempt to review the manuscript which has gone from the master's desk during the past four years would be tedious to all. Let it suffice to say that personalities and prejudices have been studiously avoided, while facts and principles have been as studiously sought. The purposes of the grange have been as fully set forth as time, ability and space would admit. It is true there are members of the grange who have thought, and some who yet think, the order is too conservative, too slow, so to speak. These members may have thought the master a little too cautious, but most will at least say the grange is stronger financially, socially and fraternally than it would have been had we run wild on the many isms and factions which come and go with the rising and setting of the sun. The great questions which affect citizenship, the fundamental idea of education as exemplified in our free and splendid public schools, the importance of having a spot called "home," the love for family, for country, for morality and for temperance, have not been forgotten or neglected. With the full knowledge that others could have done better, and with the reflection that my level best has been done, the record is submitted. It is with feelings mingled with pleasure and with sorrow, that this work is laid aside. Of pleasure, because of the mental and physical rest it will bring; of sorrow, because of the many "chats" with fond friends, which will be conducted by others—chats in which information has been gained and by which much pleasure was derived. No feeling of jealousy, no intent to do wrong, no desire to have revenge, no purpose of building up self at the expense of another, or for the sake of personal advancement or elevation, has been intended. Motives may sometimes be misunderstood. Aims are not always known to those who are not a part of the organization. So, no well-skilled general always dares confide all of his plans to the troops. With those in official authority I have always labored in the fullest confidence, and for the good that we could do. Let the past be our history for the work we have done. Let the present be our witness for good institutions and the future be the opportunity which we hope to have for the work that is yet ours and undone. In laying aside the pen, in giving the key of the Master's Desk to another, let no member of the order feel that we quit the great reform work which the grange has begun and for 25 years has carried on. In the future, as in the past, we shall strive to see our duty and to do it. Onward, upward, fearless and just shall be our motto. With friends to love, with favors to be returned, with friendship for all, with hatred for none, the pen, the key, the gavel—good wishes to and God bless you—are herewith and hereby handed to the next master of the California State Grange.

Come to Petaluma, bring your grange badge, your grange song-book and join the grangers in having a jolly good time.

Petaluma is wide-awake and ready for the State Grange. Masonic hall will be in perfect order, and a jollier crowd will never me there. Be one of them!

Be prepared for business when you get to Petaluma! Don't fail to have your report, or resolution, or whatever business you are to present, in shape for presentation as soon as an opportunity is offered you.

Be patient, progressive and persevering;

at the same time remember that action is the keynote to success.

In this aggressive age we need aggressive men, but we must not be content with that kind of aggressiveness which allows a person to fight his own image rather than have no fight on hand. An engagement when principle is at stake is all right, but don't allow personalities to warp your judgment so that you forget the principle and see only the person. Get strong men; get wise men; get men with backbone and brains! Get all the good men you can find and place them in the front ranks!

Pescadero Grange.

TO THE EDITOR:—Some way the months slip round before one knows it and a letter is due you before the former is well printed. It is to be hoped you and your readers do not yawn over our letters quite as much as the writer, for such unanimity of opinion would quickly consign us to cold oblivion.

However, as we are to tell all about ourselves I suppose I must make a beginning, and request your polite attention while I reveal to you all our doings, except, of course, the very private family secrets, such as our getting warmed up in discussion, not being rude to each other, you understand, only earnestly trying to convince each other that our separate opinions are the correct ones—but there, I didn't mean to tell, but I know you will keep my secret—and since I have told you part I might as well tell you the whole, for, like all mysteries, it is not so bad as it appears when only hinted at.

We have been trying to pass the Temescal resolutions in favor of silver. The question was passed pro and con all afternoon, at our last regular meeting, and laid over for next meeting. It is, of course, very important and necessary that we should do something with this question, and so we have taken the tactics of Congress as our model. Now that you are so deep in this secret I may as well promise to send you the sequel when I find out what it is.

If a good financial condition is any proof of a live and useful grange, then ours in Pescadero can certainly vaunt that proof. There are, to be sure, some chronic grumblers among us who think that we do not grasp all the benefits we might and who long to be and to do, oh, they hardly know what, but something. They would probably do so much in a short time, if they had their will, that their enthusiasm would kill not only themselves, but the grange. Happily there is a large conservative element among us who hold in check any especial wildness and through whom we always hit the happy medium.

I think the strongest tie in our grange is the fraternal love. We have no trouble with any member not obeying the rules or regulations. It is with sincere pleasure we meet and talk over what the great world is doing outside of our own Happy valley. It almost seems as if, here in Pescadero, the hard times could not touch us. We all live much the same as we did 10 or 15 years ago. There is no crash, no turmoil, no business success or failure, no wild-goose pleasure, just a steady tide of uninterrupted repose.

It is but natural that the grange should partake of the spirit of the town and be a very quiet body. This same quietness gives us time for reading and consideration. Thus it appears to us that it may be necessary in large granges, where many are constantly joining, to dispense with some of the initiatory ceremony, but at the same time we cannot help but think it a pity. The ceremony is so beautiful, the lessons taught, such as we most need to have imprinted on our minds, that surely we should find time for them. When properly carried out, it is a very dull person, indeed, who would not appreciate the ceremony and be edified thereby.

The few who have tried the trade-card system have given it much praise. It seems a hard lot to be held so firmly in the grip of the credit system that we cannot take advantage of it. How are we to break away? We see the coil of the credit system, but where is the remedy? It is not enough that we can get things cheap, we must have money. This money problem has troubled us since the world began, and keeps getting into a worse snarl the more enlightened we grow. The farmer has become so used to hard times that in this particular crisis he does not feel like exerting himself more than to give a morbid growl. He knows that justice has neglected to give him a proper reward for his labor, and he asks the reason why. He wants a just distribution of wealth and he is considering how it can be brought about.

Well, this is enough rambling for once, so hoping to meet you all at the State Grange, I remain, yours fraternally,
Sept. 12, 1893. MARY A. MANLEY.

San Jose Grange.

TO THE EDITOR:—Saturday, September 16th, was the day set apart to exemplify the work of the new ritual—or to prevent its being confounded with the present ritual it might more properly be called the "San Jose ritual," which is but a condensation of the four degrees into two degrees, and may be conferred at one session of the grange. It retains many of the ennobling thoughts and much of the beautiful language in the charges of the officers as contained in the old ritual, and in no degree lessening the impressiveness of the work. All the essential features of the present ritual are retained. Discarding only non-essentials and omitting two-thirds of the field work, much time is saved. Undoubtedly the committee found some difficulty in deciding what words, sentences and paragraphs to retain and what to exclude, but some must be omitted, otherwise the ritual could not be abridged. Our grange thinks the committee chose wisely and well.

Bro. J. B. Kingsbury was called to the master's chair and conferred the degrees on two—a brother and a sister. The time occupied in conferring the degrees was 45 minutes. There is no essential change in the obligations, which are as binding under the new as they are under the old ritual. Some of the unwritten work which requires so much time to give, but which is not used by one granger in ten thousand, has been entirely eliminated.

The charges were all read from manuscript and some of the officers exhibited a little hesitancy, but when the ritual shall have been put in type and the officers become familiar with their parts, the change from the old to the new will be most gratifying.

A resolution was presented and adopted requesting the committee to have the new ritual put into type, and when the proof is thoroughly revised, corrected as it need be and arranged, then to have one hundred copies printed in sheet form for distribution among the subordinate granges in the State. San Jose Grange, with perhaps one exception, does not believe that the ritual cannot be changed during the lifetime of any of the founders of the order. They do not believe that a body of men intelligent enough to lay the foundation for one of the grandest structures of modern times, that of the order of Patrons of Husbandry, are anxious to pass from this mundane sphere protesting against burnishing up and gilding the work they so ably begun. San Jose Grange is unanimous in commendation of the new ritual and hope and believe there will not be a dissenting grange in the whole State against its adoption.

Prune, at present, is king. He rules with a rod of iron; everybody must attend to his harvest. He takes children from school, men and women from the house of worship; he fills our grange hall with empty seats; he stops the wayfaring man on the highway and bids him enter his service in the adjoining field. How long has this state of affairs existed? Lo, many a day, but at last the end draweth nigh when King Prune will be temporarily, at least, dethroned, and little rivulets of gold running into the pockets of the tolling orchardists will take his place, and thereafter the places that knew them as dust-begrimed, horny-fisted hayseeds will know them no more. They will be seen in our churches and places of amusement; the broad avenues of San Jose will be crowded with their phaetons and surreys; they will meet and greet us with such smiles of contentment that will make us all wish that we also were orchardists. AMOS ADAMS.

San Jose, Sept. 18th, 1893.

New Hope Grange.

TO THE EDITOR:—New Hope Grange still has a small attendance, notwithstanding the busy times have passed among the farmers, but those who are trying to make the grange a success are active members, and much credit is due them for riding so far and being prompt in attending regularly. The non-payment of dues from many of our members during the prevailing hard times, and keeping up their dues in the State Grange, makes us feel financially poor. We are yet in hopes they will wake up, come forward, pay up and make our attendance

large, that we may through the long winter evenings have pleasant meetings for sociability sake, if nothing more can be derived from them.

At our meeting Sept. 2d, the evening was taken up in appointing different committees and arranging a programme for a pleasant time at our coming picnic, Sept. 29th. The committee consists of our most active members, and in their hands ought to meet with success as they seem to know just what to do.

The best of music has been engaged, both brass and string bands, and if the weather should be pleasant, bright and warm, we shall look for a large attendance.

At our meeting Sept. 16th we elected delegates to attend the State Grange at Petaluma. Some of our members attended the State Fair, while others are in attendance at Stockton this week. New Hope was visited with the first fall rain on Sunday, Sept. 10th, and although it was quite a rain no damage was done.

I hear several are talking of making applications for membership to our order.

It is with true pleasure I can make a correction in my August letter, that our Worthy Master Bro. W. E. Journey and Sister Journey were to move from our vicinity. They have decided to stay here another year. CARRIE CARLETON.

New Hope, Sept. 23, 1893.

Sutter County at the State Fair.

TO THE EDITOR:—In my last I wanted to say something about the State Fair and the share our gallant little county had in it, but the letter grew to such length that I dare not venture on the theme, and then, at that writing the returns were not all in, so the subject had to be deferred. But for fear the matter may grow stale or be crowded out by coming events, I beg again to put your good nature to further test in behalf of our glorious little county. You, Mr. Editor, may have noticed the disposition of Sutter county to be at the front and possibly an apology may be due the RURAL for the attention she has demanded at your hands; she certainly is under lasting obligations to you for the generous treatment. As to an apology, that seems to be due from those who were absent with their products and lost the opportunity to be seen and heard.

Sutter's showing at the District Fair in Marysville gave evidence that she was in it to stay. The exhibits were bunched and sent to Sacramento as a county exhibit, as well as exhibits by individuals. The whole was in charge of S. W. Charles, a young member of Yuba City Grange and one of the most industrious and enterprising of our citizens. He was assisted by numerous residents of the county by smiles and commendations and largely by their choicest products. They came, they saw and they conquered, as the following will show, taken from the general premium list:

Sutter county, first prize on county exhibit, \$500.
H. Poffenberger, Cranmore, second prize on general farm exhibit, \$50.
First prize on display of oats, \$5.
First prize on display of corn, \$5.
First prize on display of alfalfa, \$5.
A. F. Abbott, Yuba City, first prize on display of peaches, \$25.
First prize on display of apples, \$25.
First prize on display of pears, \$25.
Second prize on general display of green fruits, \$20.
R. C. Kells, Yuba City, first prize on best display of dried fruits, \$20.
First prize on best 10 pounds of nectarines, \$5.
First prize on best 10 pounds of apples, \$5.
First prize on best 10 pounds of figs, \$5.
Mrs. Jennie Starr, Yuba City, first prize on display of raisins, \$20.
Second prize on display of raisin grapes, \$4.50.
S. W. Charles, Yuba City, first prize on general display of grain in sheaf, \$40.
First prize on general display of fruit in glass, \$5.
John Burns, Vernon, first prize on general display of cheese, \$15.
First prize on general display of cheese over one year old, \$15.
George Ohleyer, Yuba City, first prize on display of club wheat, \$10.
B. F. Walton, Yuba City, first prize on display of Sonora wheat, \$10.
Sutter Canning and Packing Company, first prize on display of dried fruit by factory, \$20.

The writer spent one day at the Fair, and that only at the pavilion. Circumstances over which he had no control prevented a more extended visit, hence the inability of doing justice to a California exposition as it merits. It was remarked that the exhibition of the State's products was not as large as

With 23 years of experience in the Watch, Jewelry and Diamond Business, I am in a position to supply the public with goods in the above line at the very lowest figures. Shall be pleased to give estimates on anything appertaining to the line, especially American watches. Goods sent U. O. D. with privilege to examine on receipt of forwarding charges.

J. H. PIERSON,

126 Kearny Street, : : : : : San Francisco.

on some former occasions, and I am inclined to think this is true; but that it was the most meritorious admits scarcely of a doubt. It is of course difficult to improve on old lines, but they were fully up to the best, while new ventures to our soil and climate make their appearance, adding to the attractiveness of our fairs and the resources of our commonwealth. Space forbids an enumeration of the products. They hail almost from every country and clime of the globe, and find here a genial soil and climate, excelling in many lines the parental effort.

No State of this Union, and no one country on earth, can make the showing of native or acclimated fruits or cereals that is made in California. It has been reserved to this State to grow the hardy winter apple of the North alongside the raisin, the almond and the fig of the South, and in the highest degree of perfection, too. The North, the East and nearly the entire South are without the citrus fruits, while here they decorate our fields and dooryards. Scarcely do our luscious peaches, apples and prunes disappear from the trees until the orange and lemon, with their bright yellow color, decorate the deep evergreen foliage of those trees, and that, too, in the months of November, December, January and February, when nature sleeps in winter garb from Maine to our Eastern frontier. But pardon me, please; the theme is inexhaustible, and I must cease. The wildest fancy must fail to paint California as she will be seen 50 years hence. Individual effort will do much to enhance the general prosperity, but the grandest strides will come from co-operation and organized efforts.

No individual in our county could have made the showing at Sacramento, but to the many it was comparatively easy. Therefore, "we propose meeting together, talking together, working together, buying together, selling together and, in general, acting together for our mutual protection and advancement, as occasion may require." Fraternally,
GEORGE OHLEYER.
Yuba City, Sept. 24, 1893.

Secretary's Notes.

The following is a list of alternate representatives to the State Grange, opening at Petaluma at 10 A. M. on Tuesday, October 3d, as far as received September 25th:

List of Alternates.

Alhambra Grange—Alexander Ross, Mrs. Elitha L. Boss.
Bennett Valley—W. L. Whitaker, Mrs. Elmira Whitaker.
Danville—R. O. Baldwin, Mrs. Mary Baldwin.
Enterprise—E. J. Lynch, Mrs. Minnie Lynch.
Glen Ellen—Benjamin Clawson, C. A. Kennedy.
Independent—C. G. Watkins, Mrs. Watkins.
Lockeford—Mrs. Margaret Emslie, Mrs. Fanny McGary.
March—W. T. Lam, Mrs. Lam.
Merced—H. C. Healy, Mrs. Mary Healy.
North Butte—William Mould, Miss E. Mould.
Pescadero—B. Haywards, Mrs. C. S. Haywards.
Petaluma—D. Walls, Mrs. Walls.
Roseville—S. S. Gladney, Mrs. S. C. Powell.
Sacramento—William Johnston, Miss Gussie Wilcox.
San Jose—W. C. Kingsbury, Mrs. Sarah Kingsbury.
Santa Rosa—S. T. Coulter, Mrs. Rachel Coulter.
Stockton—John L. Beecher, Mrs. Beecher.
Temescal—Mrs. S. H. Dewey, H. H. Stevens.
Tulare—A. J. Woods, E. C. Shoemaker.
Two Rock—J. C. Purvine, Mrs. Purvine.
Vaca Valley—Mrs. M. C. Smith, Miss Portia Hill.
Washington—Jefferson Giles, Mrs. Rosey Giles.
Waterloo—H. C. Strucke, Miss Myrtle Macomber.
Watsonville—Abraham Cox, Mrs. Cox.
Woodbridge—G. H. Ashley, Mrs. Rose Ashley.
Yuba City—Geo. Ohleyer, Sr., Mrs. Ohleyer.

Standing Committees of the State Grange.

CREDENTIALS—Bros. J. D. Huffman, Harry C. Rapp, C. H. W. Brunlog, Sisters Walter Kenwick and D. Fisher.
DIVISION OF LABOR—Bro. E. Greer, Walter Renwick, Nelson Dill, Sisters A. Bickford and John Burnham.
RESOLUTIONS—Bro. Thos. McConnell, Jas. Moran, J. M. White, Sisters Gustave Brown, P. L. Bunce.
AGRICULTURE—Bro. I. C. Steele, H. D. Strother, Louis Schlimmer, Sisters Philo Hersey, H. M. Woods.
CO-OPERATION—Bro. Philo N. Hersey, J. R. Denman, L. A. Grein, Sisters E. Greer, F. B. More.
CONSTITUTION AND BY-LAWS—Bros. J. V. Webster, O. N. Cadwell, Milton Casey, Sisters J. R. Denman, C. D. Grover.
FINANCE—Bros. John Tuohy, Chas. Gamble, D. Fisher, Sisters Marion T. Noyes, A. Bickford.
GOOD OF THE ORDER—Sister E. Z. Roache, Marion T. Noyes, P. L. Bunce, Sisters Jamee Moran, Alida Allison.
EDUCATION—Sister Ella E. Ashley, Bros. J. S. Eddington, Alex. Henderson, Simeon Higgins, Lister E. C. Bedell.

Arrangements Committee.

PETALUMA GRANGE—M. D. Hopkins, Chairman; Theo. Skillman, W. W. Chapman.

Each patron must have a single individual certificate, signed by the secretary of the State and subordinate grange, both, in order to purchase a round-trip ticket over the S. F. and North Pacific R. R. at San Francisco, or elsewhere on the line, at half rates. All members should be notified of this at once.

At a meeting of the executive committee, September 12th, the secretary was requested to announce to subordinate granges the State

Grange exercises, to-wit: A public reception at the theater in Petaluma, on Tuesday evening, October 3rd; excursion on the S. F. and North Pacific R. R. (complimentary to all patrons), Wednesday afternoon, to Sebastopol and return via Santa Rosa, lunch to be provided at Sebastopol; Thursday evening, conferring the fifth and sixth degrees, with Pomona feast. Also, the following order of business as provided by the constitution:

FIRST DAY.

1. Opening of grange in ample form.
2. Presentation of credentials.
3. Report of committee on credentials.
4. Reading and approval of the minutes of any special session of the State Grange.
5. Report of officers of the State Grange.
6. Calling the roll of subordinate granges for the introduction of new business and master's reports for reference without debate.
7. Miscellaneous business and reports of committees.

SECOND DAY.

8. Reading and approval of the minutes of the preceding day.
9. Report of committee on credentials.
10. Consideration of proposed amendment to constitution of National Grange.
11. Consideration of proposed amendment to constitution of State Grange.
12. Unfinished business.
13. New business.

THIRD DAY.

14. Reading and approval of the minutes of the preceding day.
15. Report of committee on credentials.
16. Reports of special committees.
17. Reports of standing committees, to be placed on file to come up in regular order.
18. Additional business, same as preceding day.
19. Should any of the foregoing order of business not be completed on the first or second day of the session, it shall commence on the succeeding day where it left off on the former, except that the reading of the minutes and the report of the committee on credentials be the first business in order each day.

(Additional grange matter on page 242.)

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

Livermore Herald: Our farmers had a very fair crop of hay as regards quantity, and, as regards quality, it is gilt-edge; as a natural consequence there is a ready market for it at a fair, living price, ranging from \$8 to \$10.25 per ton. There is also a very fair market for beef cattle, another of our important industries. This helps greatly to offset the depression in the wine, grape, grain and fruit industries.

Fresno.

Enterprise: The grape-picking is progressing in this section; many are already through, and most vineyards will be picked by the end of next week. The quality of the fruit has never been better, and the acreage yield is much greater than expected.

Expositor: Raisin-picking is now in the height of operation. Scenes of activity are met with in every vineyard. The general report is that the crop is better, both in quantity and quality, than was supposed earlier in the season. In fact, it is a first-rate crop which is found on the Fresno vines this year.

Republican: The raising of poultry and hogs are neglected industries in Fresno county, and there is money to be made by engaging in them. Land can now be had at a low price, it can be stocked at a reasonable figure, and, with industry and intelligence in management, the profits cannot fail to be satisfactory to people who are willing to devote their time and attention to their business for reasonable returns.

Enterprise: Mr. S. D. Frost has a 10-acre tract of land south of Selma that is a practical illustration of what it is possible to do in "intense" farming in this section. Strawberries, blackberries, raspberries, grapes (both table and raisin), pears, peaches, apples, alfalfa, squashes, potatoes—an almost endless variety, in fact, of fruit and vegetables are produced, and in marketable quantities, on this small tract. Mr. Frost sold a large quantity of strawberries and blackberries from his vines this season, and the product will be largely increased next year. He has planted a few dewberries, the success of which will be closely watched, as the fruit exceeds in delicacy any of the berries of general cultivation. Mr. Frost's three-year-old Muscats are yielding a ton to the acre.

Humboldt.

Valley Oracle: A milk-condensing factory is being put up at Port Kenyon by two gentlemen whose names we could not learn. Work is progressing rapidly on the building, though the projectors do not expect to be able to receive any milk before next spring.

Kern.

Californian: T. K. Bacon of Rosedale brought to this office to-day a watermelon of the Russian Ironside variety, weighing 45 pounds.

Californian: The 10,000 small fry of New Hampshire trout that were recently planted in Kern river near the mouth of Cottonwood creek can be seen every day. They are growing rapidly and are as lively and chipper as any plant of fish that was ever made.

Napa.

E. C. Prieber has made a trip through Napa county and estimates that the yield of the grape crop will be 2,000,000 gallons.

Register: "They talk about the Canada thistle—what a pest it is—and suggest a way to get rid of it. Why, there is not a Canada thistle

growing in California to-day, and the man who will point out one can get \$100." So spoke a '49er to the Register this morning. "The striped weed or thistle we have was imported in barley from Chile and Australia in early days, and if you want to get rid of it cut it down. It will not come back."

St. Helena Star, Sept. 22: In speaking with a number of our wine men, we learn that the price of grapes is ranging from \$7 to \$10 per ton, but that the average price being paid is \$8 per ton, with half cash and the remainder in six months. The crop is much larger than last year, but will fall short of that expected early in the season. The heavy rain did not do the damage it was at first thought, and in the foothill and mountain vineyards the crop is as good as before the visitation of rain. The vintage commenced Monday with the earlier varieties, and the pleasant weather we are now having will increase the percentage of sugar in the grapes heretofore backward. We hope that prospects will soon brighten and that the wine men will be enabled to sell their products next spring at a price which will enable them to pay a higher price for grapes next season. Of course the low price for wine is bound to cause the price of grapes to be proportionately low, and thus it seems that times will continue as they are until some arrangement can be made whereby the market can be controlled by producers instead of a combination of dealers.

San Bernardino.

Orange Grower: Think of it! an orange sprout 10 feet 10 inches in length, the growth of one season. That's the kind of a specimen M. V. Sweesy took off one of his trees yesterday and brought down town as an exhibit of rapid growth.

Needles Eye: It is not generally known that the cotton of commerce grows at Needles, but such is the fact. About three-fourths of a mile from town, between the mesa and the river, on what is the bottom, or the overflowed land, the Mojave Indians have cleared a few acres of land, and each year these patches are sown to corn, melons, beans, etc. These crops have been raised for many years, but to hear that they also cultivate cotton will be in the nature of a surprise to many. An old Mojave informs us that he has raised cotton for more than 12 years, and has spun and made it into cloth.

Santa Clara.

Saratoga Standard: Mr. Coyle, the well-known orchardist, has this season been trying the experiment of employing only white men, and so gratifying was the result that he sent word to President Johns of the White Labor League, authorizing him to say that he had never before had so much work done for his money as he had this year. He employs in his orchard at the present time 12 white men at good wages, and he does not hesitate in saying that white labor is decidedly cheaper than Chinese.

Santa Cruz.

Pajaronian: One of the apple-packers of this valley has contracted 13,000 boxes of Bellefleur apples for Eastern shipment. The lot will fill about 20 cars. This is one of the best varieties of apples, and it comes very close to growing in perfect state in the Pajaro valley.

Pajaronian: The hop picking and curing season is about half over in the larger yards of this valley, and the yield is a good average crop, and the quality was never better in this section. It is estimated that nearly 500 white persons have found employment in the yards this year. The number will be increased next year, and we believe this will be the last season of the Mongolian in the hopfields of this valley.

Pajaronian: There has been a grand rush of beets to the factory the past week, and the receipts by rail and wagon have aggregated nearly 4000 tons. There is a very evident intention on the part of farmers to rush their beets as much as possible. The season is a bit late this year, and there is no time for delay. The Salinas valley has already made a strong contribution to the bins. All of the beets are of clean appearance and good milling size.

Sonoma.

Santa Rosa Republican: Forty hands are at present employed at the Crawford drier, handling prunes and apples. Prunes hold their own at \$20 a ton and are coming in at the rate of 15 tons a day. Apples are a good crop, and they arrive in eight-ton lots daily. Mr. Crawford says the fruit business is all right.

Healdsburg Tribune: Monday the must factory machinery was given a test operation and everything is now complete. The factory will begin running this week, and, barring accidents, there will be no stops made until the grape season is past. In order to supply the demand of must from European countries it will be necessary to run the factory day and night. The company will use no less than 4000 tons of grapes this year.

Healdsburg Tribune: Hop-picking the past week has been at its height, and in a few days all the growers will have finished gathering their crops. Pickers were paid in most of the yards \$1.25 per hundred, but owing to the smallness of the hops it was not as big a paying business to the hands as it was last year, though the average picker could, without much exertion, make as much as \$1.50 a day. The rains did no damage to hops here, and they are as fine in quality as any we were ever shown.

Sutter.

Farmer: Hundreds of thousands of trays loaded with grapes are now on the ground in the vineyards, and, if good weather continues for a few weeks, there will be many tons of choice raisins for shipment this fall. The Muscats and other standard raisin varieties are now being put on the trays. Some of the vineyardists are dipping the grapes to hasten the

Superphosphate Fertilizers

Made from GENUINE GUANO,

For Fruit Trees, Vines, Sugar Beets, Grains, Vegetables, Etc.

Special Grades put up to suit the soil.

—ALSO—

GUANO FLOUR.

EQUAL TO PURE BONE MEAL. Circulars giving directions may be had on application to

Mexican Phosphate & Sulphur Co.,

H. M. NEWHALL & CO., Agents,

309 & 311 SANSOME STREET,
San Francisco.



CHOPPERS

ATTENTION!

ASK FOR THIS AXE.

USE NO OTHER.

Wood-choppers, try the

Kelly Perfect Axe

It will cut more wood

than any other axe.

The scoop in the blade

keeps it from sticking

in the wood, and makes it

cut deeper than any other

axe. Ask your dealer for

it. Send us his name if

he don't keep it. It is the

Anti-Trust Axe.

Kelly Axe Mfg. Co.

LOUISVILLE, KY.

WE GUARANTEE

That one tablespoonful of

GOMBALT'S CAUSTIC BALSAM

will produce more actual results than a whole bottle of any liniment or opium cure mixture ever made. It is therefore the cheapest (as well as safest and best) external applicant known for man or beast.

THE LAWRENCE WILLIAMS CO., CLEVELAND, OHIO.

Will \$500 Help You Out?

If so, you can have it! We offer you the Sole Agency for an article that is Wanted in Every Home and Indispensable in Every Office, something that SELLS AT SIGHT. Other articles sell rapidly at Double the Price, though not answering the purpose half so well. You can make from \$500 to \$700 in three months, introducing it, after which it will bring A Steady, Liberal Income, if properly attended to. Ladies do as well as men, in town or country. Don't Miss This Chance. Write at once to J. W. JONES, Manager, Springfield, Ohio.

WANTED!

\$7500 FOR A TERM OF YEARS ON IMPROVED land, town of Belmont, San Mateo County.

JOHN F. BYXBEE,

22 Market St., San Francisco.

Almond Hullers

FOR SALE!

—BY—

A. O. RIX, Irvington, Alameda Co., Cal.

TREE WASH.

"Greenbank" Powdered Caustic Soda and Insecticide.

T. W. JACKSON & CO.,

Sole Agents,

No. 5 Market Street, San Francisco, Cal

MAKE YOUR OWN GAS!

BADLAM BROS.,

519 Market St., San Francisco,

SOLE MANUFACTURERS OF THE CELEBRATED PEERLESS GAS WORKS. New process, safe and inexpensive, from \$100 upward. Light cheaper than coal oil. Send for catalogue and prices.



IT WILL CONTROL THE MOST

VICIOUS HORSE.

75,000 sold in 1891.

100,000 sold in 1892.

THEY ARE KING.

Sample mailed X C for

Nickel, \$1.50.

Stallion Bits 50 cts. extra.

RACINE MALLEABLE IRON CO. RACINE, WIS. J. P. Davies, Mgr.

drying process. In some of the vineyards there is a large acreage of wine grapes, the same now being disposed of to the winery. The second crop will not be large this season, but, as it is hard to dispose of it and too late to dry it, no complaint is heard of the same. Table grapes are now being shipped, and at fair profits. A large number of hands are given employment at present in the vineyards.

Solano.

Reporter: Following is a list of cars of fruit shipped East from Vacaville for the week ending Thursday, Sept. 21st: Earl Fruit Company, 17; Vacaville & Winters Fruit Co., 9; California Fruit Association, 7; F. H. Buck, 15; National Fruit Association, 2. Total, 50 cars. Total number of cars shipped to San Francisco for the week, 6.

Tulare.

Times: The Lakeside cheese factory is still running successfully. It has a capacity of 500 pounds per day. E. Dibble is manager and T. R. Denison is cheese-maker.

The Porterville *Enterprise* says that Woodrough and Picking, who thrashed J. B. Hockett's grain, thrashed 2175 sacks of barley in one day on section 9, township 25, range 28 east; and from the whole section 6047 sacks were obtained, 20 acres of it being cut for hay.

Times: Miss Izzie Bacon of Visalia made a good record for herself as a fruit-cutter this summer. The work was done on the Fleming orchard, east of Visalia several miles and managed by Henry A. Scott. Miss Bacon began work one morning at 7:30 by the clock. The fruit was freestone peaches. She rested an hour at noon and then quit work at 5:45 in the evening. In that time she cut 43 boxes of fruit, each box containing 50 pounds. This made a total of 2150 pounds of fruit that her nimble fingers handled in a little over nine hours.

Yolo.

Davisville Cor. Woodland *Democrat*: There is a large quantity of hay in this vicinity which could be hauled to Sacramento by team and sold at a profit if there was only a bridge over the canal. As the matter now stands, farmers who have hay to sell in Sacramento must first haul it to Davisville, pay a high freight rate, and then pay drayage at the other end of the line.

Democrat, Sept. 22: The vineyardists of Yolo county are very busy. For several days grape-picking has been in progress in various parts of the county, but in the vicinity of Woodland the Sultanas and Tokays only began to ripen the early part of the week, and in many instances the Emperors and Cornichons will not be ripe enough to ship before next Monday. These vineyards give employment to a large number of men, women and children, and, so far as we have been able to learn, none but white labor has been employed. The rising prune market and good prices in the East for the best qualities of shipping grapes are very encouraging, and the prospects that Yolo county vineyardists will make some money this season are hopeful.

A Sale Worth Visiting.

Mr. Frank Burke says, regarding his coming sale, an advertisement of which appears on this page:

My reasons for selling are many: A disastrous fire at the ranch destroyed my trotting barn and 18 head of horses.

Distemper in June compelled the throwing out of training of the best stable of horses I ever had.

I thoroughly understand that, selling now during a financial depression and at a time when trotting horses are lower than they ever have or ever will be, I will not obtain ten cents on the dollar, and trust that breeders will take advantage of this opportunity to strengthen their stud.

Farmers here have an opportunity of going into business on a sound foundation at almost work-horse price.

Nearly every one of these mares will work, and have done all the plowing, cultivating, mowing, raking and hauling on my ranch for the past three years, without detriment to themselves or colts.

Approved paper on six months' time will be taken, but all such arrangements must be made prior to day of sale, as, on that day, I will be too busy to attend to the matter.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California street San Francisco.

Hay Pressing.

If you are interested in pressing hay write Truman, Hooker & Co., San Francisco. They will save you money.



In These Dull Times

You Can Largely Increase Your Income by buying an Incubator and engaging in the chicken business. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember, the best is the cheapest. PACIFIC IN UBA-OK CO. 1317 Castro St., Oakland, Cal.

FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank.)

Wants you all to write to him for prices on Young Stock.

MINORCAS: White and Black.

LEGHORNS: White, Brown, Black, Buff.

B. P. ROCKS.

Mention the age desired and when shipped. Circular Free.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

JERSEYS AND HOLSTEINS, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. William Niles & Co., Los Angeles, Cal., Breeders and Exporters. Established in 1876.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER SAGE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS—The best A. J. C. C. Registered Prize Herd is owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

THOROUGHbred SPRING CHICKS, S. C. White & Buff Leghorns, Black Spanish, S. C. & White Wyandottes, Game Bantams, Mam. Bronze & White Hol. Turkeys. Theo. Cushing, Spokane, Washington.

WM. NILES & CO., Los Angeles, Cal., Breeders of nearly all varieties of Poultry, Dairy Cattle and Hogs.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

B. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

SWINE.

CHAS. A. STOWE, Stockton, Cal., (Box 283). Breeder of Berkshire and Poland-China Hogs; Milking Strain of Durham Cattle, and M. B. Turkeys. Write for Price.

BERKSHIRES & POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. William Niles & Co., Los Angeles, Cal. Established 1876.

J. E. ALSFORD, Woodside, San Mateo Co. Breeder of Berkshire Hogs and Toulouse Geese.

P. H. MURPHY, Perkins, Sac. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.



OXFORD DOWN SHEEP FOR THE PACIFIC COAST.

W. A. SHAFOR, Middletown, Ohio, Largest American Importer of O. D. Sheep.

Is prepared to quote prices on the best stock of Oxford Down Sheep to be had in England. Parties wanting first-class stock should write for particulars and induce their neighbors to join them. Import will arrive about August 1st. Write at once.

Short-Horn BULLS

Calves, Yearlings and 2-year-olds

FOR SALE.

ROBERT ASHBURNER,

Baden Station, San Mateo County, Cal.

Only three-fourths mile from the terminus of the S. F. and San Mateo Electric Road.



THE PROPERTY OF

LA SIESTA RANCH, MENLO PARK, CAL.,

FRANK H. BURKE, PROPRIETOR.

Also, to close the partnership of BURKE & VIGGET,

THE ELECTIONEER STALLION

EROS, AND MOUNTAIN BOY

AND SIX OF THEIR PRODUCE,

TO BE SOLD AT AUCTION, WITHOUT RESERVE,

—BY—

KILLIP & CO., - LIVE STOCK AUCTIONEERS,

22 Montgomery St., San Francisco,

AT SALESYARD, MARKET STREET AND VAN NESS AVENUE,

THURSDAY, OCTOBER, 5, 1893,

PROMPTLY AT 11 A. M.



ONLY 25 YEARS OLD AND A GIANT!

THE H. H. H. LINIMENT

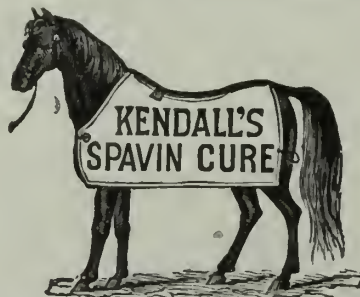
HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STAR, LANE CO., OREGON, Feb. 8th, 1892.

DR. B. J. KENDALL CO.,

Dear Sirs:—I have used your KENDALL'S SPAVIN CURE for the last twelve years never being without it but a few weeks in that time and I have made several wonderful cures with it. I cured a Curb of long standing. Then I had a four year old colt badly Sweeneyed; tried every thing without any benefit, so I tried your Liniment, and in a few weeks he was well and his shoulder filled up all right, and the other, a four year old that had a Thoroughpin and Blood Spavin on the same joint, and to-day no one can tell which leg it was on. These statements can be proven, if necessary; the four year olds are now seven and can be seen any day at Cottage Grove, Or.

S. Z. PAXTON.

—Price \$1.00 per bottle.—

DR. B. J. KENDALL CO., Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular

E. FOUGERA & CO.,

30 North William Street, New York.

ROOFING

GUM ELASTIC ROOFING FELT costs only \$2 per 100 square feet. Makes a good roof for years, and any one can put it on.

GUM ELASTIC PAINT costs only 60 cents per gal. in bbl. lots or \$4.50 for 5 gal. tubs. Color red. Will stop leaks in tin or iron roofs that will last for years. TRY IT.

Gum Elastic Roofing Co.,

89 & 41 West Broadway,

NEW YORK.

Local Agents Wanted.



HALSTED INCUBATOR

COMPANY,

1812 Myrtle Street, Oakland, Cal.

Send Stamp for Circular.

S. H. MARKET REPORT

Market Review.

WEDNESDAY MORNING, Sept. 27, 1893.

The wheat market has disclosed further weaker tendencies during the week past. The tonnage situation remains unchanged, and the hold Mr. McNear has upon the vessels available has not been broken, or even shaken. Buying has been quite lively on export account—mostly by McNear or his agents—and the movement from the interior has been quite heavy. Speculative business is restricted in volume. The sample market has shown little or no activity.

The general situation does not seem to improve. Quantities of wheat afloat for Europe are large, and serve to depress prices. Both England and France want large quantities of wheat, but much of it appears to be in sight, and they are not disposed to bid up because of the known shortage in the world's crop.

The following tables show the range of the Eastern, European and local markets:

	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
Thursday.....	50.63d	50.63d	50.73d	50.83d	50.93d	51.0d
Friday.....	50.63d	50.63d	50.73d	50.83d	50.93d	51.0d
Saturday.....	50.63d	50.63d	50.73d	50.83d	50.93d	51.0d
Sunday.....	50.63d	50.63d	50.73d	50.83d	50.93d	51.0d
Tuesday.....	50.63d	50.63d	50.73d	50.83d	50.93d	51.0d

To-day's cablegram is as follows:
LIVERPOOL, Sept. 27.—Wheat—More disposition to buy. California spot lots, 5s 9½d; off coast, 2s; just shipped, 2s 9d; nearly due, 2s; cargoes off coast, at-ally held, on passage, not much inquiry; Mark Lane wheat, firm; French country markets, steady; wheat and flour in Paris, slow; weather in England, warmer.

Day.	Sept.	Oct.	Dec.
Thursday.....	72½	73½	74½
Friday.....	72½	73½	74½
Saturday.....	72½	73½	74½
Sunday.....	72½	73½	74½
Tuesday.....	71½	72½	73½

The following is to-day's telegram—per bushel:
NEW YORK, Sept. 27.—September, 71½; October, 72½; December, 73½.

Day.	Sept.	Oct.	Dec.
Thursday.....	67½	67½	67½
Friday.....	66½	66½	66½
Saturday.....	66½	66½	66½
Sunday.....	66½	66½	66½
Tuesday.....	66½	66½	66½

The following is to-day's telegram—per bushel:
CHICAGO, Sept. 27.—September, 66½; October, 66½; December, 67½.

Day.	Sept.	Oct.	Dec.
Thursday.....	67½	67½	67½
Friday.....	66½	66½	66½
Saturday.....	66½	66½	66½
Sunday.....	66½	66½	66½
Tuesday.....	66½	66½	66½

The following are to-day's recorded sales on Call:
Morning—Informal Session—December, 300 tons, \$1.14; 700, \$1.14; 400, \$1.14; 1100, \$1.14; 600, \$1.14.

May—300 tons, \$1.26; 300, \$1.26; 100, \$1.26; 100, \$1.26; per cbl.

Regular Session—December, 300 tons, \$1.13; 100, \$1.13; 200, \$1.13; 1500, \$1.13; 200, \$1.13; 100, \$1.13; 200, \$1.13.

May, 200 tons, \$1.25; 200, \$1.25; 100, \$1.25; per cbl.

Afternoon Session—December—100 tons, \$1.13; 100, \$1.13; 500, \$1.13; 100, \$1.13; 125, \$1.25; 100, \$1.25; per cbl.

May, 100 tons, 1.25; 200, \$1.25; 100, \$1.25; per cbl.

Barley.

A quieter feeling has prevailed recently and prices have had an easier tendency. There has been less inquiry of late for brewing export and the local demand is light. Considerable quantities, mainly representing purchases made some time ago, are being cleared right along, and a number of the vessels now on the list for wheat will carry more or less barley.

Day.	Sept.	Oct.	Dec.
Thursday.....	75½	75½	75½
Friday.....	68½	68½	68½
Saturday.....	68½	68½	68½
Sunday.....	68½	68½	68½
Tuesday.....	68½	68½	68½

The following are to-day's recorded sales on Call:
May—100 tons, 86c.

Regular Session—December, 200 tons, 76c; 200, 76c; 100, 76c; 100, 76c; 100, 76c; per cbl.

Afternoon Session—December, 100 tons, 75c; 100, 75c; 200, 75c; per cbl.

Other Cereals, Etc.

Oats move rather slowly and without any marked variations in prices. New crops have been coming forward quite freely. Corn braced up a little for a while, but toward the close of the week business was light. Mustard seed has been attracting more attention, and some large shipments have already been made. The market, however, now has an easier tone. Beans lack strength and prices have been rather irregular lately. Hay was reported firm yesterday. Hops are rather quiet, buyers and sellers differing in their views as to their actual market values. Rye is only selling in a small way at weak prices. The transactions in buckwheat and dried peas are merely of a jobbing character, and prices vary so that definite quotations are about impossible.

OATS—Common to fair white feed, 95c@ \$1.05 @ cbl; good to choice, \$1.10@1.15; milling, \$1.20@1.35; black, 90c@ \$1.15; red, 97c@ \$1.02½.

CORN—Large yellow, 97c@ \$1 @ cbl; small do, \$1.00; white, 90c@ \$1.00.

BEANS—Prairie, \$2.15@2.25 @ cbl; Pink, \$2.10@2.20; Bayo, \$1.60@1.67½; Small White, \$2.00@2.15; large do, \$1.80@1.90; Butter, nominal; Red, \$2.25@2.50; Lima, \$2.15@2.30.

SEEDS—Rape, 2½@2½c @ lb; Hemp, 3½@4½c; Canary, 4½@4½c for imported; do California, nominal; Flaxseed, 2½@3½c; Alfalfa, 8½@9c; Caraway, 7½c; Mustard, 2½c for yellow; brown do, 2c for Native and 2½c for Triest.

HAY—Wild Oat, \$8.50@10 @ ton; Wheat and Oat, \$10.00@11.00; Barley, \$7@9.50; Wheat, \$9.50@12.50; Clover, \$7@9.50; Alfalfa, \$8@10.00; Compressed, \$8@11.00.

STRAW—Quotable at 35@42½c @ bale.

HOPS—Quotable from 17@20c @ lb for new.

RYE—Quotable at 90@92½c @ cbl.

DRIED PEAS—Largely nominal.

BUCKWHEAT—Nominal.
Other articles have ruled fairly steady.
BRAN—From \$17@18 per ton.
MIDDLINGS—From \$19.50@22.50 per ton.
GROUND BARLEY—From \$17.00@18.00 per ton.
ROLLED BARLEY—From \$17.00@18.00 per ton.

CHOPPED FEED—From \$17.50@18.50 per ton.
FEED CORNMEAL—From \$22@22.50 per ton.
CRACKED CORN—From \$23@23.50 per ton.
OILCAKE MEAL—From \$32.50@35 per ton.
FLOUR—Family Extras, \$3.65@3.75 per bbl.; Bakers' Extra, \$3.50@3.60; Shipping Superfine, \$2.60@2.90.

VARIOUS—Cash prices per 10-lb. sks.: Cracked Wheat, 3½c per lb.; Rye Flour, 3½c; Rye Meal, 3c; Buckwheat Flour, 5½c; Oatmeal, 4½c; Oat Groats, 5c; Hominy, 4½c@4¾c; Rice Flour, 7½c; Farina, 4½c; Pearl Barley, 4@4½c; Split Pea, 5½@5¾c; Rolled Oats, 5c; Buckwheat Groats, 8½c; Graham Flour, 3c; Normal Nutrient, 13c per case 1 doz. 1-lb. tin cans; Breakfast Delight, \$3.25 do. 2 doz. 4-lb. pkgs.

Vegetables.

Potatoes and Onions are dull and weak at the quoted prices. The receipts are moderate. Pickling Cucumbers are weaker. All seasonable Vegetables are in large supply and going at low prices.

ONIONS—From 80@95c @ cbl, extra selling in a small way up to \$1.

POTATOES—Early Rose, 30@35c @ cbl in sks; Burbanks, 35@40c for river; do Salinas, 70@80c; Sweet, 50@75c.

VARIOUS—Green Peas, 1½@2c @ lb; String Beans, 50@75c @ sk for common and 2@2½c @ lb for choice; Lima do, 2@2½c; Cucumbers, 15@25c @ bx; Pickling do, \$1.25@1.50 per 100 lbs. for No. 1 and 50@75c for No. 2; Summer Squash, 20@30c; Green Peppers, 25@40c for Bell and 40@65c for Chile; Green Corn, 50@75c for small crates and \$1.25@1.50 for large; do sks. 4@65c; Tomatoes, 20@40c @ box; Garlic, 1½@2c @ lb; Green Okra, 35@50c @ box; Eggplant, 25@40c.

Fruits and Nuts.

The first Wisconsin Cranberries of the season were put on the market yesterday. They are rather green. The market was overstocked with Cantaloupes, sales being made on the wharf at 25@50c per crate. Nearly all varieties of table Grapes sell as low as 15c per box for common quality, and only fancy Isabella in crates are selling above 40c. Wine Grapes are arriving slowly and the demand is light. The Fruit market throughout is very weak, with supplies largely in excess of the demand. By way of contract, it is pleasing to note that Dried Fruits are moving off well at hardening prices.

FRESH FRUITS—Strawberries, 4@5 @ chest for Sharpless; Raspberries, 4@6; Blackberries, nominal; Huckleberries, 4@5c @ lb.
Apples, 35@75c @ box; Plums, 15@40c @ box as to kind; Bartlett Pears, 35c@75c; other Pears, 25@50c; Peaches, 20@50c.

Watermelons, \$5@8 @ 100; extra large, higher; Cantaloupes, 25@50c per crate from wharf; do from store, 50c@ \$1; Nutmeg, Melons, 25@40c per box; Crabapples, 25@50c; Black Figs, 35@50c for general offerings and up to \$1 for fancy; Quinces, 35@50c; Pomegranates, 50@75c.

Grapes—Sweetwater, 25@30c per box; Rose of Peru, 15@35c; Muscat, 15@35c; Malvoise, 15@25c; Malaga, 15@30c; Tokay, 15@35c; Black Hamburg, 15@25c; fancy Isabella, 50@75c @ crate; common do, 15@30c @ box; Wine, 12@14 @ ton for Zinfandel and 10@13 for Native.

Citrus—Common to good California Lemons, \$1.50@2.50 per box; fancy, Santa Barbara, \$3.50@4.00; Santa Paula, \$3.50@4.00. Limes, Mexican, \$4@5; California Oranges, \$1.50@2.

Various—Bananas, \$1.50@2.50 per bunch. Pineapples—Mexican, \$3@4 per doz; Honolulu, \$2.00@3.

CRANBERRIES—Cape Cod and Wisconsin, \$9 @ bbl.

DRIED FRUITS—New crop: Bleached Apricots, Royal, 10@11c per lb and 6@7c for sun-dried; bleached Moorpark do, 11@12c; Apples, 3@4c for qrs and 4@5c for sliced; do evaporated, 7@7½c; Peaches, bleached, 6@7½c; do sun-dried, 5@6c; Pears, 4½@5c for bleached halves; pitted Plums, 4½@5½c and 2½@3½c for unpitted; Nectarines, 6@7c for white and 5@6c for red; Figs, pressed, 4@5c; do unpressed, 2@2½c; do sks, 2@3c; Prunes, 5c for the four sizes.

RAISINS—Fresno combination prices crop of 1893, f. o. b.: Cluster, \$2 @ box; 4-crown London layer, \$1.50; 3-crown do, \$1.30; 4-crown, faced loose, \$1.40; unfaced do, \$1.30; 3-crown, faced, \$1.25; unfaced do, \$1.15; 3-crown, stemmed, loose, \$1. Bags—Three-crown, 4c @ lb; 2-crown, 3½c; third grade, 3c; dried grapes, 2½c; seedless Muscatel, 3½c; Sultana, 5c. For 50-lb bxs, ¼c additional.

NUTS—Jobbing prices: Brazil, 9@10c @ lb; almonds (new) 10@12½c; Walnuts, California, nominal; do Chile (new), 9@10c; Pecans, 10@12c; Peanuts, California, 4½@5½c; do Virginia, 7@9c; Filberts, 10½@11c; Pinenuts, 12½@15c; Cocoanuts, \$5@5.50 @ 100.

Butter, Cheese and Honey.

There is no change in the situation as regards prices. Butter is quieter, presumably owing to the recent sharp advance. There is no particular scarcity of any descriptions. Cheese continues in large supply and at unchanged prices. Honey is more freely on export account.

BUTTER—Fancy creamery, 30@32c @ lb; fancy dairy (rolls and squares), 27@29c; other grades of fresh, 22@26c; pickled lard, 20@22c; firkin, 18@19c; creamery, in tubs, 24@26c.

CHEESE—California, 8@10c @ lb; Young America, 9@11c; New York cream, nominal; western 11@13c.

HONEY—New: Comb, water white, 8½@10c @ lb in 1-lb frames; extracted, 5½c for water white and 5@5½c for amber.

BEEWAX—From 22@23½c @ lb.

Poultry and Eggs.

Poultry sells quite readily at the quoted prices. More Eastern is due this week. Fine Eggs are well sustained.

POULTRY—We quote California: Hens, \$6 @7.00 @ doz; Broilers, \$2.50@3 for small and

\$3.00@3.50 for large; Roosters, \$5.00@6.00 for young and \$5.00@6.00 for old; Geese, pair, \$1.50@2.00; Ducks, \$4.00@6.00 per doz; Turkeys, live, 16 @18c @ lb for Hens and 17@20c for Gobblers; Pigeons, \$1.25@1.50 @ doz.
EGGS—California, 20@30c per doz for store and 32½@36c for ranch; Eastern, 20@22½c; extra, 24@25c.

Provisions.

There is a firmer feeling for Hams and Bacon.
CURED MEATS—Hams—Eastern, sugar-cured, 14@14½c @ lb; A—1—C, 14½c; California, 13½c. Bacon—Eastern, extra light, 19@20c @ lb; medium, 15c; light do, 15½c; light, 17c; light clear, 17½c; light medium, boneless, 16½c.

Pork—Extra prime, \$16.00@16.50 @ bbl; prime mess, \$17.00@18.00; mess, \$23.00@24.00; extra clear, \$26.00@27.00; clear, \$25.00 @ 26.00; pigs' feet, \$12.50; hf hbs, \$6.50.

Beef—Mess, \$7.50@8.00 @ bbl; extra mess, \$8.50 @9.00; family, \$11.00@12.00; extra do, \$12.50@13.00; California smoked, 10@10½c.

Lard—California, 10-lb tins, 11c @ lb; 5-lb, 11½c; kegs, 11@11½c; 20-lb buckets, 12½c; California compound, 8½c for tierces; do hf bbls, 9½c; Eastern compound, 9½@10½c for tierces; do prime steam, 11½c; Eastern pure, 10-lb pails, 12½c; 5-lb, 12½c; 3-lb, 12½c.

Wool, Hides, Etc.

The receipts of Wool yesterday were 239 bales. There is some trading, but not enough to give the market any appearance of activity. No material improvement in prices can be expected until the inquiry assumes a more positive character. Hides are very dull and weak.

WOOL—Prices are quotable as follows: California—Spring, year's fleece, 8@9c @ lb; 6 to 8 months, 8@10c; Foothill, 9@12c; Northern, 12@14c; Extra Humboldt and Mendocino, 12@13c. Fall—San Joaquin, plains, 3@4c; do mountain, free, 5@7c. Nevada—Choice and light, 12@14c; heavy, 8@10c. Oregon—Eastern, choice, 13@16c; poor, 7@9c; do Valley, 12@15c.

HIDES AND SKINS—Dry Hides, sound, 5@6c @ lb; Kip and Calf, 6c. Heavy Salted Steer, sound, do, 4½@4¾c; medium, 4c; do light, 3c. Salted Cows, 3c. Salted Kip, 4c. Salted Calf, 6c. Salted Veal, 4c (all culls ½c less). Long Wool Pelts, 75c each; medium do, 40@60c; short do, 25@40c; shearing, 10@20c. Deerskins, summer, 25@30c @ lb; do medium, 15@20c; do winter and long-haired Skins, 5c. Goat-skins, prime and perfect, 30@50c each; damaged, 10@25c; Kids, 5@10c.

TALLOW—Refined, 6c @ lb; No. 1 rendered, 4½c; country, 4c; grease, 2½@3½c.

San Francisco Meat Market.

The market is without any quotable changes. We quote wholesale prices as follows:

BEEF—No. 1 Steers, 5c @ lb and 5½c for prime; No. 2, 4@4½c; No. 3, 3½@4c.

VEAL—From 5@6c @ lb for large; choice Dairy Calves higher.

MUTTON—From 4½@5c @ lb and 6c for extra Wethers; Lamb, 6½@7½c.

HOGS—Hard, heavy to medium, 5½@5¾c @ lb; Stock, 4½@5c.

Sales of California Fruit.

CHICAGO, Sept. 26.—Porter Brothers' Company sold at auction to-day 12 carloads of California fruit at the following prices: Tokay Grapes, \$1.75@3.75; Natoma Tokay Grapes, \$2.75; half crates Tokay Grapes, 80c@ \$1.35; Muscat Grapes, \$1.75; Natoma Muscat Grapes, \$1.80; half crates Muscat Grapes, 70c@ \$2.05; Cornichon Grapes, \$2.40; half crates Cornichon Grapes, \$1.25; Bartlett Pears, \$1.10@2.25; Beurre Rose Pears, \$2.35; Beurre Hardy Pears, \$2.05@2.30; Howell Pears, \$2.05@2.30; Onondaga Pears, \$2.25; Beurre Diel Pears, \$2.25; Beurre Clairgeau Pears, \$1.75@2.25; De Comice Pears, \$1.85@2.15; Columbia Pears, \$2; D'Anjou Pears, \$1.90; Doyenne Pears, \$1.80; Duchesse Pears, \$1.75; Seckel Pears, \$1.40; Japan Plums, \$2.35@ \$2.40; German Prunes, 90c@ \$1.15; Fellenberg Prunes, 85c@ \$1.10; Silver Prunes, 60c@ \$1.05; Egg Plums, 85c@ \$1.10; Quinces, \$1.05; Salway Peaches, 60@90c; Cling Peaches, 85c; Peaches, 55@85c; Orange Cling Peaches, 65@90c.

NEW YORK, Sept. 26.—Porter Brothers' Company sold at auction to-day six carloads of California fruit at the following prices: Bartlett Pears, \$1.95@3.35; half boxes Bartlett Pears, 90c; Beurre Clairgeau Pears, \$2.40; Duchesse Pears, \$2.40; Winter Nellis Pears, \$1.75; Tokay Grapes, \$2.20; half crates Tokay Grapes, \$1.15@2.10; half crates Assorted Grapes, \$1.35@1.75; half crates Morocco Grapes, \$1.10@1.65; half crates Muscat Grapes, 70c@ \$1.15; half crates Malvoise Grapes, \$1; Figs, \$1.35@1.50; Silver Prunes, \$1.25; Hungarian Prunes, \$1.20; French Prunes, \$1.05; Nectarines, \$1.05; Salway Peaches, 60c@ \$1.10; George's Late Peaches averaged 88c; Peaches, 85c; Yellow Peaches, 80c; Freestone Peaches, 75c.

MINNEAPOLIS, Sept. 26.—Porter Bros. Co. sold at auction yesterday three carloads of California fruit at the following prices: Pears, \$1.60@1.80; Natoma Muscat grapes, \$1.40; peaches, 60c.

MINNEAPOLIS, Sept. 26.—Porter Bros. Co. sold to-day at auction one carload of California fruit at the following prices: Pears, \$1.60@1.70; half crates Tokay grapes, \$1@1.25; half crates Muscat grapes, 60c; Salway peaches, 85@95c; George's Late peaches, 55@60c.

CHICAGO, Sept. 26.—The Earl Fruit Co. sold California fruit at auction to-day as follows: Tokay grapes, \$1.70@2.10; half crates Tokay grapes, 60c@ \$1.10; half crates Malaga grapes, 65c@ \$1; German prunes, \$1@1.25; Silver prunes, 85c@ \$1; Egg plums, \$1.05@1.15; Bradshaw plums, \$1; Ickwith plums, \$1; Bartlett pears, \$1.85@3; White Doyenne pears, \$1.70@1.80; Beurre Diel pears, \$1.40@1.75; Duchesse pears, \$1.60@1.75; Beurre Clairgeau Pears, \$1.30@1.80; Beurre d'Anjou pears, \$1.10@1.60; Piquet's Late peaches, 80 @90c; Orange Cling peaches, 85@95c; Strawberry Cling peaches, 80@90c; Crawford peaches, 85@90c; George's Late peaches, 80@90c; Salway peaches, 50c@ \$1; Orange quinces, \$1.20@1.30.

BOSTON, Sept. 26.—The Earl Fruit Co. sold California fruit at auction to-day as follows: Gros prunes, \$1.60@1.70; German prunes, \$1.10@1.70; Silver prunes, \$1.15@1.50; Lemon Cling peaches, 70c@ \$1.15; Beurre Hardy pears, \$1.40@1.60.

NEW YORK, Sept. 26.—The Earl Fruit Co. sold California fruit at auction to-day as follows: Tokay grapes, half crates, 90c@ \$2.75; Muscat grapes, half crates, 55@85c; Bartlett pears, \$2.70@3; German prunes, \$1.10@1.30; Silver prunes, \$1@1.15; Fellenberg prunes, \$1.15@1.25; quinces, \$1.60@1.70; peaches, 60 @70c.

—The Northern Pacific Railroad Company have let a contract to John Nolan for filling under remaining bridges on the Pacific division at a cost of \$35,000. The road is being put in shape for faster time.

Railway Earnings for Six Months.

Railway earnings in the United States for the six months ending June 30, 1893, show increases in both gross and net, according to statistics covering 121,173 miles, or 69.2 per cent of the total mileage of the country, collected by the *Financial Chronicle*. The results of operations for the six months is given as follows:

	1893.	1892.	Inc.
Gross earnings.....	\$438,662,810	\$423,542,661	3.53
Operating expenses.....	311,841,013	297,978,698	4.60
Net earnings.....	\$126,821,797	\$125,563,963	1.00

Classifying the roads by groups, it is found that four—the New England, Trunk lines, Northwestern and the Pacific—exhibit decreases in net earnings varying from 5.37 to 1.28 per cent, all others showing increases over the corresponding period of 1892. The largest increase in net is shown by the Middle Western group—14.49 per cent. It is to be remembered in considering these figures the present business prostration did not begin until after July 1st, so that its effects are not felt to any great extent in railway earnings of the first half of the year. At present earnings are showing large decreases.

Harness Polish.

The following recipe has been recommended as a harness polish worth trying: Glue 4 ozs., vinegar 1½ pts., gum arabic 2 ozs., black ink 8 ozs., isinglass 2 dr. Break the glue in pieces, put in a basin and pour over it about a pint of vinegar; let stand until it becomes perfectly soft. Put the gum in another vessel with the ink until it is perfectly dissolved; melt the isinglass in as much water as will cover it, which may be easily done by placing the cup containing it near the fire about an hour before you want to use it. To mix them, pour the remaining vinegar with the softened glue into a sand pan upon a gentle fire, stirring it until it is perfectly dissolved, that it may not burn on the bottom, being careful not to let it reach the boiling point; about 82 degrees Centigrade is the best heat. Next add the gum, let it reach the same heat again; add the isinglass. Take from the fire and pour it off for use. To use it, put as much as is required into a saucer, heat it sufficiently to make it fluid, and apply a thin coat with a piece of dry sponge. If the article is dried quickly, it will have the better polish.

—The Treasury Department at Washington gives the following as the value of the exports of breadstuffs for the month of August from Pacific Coast districts: Puget Sound, \$31,167; San Francisco, \$2,271,456; Willamette, \$162,299; total, \$2,464,931. Barley shows a decided increase in the exports, being more than three times the amount exported in August of last year. Corn shows a decrease. Oats have gained handsomely and so has wheat, but the exports of wheat flour have fallen off. From the San Francisco customs district the figures, as compared with those of last year, show great gains in the exports of cattle and beef products, but hogs and hog products show a decided decrease. Dairy products are also among the exportations which have fallen off, though on the whole provisions have gained.

—The California rail freight movement this season is much larger than at a corresponding date last year. The cars go East laden with canned goods, dried fruit, beans, seals

California Patrons of Husbandry Directory.

State Grange Officers for 1892-1893.

MASTER.....E. W. DAVIS, Santa Rosa
OVERSEER.....A. P. ROACHE, Watsonville
LECTURER.....J. D. HUFFMAN, Lodi
STEWARDS.....W. W. GREER, Sacramento
ASS'T STEWARD.....E. C. SHOEMAKER, Visalia
CHAPLAIN.....S. GOODENOUGH, Oakland
TREASURER.....I. C. STEELE, Pescadero
SEC'Y.....A. T. DEWEY, 220 Market St., S. F.
GATE-KEEPER.....GEO. OHLEYER Jr., Yuba City
CERES.....MRS. DEE D. HULL, Sacramento
POMONA.....MISS NETTIE BROUSE, Merced
FLORA.....MISS ETTA CORNELL, Rautier Sta'n
LADY ASS'T STEWARD.....MISS S. E. WOOD, Danville
EXECUTIVE COMMITTEE.—CYRUS JONES, San Jose; GEO. P. LOUCKS, Pacheco; B. F. WALTON, Yuba City.

Pomona Granges.

SACRAMENTO COUNTY (No. 2)—Last Saturday March, June, August and November at 1 p. m., in Grangers' Hall, Sacramento; M., Lewis Schelmyer, Elk Grove, Sac'to Co.; Sec., A. A. Krull, 1717 O St., Sacramento.

SAN JOAQUIN COUNTY (No. 3)—Last Thursday February, May, August, third Thursday November, at Lodi Hall, Lodi, at 10 a. m. M., R. Pixley, Lodi; Sec., J. D. Huffman, Lodi.

SONOMA COUNTY (No. 1)—Third Wednesday October, January, April, July, at 10 a. m., in Grangers' Hall, Santa Rosa. M., A. P. Martin, Petaluma; Sec., Mrs. Mary E. Saxton, Santa Rosa.

Subordinate Granges.

ALHAMBRA (No. 230)—First and third Saturdays at 2 p. m. in Grange Hall, Martinez. M., Harry C. Raap, Martinez; Sec., Mrs. M. B. Lander, Martinez.

AMERICAN RIVER (No. 172)—Second and fourth Saturdays, at American River Grange Hall, from November 1st to February 1st, in the evening; from February 1st to November 1st at 2 p. m. M., A. A. Harris, Rautier; Sec., Etta Cornell, Rautier.

ANTELOPE (No. 100)—Second and fourth Saturdays in month at 11 a. m.—2d Sat. at Union Hall, Maxwell, and 4th Sat. at schoolhouse at Sites. M., H. A. Logan; Sec., P. Peterson, Sites.

BENNETT VALLEY (No. 16)—First and third Saturdays at 2 p. m. M., John Burnham, Santa Rosa; Sec., W. L. Whitaker, Santa Rosa.

CARPINTERIA (No. 51)—Every other Thursday at 1:30 p. m. M., O. N. Cadwell; Sec., H. A. Stinson, Carpinteria.

CRESTON (No. 259)—Creston, San Luis Obispo Co. M., J. V. Webster; Sec., Mrs. J. C. Waterberry, Creston.

DANVILLE (No. 85)—First and third Saturdays at 2 p. m. M., F. B. More; Sec., Miss Myra More, San Ramon.

EDEN (No. 166)—Second and fourth Saturdays at 2 p. m. in Odd Fellows' Hall, Hayward. M., H. V. Mosen, Hayward; Sec., Josie Sharal, Hayward.

ELK GROVE (No. 86)—First and third Saturdays in I. O. O. F. Hall. M., Louis Schelmyer, Elk Grove; Sec., Geo. S. Williamson, Elk Grove.

ENTERPRISE (No. 129)—First and third Saturdays. M., N. G. Wilson, Florin; Sec., Minnie Toomey, Walsh's Station.

FLORIN (No. 130)—Second and fourth Saturdays, 2 p. m. M., Milton Casey; Sec., John Reese, Florin.

GLEN ELLEN (No. 299)—First and third Saturdays at 2 p. m. M., C. W. H. Bruning; Sec., Mrs. M. A. Miner, Glen Ellen.

GRASS VALLEY (No. 256)—Every Saturday at 7:30 p. m. M., Alexander Henderson; Sec., O. L. Twitchell, Grass Valley.

GRIMES (No. 233)—M., H. D. Strother; Sec., J. H. Baldwin, Grimes Landing, Cal.

HOLLISTER (No. 11)—Second and fourth Saturdays at Hollister. M., A. D. T. Button; Sec., Mrs. B. B. Mansfield, Hollister.

INDEPENDENT (No. 302)—M., W. S. Eliot; Sec., H. H. Fine, Linden, Cal.

LOCKEFORD (No. 131)—M., J. M. White, Lockeford; Sec., Mrs. S. L. Locke, Lockeford.

LODI (No. 92)—First and third Wednesdays at 2 p. m. in Lodi Hall. M., Alida Allison, Stockton; Sec., Miss Florence Huffman, Lodi.

MADERA (No. 300)—M., F. J. Quant; Sec., B. W. Child, Madera, Cal.

MAGNOLIA (No. 261)—Second Saturday at 10 a. m. at Magnolia Grange Hall, one mile north of Bear river, Nevada county. M., Jackson Cunningham, Grass Valley; Sec., C. D. Bilderback, Colfax.

MARCH (No. 280)—Second Saturday at 2 p. m. at Pennington. M., R. K. Stevenson, West Butte; Sec., Jennie Clyma, Pennington, Sutter Co.

MERCED (No. 7)—First and third Saturdays at 10 a. m. in Pythian Castle Hall. M., A. Bickford, Merced; Sec., Miss L. Archibald, Merced.

MILLVILLE (No. 221)—Millville, Shasta Co. M., J. S. Eddington; Sec., C. P. Dunham, Millville.

NEW HOPE (No. 301)—M., W. E. Journeay, Sec., Geo. Connor, New Hope, Cal.

NORTH BUTTE (No. 225)—Second and last Saturdays at 1 p. m. at Union Hall, Live Oak. M., D. Fisher, Live Oak, Sutter Co.; Sec., Mrs. Ella Hedger, Live Oak, Sutter Co.

PESCADERO (No. 32)—First and third Saturdays at Good Templars' Hall, 2 p. m. M., I. C. Steele, Pescadero; Sec., Miss M. A. Manley, Pescadero.

PETALUMA (No. 23)—Second and fourth Saturdays at 1:30 p. m. M., C. D. Grover; Sec., D. G. Heald, Petaluma, Cal.

PILOT HILL (No. 1)—Saturday on or preceding each full moon at 7:30 p. m. M., C. S. Rogers, Cool, El Dorado Co.; Sec., A. J. Bayley, Pilot Hill.

PLUMAS (No. 245)—Saturday succeeding full moon at 1 p. m. M., R. A. Heriot; Sec., Miss Hattie Hinds, Beckwith.

POTTER VALLEY (No. 15)—First and third

Saturdays at 2 p. m. M., Wm. Eddle, Potter Valley; Sec., W. V. Kilbourn, Potter Valley.

ROSEVILLE (No. 161)—First and third Saturdays. M., E. C. Bedell, Roseville; Sec., S. S. Gladney, Antelope, Sacramento Co.

SACRAMENTO (No. 12)—Second and fourth Saturdays at 1:30 p. m. at Grangers' Hall. M., E. Greer, Sacramento; Sec., Elmer G. McMullen, Box 509; Sacramento.

SAN ANTONIO (No. 256)—John, Monterey Co. M., W. S. Earl, Jolon; Sec., Mrs. S. S. Paulsen, Jolon.

SAN JOSE (No. 10)—Every Saturday at 10:30 a. m. at Grand Army Hall, First St., San Jose. M., Philo Hersey; Sec., Mrs. M. J. Worthen, San Jose.

SANTA ROSA (No. 17)—Second and fourth Saturdays at 1:30 p. m. M., Chas. Gamble; Sec., Glenn Murdock, Santa Rosa.

SEBASTOPOL (No. 45)—First and third Saturdays of each month. M., Jas. Moran; Sec., Martin Litchfield, Sebastopol.

SOUTH SUTTER (No. 207)—Fourth Saturday. M., John W. Jones, Pleasant Grove; Sec., May Donaldson, Pleasant Grove.

SELMA (No. 291)—Selma, Fresno Co. M., Prof. G. D. Hinds; Sec., J. J. Roadhouse, Selma.

STOCKTON (No. 70)—Every Saturday at 1 p. m. M., Marion T. Noyes; Sec., N. T. Root, Stockton.

TEMESCAL (No. 35)—First Saturday at 7:30 p. m. in Odd Fellows' Hall, corner Eleventh and Franklin Sts., Oakland, and third Saturday at 2 p. m. at same place. M., Walter Renwick, East Oakland; Sec., Mrs. Nellie G. Babcock, North Temescal.

TULARE (No. 198)—First and third Saturdays at 2 p. m. at Goldman's Hall, Tulare. M., John Tuohy; Sec., Mrs. Bertha Ingham, Tulare.

TWO ROCK (No. 152)—First and third Thursdays at 1:30 p. m. M., J. R. Denman; Sec., G. W. Gaston, Petaluma.

VACA VALLEY (No. 208)—M., Mrs. E. E. Ashley; Sec., Mrs. Gertrude Moutgomery, Vacaville.

VALLEY (No. 279)—Second and fourth Saturdays at 1:30 p. m. in Odd Fellows' Hall, Pacheco. M., G. P. Loucks, Pacheco; Sec., Annie Loucks, Pacheco.

WASHINGTON (No. 228)—First and third Saturdays. M., Nelson Dill; Sec., Sam C. Waters, Clements.

WATERLOO (No. 295)—M., L. A. Gremore, Stockton; Sec., C. A. Merrill, Stockton.

WATSONVILLE (No. 124)—First and third Saturdays at 1 p. m. M., Mrs. E. Z. Roache; Sec., Mrs. S. J. Cromarty, Watsonville, Cal.

WEST SAN JOAQUIN (No. 3)—First and third Wednesdays at 1 p. m. M., Simeon Higgins, Tracy; Sec., W. von Soster, Tracy.

WHEATLAND (No. 260)—M., J. Steinhilber; Sec., L. Hamilton, Wheatland.

WOODBRIDGE (No. 84)—First and third Tuesdays at 2 p. m. in Grangers' Hall. M., H. M. Woods; Sec., H. C. Shattuck, Lodi.

YUBA CITY (No. 65)—First Saturday at Masonic Hall, Yuba City. M., P. L. Bunce; Sec., Nellie Brophy, Yuba City.

Sept., 1893.

HEALD'S

BUSINESS COLLEGE.

24 POST STREET.....SAN FRANCISCO.

FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Book-keeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR. E. P. HEALD, Pres. O. S. HALEY, Sec.

ACTUAL BUSINESS PRACTICE.

PACIFIC

Business College,

320 POST ST.

320 SAN FRANCISCO.

LIFE SCHOLARSHIPS, \$75.

Bookkeeping, Penmanship, Shorthand, Typewriting, English Branches, etc. Graduates aided in getting positions. Send for circulars. T. A. ROBINSON, Pres.

School of Practical, Civil, Mechanical.

Electrical and Mining Engineering,

Surveying, Architecture, Drawing and Assaying,

728 MARKET ST., SAN FRANCISCO, CAL.

Open All Year.

A. VAN DER NAILLEN, President.

Assaying of Ores, \$25; Bullion and Coloration Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. ESTABLISHED 1861. Send for circular.

CALIFORNIA FRUITS

AND HOW TO GROW THEM.

By Prof. Edward J. Wickson.

A practical, explicit and comprehensive book embodying the experience and methods of hundreds of successful growers, and constituting a trustworthy guide by which the inexperienced may successfully produce the fruits for which California is famous. 600 pages. Fully illustrated. Price \$3. Postpaid. Send for circular. DEWEY PUBLISHING CO. Publishers. 220 Market Street, San Francisco, Cal.

GRANGERS' BUSINESS ASSOCIATION,

SHIPPING AND COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.

Full Cargoes of Wheat furnished Shippers at short Notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

H. VAN EVERY, Manager. A. M. BELT, Assistant Manager.

Seeds, Plants, Etc.

GOLD DUST.

"Gold Dust Cling," says H. E. Van Deman, U. S. Pomologist, "is a yellow cling of medium size, round and regular in shape, and very firm in flesh. The color is very attractive, being dark yellow with a very red cheek. It bears heavily and carries to market with very little damage. Coming as it does before the main peach crop is gathered, it is about the first yellow cling of any special value and therefore finds a ready sale. Each year it gains in favor, but as it is a variety but recently originated the public know little of it. It is a very profitable variety." Price \$1 each, 85¢ per half dozen. For sale by SACRAMENTO RIVER NURSERY COMPANY, Growers of HIGH-GRADE Fruit Trees, Walnut Grove, Sacramento County, California. Our Specialties—Genuine Tragedy Prunes, Clymau and Japan Plums—price 15 cents each; Sacramento River Bartlett and Peaches—price 10 cents each.

AN INVITATION

IS EXTENDED TO ALL INTERESTED TO VISIT THE SAUSAL FRUIT FARM DURING THE FRUITING SEASON, WHERE ALL VARIETIES ARE TESTED THAT ARE GROWN AT

NAPA VALLEY NURSERIES

AN INSPECTION OF THE NURSERIES ALSO SOLICITED. CLEAN STOCK, UNIRRIGATED, PROPAGATED FROM BEARING TREES.

LEONARD COATES, NAPA, CAL.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrabalan Plum Roots.

Cherries, Peaches, Apricots, Apple, Almond Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

OLIVE TREES.

ALL KINDS OF

Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,

Pomona, Cal.

Pepper's Nurseries.

ESTABLISHED IN 1853.

For Sale at Low Rates, a General Assortment of Hardy Deciduous Fruit Trees.

I do not buy trees to sell; what is offered is grown in my own grounds and free from scale bugs. No scale bugs of any kind to be found in the Nursery. No agents employed. Order direct from the nursery and procure your trees true to label. Order early, as early planting is the most successful with deciduous trees. Prices furnished on application.

Address W. H. PEPPER Petaluma, Cal.

STOCKTON NURSERIES,

— ESTABLISHED 1853. —

FRUIT TREES. FRUIT TREES.

— GRAPE VINES. —

Also Fine Stock of Shade and Ornamental Trees, Shrubs, Palms, Roses and Carnations.

Correspondence Solicited.

PLANTS IN GREAT VARIETY.

E. C. CLOWES, STOCKTON, CAL.

1838. 55 YEARS. 300 ACRES. 1893.

NEW APPLES, PEARS AND NUTS

Starr, the largest early apple. Paragon, and other valuable sorts. Lincoln Coreless, Seneca and Japan Golden Russet Pears in collections at reduced rates. NUTS—Parry's Giant, Pedigree Mammoth, Paragon and other chestnuts. Walnuts—French, Persian, Japan, English and American. Pecans, Almonds and Filberts. Elegans Longipes, Hardy oranges, Dwarf Rocky Mt. Cherries free from insects, black knots or other diseases. Small Fruits, Grape Vines, Currants, Etc. SHADE TREES—Immense stock of Poplars and Maples, ornamental shrubs and vines.

AN ILLUSTRATED DESCRIPTIVE CATALOGUE FREE.

WILLIAM PARRY, Parry, New Jersey.

POMONA NURSERIES.

ORANGE, LEMON & CITRON TREES.

If you have a Lemon or Orange grove, or wish to start one, remember that the success of your grove depends on the trees you plant. Common seedlings will give you a poor crop. Remember now that you are in time! If you will get your plants from this island, which, in point of fact, is the real citrus producing region in the world, in the course of time you will have a very prolific grove of the best Sicilian varieties. We only ship trees three years old, budded on the sour stock. Real trees and not common seedlings. Our leading varieties are: ORANGE:—Mountain, Etna, Aderno, Cateno, Blood, Oval and Mandarin. The LEMON:—Mecana Mountain, Etna. The CITRON:—Utrina Medica, Spadafara, Diamante, Peretone, Lemondella Turk's Head, Lemuziana, Paradise, Etc. The fruit of the above-mentioned varieties is the one largely exported in boxes to the American markets from this island. We have made several successful shipments of plants to California, Florida and Louisiana. Special care in packing. Give us an order for one case containing 100 or 200 assorted trees. Remember that every dollar you lay out on Sicilian trees is a one hundred dollar bill you have gained in future. Apply:

G. SGROI & CO., Catania, Sicily.

Santa Rosa Nurseries.

AN IMMENSE AND WELL ASSORTED STOCK.

TREES TRUE TO NAME—Warranted clean and raised without irrigation. PEARS AND PRUNES at about HALF USUAL PRICES till my surplus is sold.

Price List mailed free.

Address R. W. Bell, Santa Rosa, Cal.

Dewey & Co.'s Scientific Press Patent Agency.



OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library, containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING and SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free.

DEWEY & CO., Patent Agents,

220 Market St., Elevator, 12 Front St., S. F. TELEPHONE No. 653.

A. T. DEWEY, W. B. EWER, GEO. H. STRONG

California Crops.

[Summary of Report of Observer James A. Barwick, for Week Ending September 25, 1893.]

Fruit-picking will be about over the end of this month, with the exception of a few very late peaches. The bean crop is being harvested as rapidly as they ripen and the walnut crop will soon be ready for harvesting. The grain farmers are busy crushing barley for feed during the winter season and are also preparing their land for the sowing of the grain for next year's crop. Quite a number of acres have already been seeded. Raisin drying is now at its best, there being millions of trays over the State loaded with the raisin grape in all stages of drying. Heavy rains at this time, which are not anticipated, would be very detrimental to the grape-growing interests.

Colusa County (Maxwell)—The late rain did but slight damage to the grape crop. The raisins and dried grapes will soon be ready. The farmers are now cleaning wheat for sowing, and getting their barley ground for the season.

Sutter County (Yuba City)—Fall seeding on the farms has commenced. Hops about all picked and the yield was an average one. The shipment of fruits to the East during the past few weeks has averaged over five tons daily. The grape crop is mostly on the trays drying and is very good. Four carloads of green fruits, two of dried peaches and one of dried apples left this section last Wednesday for the East. Daily shipment of green fruit continues.

Butte County (Oroville)—The mountain sections of this county will have the biggest crop of apples this year it has had for many seasons. Hops have been tried successfully.

Yuba County (Wheatland)—Hop-picking has closed in this vicinity and has been the longest season ever known at Wheatland.

Placer County (Newcastle)—The fruit season will be practically over by the close of the month, which, on the whole, is quite unsatisfactory to the producer.

Sacramento County (Courtland)—The orchard land along the river is beginning to look natural again, all the fruit covering the ground having about decayed. (Sacramento)—Hop picking ended and the crop was an average one, and also of good quality.

Yolo County (Winters)—The peach and pear crop will soon be exhausted, but grape shipments are likely to continue for a month longer. The demand for Tokays and Muscats is especially good. Nearly all the orchardists are cutting and drying peaches, mostly of the Muir variety. Some of the late Crawfords will not be ripe enough to pick for two weeks. (Blacks)—There are enough grapes on trays in this vicinity and at the mercy of the elements to supply the people of Yolo county for the next ten years. (Knight's Landing)—The potato vines are now in blossom and the buckwheat crop is a very promising one. (Woodland)—For several days grape-picking has been in progress in various parts of the county, but in the vicinity of Woodland the Sultanas and Tokays only began to ripen the early part of the week, and in many instances the Emperors and Cornichons will not be ripe enough to ship for several days yet.

Solano County (Vacaville)—Shipments of green fruit consist of Tokay and Muscat grapes, fall and winter pears and Salway peaches. Binghamton farmers are beginning to harrow their summer-fallow, preparatory to sowing their grain. (Tremont)—Grape-picking will be completed the coming week in this immediate vicinity. In the neighborhood of Silveyville a large crop of fine prunes is being harvested.

Napa County (Napa City)—The winds of the past few days have blown tons of fruit to the ground. Peaches (clingstones), plums and apples have in many orchards been rudely harvested by the wind.

Sonoma County (Petaluma)—Grape-picking is progressing in some of the vineyards. Except in a few localities, there is not much damage to grapes by the late rains. Fruit in process of drying, however, was considerably damaged. The vintage in this county will not begin much before October 1st. (Santa Rosa)—Hop-picking in most of the yards is about finished. Tomatoes are a more profitable crop this season than peaches and pears. At present they hold their own at 50 cents per box. Grape-crushing has begun. (Rincon Valley)—The grape crop will average about the same as last year, both in quantity and quality. They were not far enough advanced to be injured by the late rain. Fruit has proved a good crop generally, apples and pears being exceptionally fine. Nearly the entire lot has been dried and is now in good shape for the market.

Santa Clara County (San Jose)—There has been a constantly rising market on apricots since the opening of the season. There is beginning to be a demand for pears,

silver prunes, nectarines and pitted plums. (Berryessa)—The atmosphere has been rather damp the past week for fruit-drying, but there has been many tons spread on the trays. (Evergreen)—The late foggy mornings and cloudy days have made the work of drying fruit proceed slowly, yet the prunes are being gathered rapidly, and soon there will only be the grapes left to be picked. (Cupertino)—The late foggy weather continued has done considerable damage to the grape crop.

San Benito County (Hollister)—The hop-pickers are still at work, but expect to finish this week. (Mulberry)—The grape is splendid in this part of the county. Most of the grangers in this vicinity have harvested their grain.

Monterey County (San Ardo)—Weather moderately cool. Farmers are finishing up their fall work as fast as possible. Grain is being stored for better prices.

San Luis Obispo County (San Luis Obispo)—The cool weather has helped bean harvesting, and this we need, as the crops on the low land is in danger of getting wet. The grape crop is a very heavy one. Bean harvesting on the uplands is about over. Potatoes are doing very well.

Orange County (Anaheim)—One hundred tons of beets are being sent out daily; total shipment of sugar beets this season, 7,409,435 pounds.

Santa Barbara County (Santa Maria)—Continued cool weather still prevails, with but two windy days. Prunes are drying slowly. Beans, owing to excessively cool weather, are not turning out as large as at first anticipated, there being too much vine growth. (Lompoc)—The prune crop is so fearfully large here that the dryer has several mechanics constantly making trays, and then cannot keep up with the demand. The prune was of much fairer size than it was last year.

Scientific Facts.

A ton of sea-water is supposed to contain about 14 grains of gold.

Sixteen ounces of gold are sufficient to gild a wire that would encircle the earth.

Whenever there is friction there is heat. Hammering a nail rod until it is red-hot, or forging a nail without fire, are feats of the blacksmith.

During the last Paraguayan war it was noticed that the men who had been without salt for three months, and who had been wounded, however slight, died of their wounds because they would not heal.

A frog cannot breathe with its mouth open. Its breathing apparatus is so arranged that when its mouth is open its nostrils are closed. To suffocate a frog it is necessary only to prop its jaws so that they cannot shut.

Prof. Virchow reaffirms his belief that no trace of "the missing link" between man and the lower animals has been discovered, either in the human skulls which are believed to be most ancient, or in the physical structure of modern savages.

Among solids, glass is apparently perfectly elastic. A plate of glass bent under pressure and allowed to remain under stress for 25 years, when released and carefully tested for any permanent set, was found to have returned to exactly its original shape.

It is said that a new industry has sprung up in France, the selling of milk frozen solid in cans. It has been discovered that milk can be kept perfectly fresh in a frozen condition for more than a month. It is frozen by means of an ordinary ice-making machine, and dispatched by road, rail or steamer to its destination. The customer who purchases the frozen milk has simply to thaw it when it is required for use.

Dr. Bowdler Sharpe suggested in a recent lecture on the geographical distribution of birds, before the Royal Institution of London, that there was once a great continent, with its center at the South Pole, now submerged under 2000 fathoms of ocean. It embraced, he said, South America, Madagascar, Mauritius, New Zealand and Australia; and thus he explained the existence of the cognate struthious birds that now exist, or once existed, in those countries.

Prof. E. S. Holden says that if the brightness of a star seen with the eye alone is designated by one, with a two-inch telescope it is 100 times as bright, with a four-inch telescope it is 400 times as bright, eight-inch telescope it is 1600 times as bright, 16-inch telescope it is 6400 times as bright, 32-inch telescope it is 25,600 times as bright, 36-inch telescope it is 32,400 times as bright. That is, stars can be seen with the 36-inch telescope that are 30,000 times fainter than the faintest stars visible to the naked eye.

An Indiana Miracle.

A CASE THAT HAS ATTRACTED MUCH ATTENTION.

A Well-Known Citizen Whose Life Was Despaired of Is Again Enjoying Health and Strength—The Particulars of His Remarkable Cure as Related to a Reporter of the Crawfordville Journal.

(Crawfordville Ind., Journal.)

There is probably no man better known in this city than G. M. Johnson, or "Mit," as he is familiarly called by everybody. Six months ago it was the common remark that "poor Mit had but a few more days of his life," his physical condition being such that not one of his hundreds of friends had the slightest hope of his surviving the summer. He had about abandoned all hope himself, evidently, and was confined to his room and bed, unable to walk or to attend to any business whatever. A representative of this paper, who has enjoyed an intimate acquaintance with Mr. Johnson for a long number of years, met him walking briskly up street to-day, and in astonishment inquired of him what had brought so wonderful a change in his appearance and condition.

"Well," said Mr. Johnson, for a number of years I have had a complication of troubles, the most serious being spinal and nervous trouble, which, as you know, brought me pretty near death's gate. My friends despaired of my recovery, and I had but little hope myself of ever being about actively again. My health kept going from bad to worse until I became perfectly helpless. I was unable to walk a step; could not sleep, had no appetite, I just lived and suffered and could not die to get relief. Physicians did me no good; neither did all the other remedies I tried, and I believe I have taken enough medicine in the last few years to stock a drug-store. I was in this miserable, hopeless and helpless condition when a friend called my attention to a remarkable cure through the use of Dr. Williams' Pink Pills for Pale People and urged me to try them. I felt that perhaps it was a last chance, and procured a supply of Pink Pills from Messrs. Nye & Booe, the well-known druggists. That was about six months ago, and you see what they have done for me. I am a new man now. I had not been taking Dr. Williams' Pink Pills long when I began to find an improvement. I saw that I had at last hit upon a remedy that had virtue in it; hope returned and I continued to use the pills and continued to improve in health and strength, and while I am not the stoutest man in the city I am a new man altogether. I feel well, eat heartily, sleep soundly; the dizzy, nervous trouble has entirely left. I can walk briskly, and am enjoying life as of yore. I consider this Pink Pill remedy a wonderful one, and have recommended it to a number of my friends who have been similarly afflicted. Why, I cannot recommend the remedy too highly. Just think, for nearly a year I could not stand up to take a drink of water without getting blind from dizziness, and the most excruciating pains would seize me, and during these paroxysms I suffered untold agony. I am now entirely free from these pains, and I really have faith that I will soon be as sound as a dollar."

"Well, Mr. Johnson, your friends are gratified to see you so much better, and we hope that others may be benefited by the same means."

"Just say to any one who may want information that I will freely give them any information they may desire on the subject, and will only be too glad to see some of my friends benefited in the same way. I know some who are in need of something right now, and will urge them to try the four p's. There is nothing in my opinion to equal them, and as I said in the start, I have tried all the remedies advertised."

Mr. Johnson can be seen any day at his place of business on Green street, and any one desiring further information in regard to his case should call on him. It is surely almost a miraculous case, and one which attracts a great deal of attention.

Our reporter then called upon Messrs. Nye & Booe, the well-known druggists, who said they considered Dr. Williams' Pink Pills for Pale People a wonderful remedy. It is less than a year since they began to sell Pink Pills, and in that time the sale has grown to such an extent as to be remarkable. Messrs. Nye & Booe said there were many in Crawfordville besides Mr. Johnson who had reason to be grateful to Dr. Williams' Pink Pills for restored health and strength. Indeed, every one who uses Pink Pills speaks of them in the highest terms.

Dr. Williams' Pink Pills were successfully used in general practice for many years before being offered to the public generally. They contain, in a condensed form, all the elements necessary to give new life and richness to the blood, and restore shattered nerves. They are an unfailing specific for such diseases as locomotor ataxia, partial paralysis, St. Vitus dance, sciatica, neuralgia, rheumatism, nervous headache, the after effects of la grippe, palpitation of the heart, pale and sallow complexion, that tired feeling resulting from nervous prostration; all diseases depending upon vitiated humors in the blood, such as scrofula, chronic erysipelas, etc. They are also a specific for troubles peculiar to females, suppressions, irregularities, and all forms of weakness. They build up the blood and restore the glow of health to pale or sallow cheeks. In men they effect a radical cure in all cases arising from mental worry, overwork, or excesses of whatever nature.

These Pills are manufactured by the Dr. Williams' Medicine Company, Schenectady, N. Y., and Brockville, Ont., and are sold only in boxes bearing the firm's trademark and wrapper, at 50 cents a box, or six boxes for \$2.50, and are never sold in bulk.

The American Bee Journal.

(Established 1861.)
IS Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample.

\$1.00 BEE-BOOK FREE
Geo. W. YORK & CO., 56 Fifth Ave., Chicago, Ill.



The beginning and end of the Horse Blanket question is 5/A. That mark has the same significance on a horse blanket that the seal of the government has on a gold certificate—it's an absolute guarantee of value. 5/A Horse Blankets are made with a special view to strength, durability, and comfort for the horse. Once you get a 5/A Blanket you will not need another for many years; perhaps not for a life time—your horse will last longer, too. Ask the dealer for a 5/A and be sure the trade mark is in plain sight.

Made only by
WM. AYRES & SONS, Philadelphia.



Commission Merchants.

ALLISON, GRAY & CO.,

501, 503, 505, 507 & 509 Front St.,
And 300 Washington Street, SAN FRANCISCO.

—GENERAL—
Commission - Merchants,
GREEN and DRIED FRUITS,
Poultry, Eggs, Game, Grain, Produce and Wool.

P. STEINHAGEN & CO.



404 & 406 DAVIS ST. S.F.

MOORE, FERGUSON & CO.

WOOL, GRAIN, FLOUR

—AND—
General Commission Merchants,

310 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

LINDSAY & CRAIG,

Crocker Building.....San Francisco.

Mortgages Bought, Loans Negotiated.

Several buyers on hand for desirable Fruit and Grain Ranches.

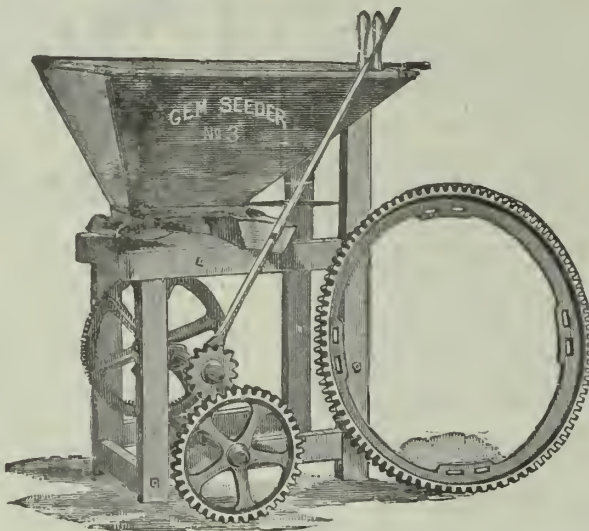
California Inventors

Should consult DEWEY & CO. AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists and large practice as Patent attorneys enables them to offer Pacific Coast Inventors far better service than they can obtain elsewhere. Send for free circulars of information. No 220 Market St., San Francisco Cal.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior St. k, low Prices.

IMPROVED GEM SEED SOWERS.

Do not be swindled. There are imitation Gem Seeders. Buy only the Genuine. Manufactured by the Benicia Agricultural Works, and sold by Baker & Hamilton for over 25 years.



STYLE OF NO. 8 GEM. WEIGHT 164 POUNDS.
 No. 1 Gem.....\$16 00
 No. 2 Gem.....20 00
 No. 3 Gem.....20 00
 For ease of management and noiseless working we recommend the Nos. 2 and 3 Gem Seeders.

Our Gem Seeder is the only Seeder having the Armstrong Patent Force Feed, an improvement adding \$5.00 to the value of the Seeder. Before buying any other closely examine the Gem.

WE GUARANTEE THE GEM MACHINES to sow all kinds of grain or seeds. We defy anything in the shape of a broadcast seeder to compare with them. This machine, with our force feed, is perfection.

At the usual walking gait of horses the Gem will sow about 15 acres per hour.

The Gem Sowers have superseded the old style Cahoon Sowers. They save the price of themselves over any other sower in one season. The Gem has two valves that supply the distributor with grain—one for each side of the wagon. One may be closed when sowing by a fence, ditch or land that is not to be sown.

We are exclusive owners of the patents and have been the sole manufacturers of the Gem Seeders for over twenty-five years. We have always furnished a satisfactory tool at a reasonable price. Do not be persuaded into buying an incomplete and inferior seeder, under the representation that it is as good as the Gem.

Write for our No. 27 Latest Catalogue of Plows, Harrows and Seeders.

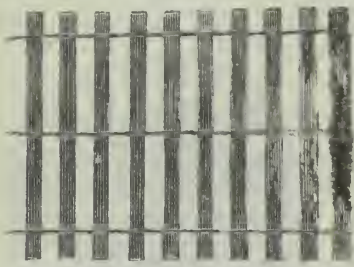
BAKER & HAMILTON,
 SAN FRANCISCO AND SACRAMENTO.

RABBIT-PROOF STOCK FENCE.

Cheap, Durable and Effective.

Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2½ ft., 4 ft., 4½ ft., and 6 ft. high. Send for circulars and price list to

JUDSON M'F'G CO.,
 12 & 14 Fremont St. San Francisco.



The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.

UNION IRON WORKS,
 SACRAMENTO.....CALIFORNIA.

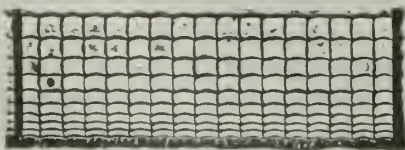
ROOT, NEILSON & CO.

—MANUFACTURERS OF—

STEAM ENGINES, BOILERS
 And all kinds of
MACHINERY FOR MINING PURPOSES.

FLOURING MILLS, SAW MILLS AND QUARTZ MILLS.
 Machinery constructed, fitted up and repaired.

Front St., bet. N and O, Sacramento, Cal.



**Pardonable
 Pride.**

That which a good farmer can take in having the best fenced farm in the county. His city brother with the best dressed wife, or fastest horse, must continually add to his investment, while he with his Page fence properly put up can safely "rest on his laurels."

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

A SUBSTITUTE

Advantages of this Paper for
 a Drying Surface.

ABSOLUTELY ODORLESS.

WATER, ACID AND
 ALKALI PROOF.

WILL IMPART NO TASTE
 NOR ODOR TO FRUIT.

CHEAP AND DURABLE.

ITS BRILLIANT BLACK
 SURFACE, which absorbs
 the heat, drying both sides
 of fruit at the same time,
 and rendering the labor of
 turning unnecessary.

E. G. JUDAH, Agent, 221 South Broadway St., Los Angeles.



FOR TRAYS!

Unequaled for
DRYING GRAPES.

Write for
 SAMPLES AND CIRCULAR.

**Paraffine
 Paint Co.**
 116 Battery St.
 SAN FRANCISCO



PROTECT YOUR TREES

Gilman's Patent Tule Tree Protector
 Patented Aug. 1, 1893.

Cheapest, Best and One to Protect Trees and Vines
 from Frost, Sunburn, Bites, Squirrels, Borers and Other
 Tree Pests.

For Testimonials Parties who are using them send
 for Descriptive Circulars.

B. F. GILMAN,

Sole Manufacturer of Patent Tule Covers,
 420 NINTH ST., SAN FRANCISCO, CAL.

Send for Price Lists
OF GUNS
 And all Articles used
 by Hunters and
 Anglers.



**GUNS SENT ON
 TRIAL.**

**OLD GUNS TAKEN
 IN EXCHANGE.**

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.

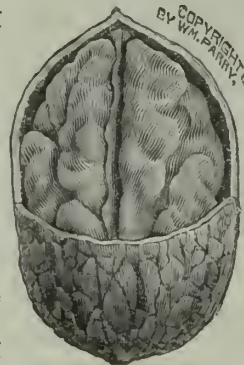
WE GIVE ESPECIAL ATTENTION TO

Fruit Trees! Deciduous Fruit Trees!

ALEXANDER & HAMMON'S
 Rio Bonito Nurseries, Biggs, Butte Co., Cal.

KAGHAZI

SOFT SHELL



PERSIAN

WALNUT!

Our Stock of TREES and VINES is Most Complete
 in EVERY CLASS of Fruits.

A LARGE STOCK OF THOMPSON'S SEEDLESS GRAPES.

SHIPPING, CANNING and DRYING Fruits of all Kinds.

Best Assortment of **RAISIN and TABLE GRAPES** in California.

Early Shipping Plums a Specialty.

SPECIAL PRICES FOR TREES IN LARGE QUANTITIES.

DURING the last three years, trees grown on the FEATHER RIVER BOTTOM LANDS, at RIO BONITO, BUTTE COUNTY, have been much sought after, and the demand for them is increasing all over the State where they have been planted. Owing to the peculiar adaptability of the soil and climate of this section for growing nursery stock, the trees making a very large and well-furnished system of root growth, and maintaining a correspondingly strong and vigorous top, maturing the wood thoroughly, we are enabled to supply our patrons with the best of trees, healthy in every respect, entirely free from insect pests, and in perfect condition for transplanting.

If You Are Going To Plant Trees, It Will Pay You To Correspond With Us Before Purchasing.

ALEXANDER & HAMMON,
 BIGGS, BUTTE COUNTY, CALIFORNIA.

GRANGERS' BANK

OF CALIFORNIA.
 SAN FRANCISCO, CAL.
 INCORPORATED.....APRIL, 1874.



Authorized Capital.....\$1,000,000
 Capital paid up and Reserve Fund 800,000
 Dividends paid to Stockholders.... 720,000

OFFICERS.
 A. D. LOGAN.....President
 I. O. STEELE.....Vice-President
 ALBERT MONTPELLIER.....Cashier and Manager
 FRANK McMULLEN.....Secretary
 General Banking Deposits received, Gold and Silver.
 Bills of Exchange bought and sold.
 Loans on wheat and country produce a specialty.
 January 1, 1893. A. MONTPELLIER, Manager.

Porteous Improved Scraper

Patented April 8, 1883. Patented April 17, 1883.



Manufactured by G. LISSENDEN.

The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making, etc.

This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

This Scraper is all steel—the only one manufactured in the State.
 Price, all Steel, four-horse, \$40; Steel two-horse, \$31.
 Address all orders to G. LISSENDEN, Stockton, California.

PACIFIC RURAL PRESS

Vol. XLVI. No. 15.

SAN FRANCISCO, SATURDAY, OCTOBER 7, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market Street.

Fan Palms as Street Trees.

We alluded recently to the popularity of palms as ornamental trees in this State, and remarked the probability that the California of the future would be rich in the peculiar vegetation of the *palmaeae* and thus depart even more widely than at present from the arborial characteristics of this latitude in other sections of the country. This prediction was based upon the growing popularity of palms as avenue trees and for planting in groups or singly in residence grounds both in suburban and rural regions. It of course will take years, almost generations, before the lofty crests of the palms can claim their full force in the landscape.

The engraving shows the effect of palm-planting on a city avenue, the plants being in this case probably about ten years old. There may be, of course, difference of opinion as to the beauty and desirability of this style of street bordering. We are ourselves in considerable doubt as to whether this is really a good use of palms. Probably most people would prefer a street tree agreeing better with the traditional idea of such an ornament than do the rather more formal outlines of the palm. Then, too, for

shade purposes the palm is about as good as a fish net would be for a bedspread. The noonday pedestrian along the avenue shown in the engraving would probably have pronounced opinions of the palm as a shade tree.

Evidently palms planted as near the sidewalk as those shown in the picture do not have opportunity to make their best growth. The leaves have been removed too soon to clear the walk, and this contributes to the spindling form of the trunks. A palm thus treated cannot form the grand shaft seen in old specimens which have never been under-trimmed. In all probability, their trunks will dwindle and expand again when they reach the height at which leaf-cutting becomes unnecessary, thus showing ere long a wavy outline which will be anything but handsome.

The treatment of palms on well-kept ornamental grounds is much of a problem. Thrift and neatness seem to call for the removal of the leaves as soon as they have passed their best estate, and probably before their services to the plant are ended. The result is lanky and stilted palms. One has to choose between this and the untidiness of dying leaves, and most people choose the former. But where the palm is used as an avenue tree, it should be given room enough to spread its crown without interfering with the comfort of the pedestrian, and then it is unques-

tionably better to admire the dying leaves as a foil for the living and allow them to droop until they enclose the trunk, comforted with the thought that the people of a century hence will have majestic and symmetrical objects for admiration.

EVEN the great cane-sugar center of the country runs low on saccharine. It is said that a full cargo of beet sugar is now on the way from Hamburg, Germany, to New Orleans. Imports of this character are quite frequent at New York, and some lots have been received direct at New Orleans. But this is the first full cargo of the kind ever ordered by that port. It consists of 39,499 bags or

killing coyotes in Lower California and turning in the scalps for the State bounty at San Diego. It is said Parker deftly split the scalps, thus making each animal killed bring him in \$10. We are not well enough up in coyote business to judge of the practicability of the alleged fraud, but it will serve as an original yarn at least.

CALIFORNIA BREWING BARLEY is taking a higher place among our exports. Houses largely engaged in wheat-shipping have recently handled more barley than ever before. Our brewing barley is chiefly going to Great Britain, where it has commanded a desirable margin above low cost here and freight rates. Some brewing also goes to

New York, and feed barley to the Hawaiian Islands. Barley shipping by rail eastward has almost ceased since the freight war three years ago. A local statistician has given the following figures: During the year ending June 30, 1893, the exports from San Francisco were 1,931,716 cents, that being an increase of 773,120 cents over the previous year. During the first eight months of this year there were shipped by sea 1,913,665 cents, being 11,949 cents more than were shipped during the year previous. In the first eight



THE CALIFORNIA FAN PALM AS AN AVENUE TREE IN LOS ANGELES.

3933 tons. This is probably the largest cargo of beet sugar ever imported into the United States. New Orleans needs the sugar to tide over until the Louisiana crop becomes available. The New Orleans refineries rarely work during the summer months, though one or more of them have been kept busy during the past season. Several years ago New Orleans imported some Hawaiian sugar from San Francisco by rail. If Congress does not knock out the beet sugar business, New Orleans can soon get all she needs from California.

IT IS REPORTED from Riverside that the raisin crop will be finished up by Oct. 15th. The crop is not as heavy as in former years. The work of gathering the grapes has been done mostly by white labor, only a few Chinese and Indians being employed. The weather for the past ten days has been cool, and the fruit dried slowly in consequence. So far no sales have been reported, but offers have been made, which are better than the prices of last season.

SPLITTING HAIRS is an old game, but splitting scalps is new. It is said that A. E. Higgins, Chief Deputy Collector of Customs, tells a story of a hunter named Parker, who is said to have made thousands of dollars

months of 1892 only 640,421 cents of barley were shipped, and a comparison with the corresponding months of this year shows an increase of 1,273,144 cents.

AND NOW we are to have another official horticultural investigation—this time in the line of viticulture. It is telegraphed from Chicago that M. Francois Gos, director of the Viticultural College at Antibes, France, and French Commissioner of Viticulture to the United States, who is charged on the part of his Government with the duty of visiting and reporting upon the vineyards of California, will arrive in California shortly and desires such opportunities as may be reasonably granted for the pursuit of his studies. The State Viticultural Commission will probably provide him with some suitable companion familiar with the French language and the subject matter, and otherwise facilitate his work. It will be a good pretext for "slicking up" in and around our vineries, and this will be a good thing whether the French expert reaches your place or not.

BLACK WOODPECKERS are said to be a great pest in Josephine county, Or. They descend upon the orchards in swarms and destroy large quantities of both fall and winter apples.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half inch (1 square).....	1.00	2.50	6.50	22.00
One inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, October 7, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—The California Fan Palm as an Avenue Tree in Los Angeles, 245.
EDITORIALS.—Pan Palms as Street Trees; Miscellaneous, 245. The Week; Weather Furies on the Atlantic Side; The Dead Weight Factor in Fruit Shipping; Miscellaneous; 246. From an Independent Standpoint, 247.
MISCELLANEOUS.—State Horticultural Society, 247. Cleaning Dried Fruit With a Grain Fan; Growing Interest in Shropshire; The Sweet Olive; Heavy Shipments of Fruit; The State Grange at Petaluma, 248.
HORTICULTURE.—Pickling Ripe Olives; About Nurserymen, 249. Fruits at the San Diego Fair, 250.
FRUIT MARKETING.—The Marketing of California Fruits, 250.
THE FIELD.—The Amended Game Laws, 251.
AGRICULTURAL ENGINEER.—How to Build Good Roads, 251.
THE HOME CIRCLE.—Miscellaneous, 252.
DOMESTIC ECONOMY.—Miscellaneous, 253.
YOUNG FOLKS' COLUMN.—The Hens That Wore Spectacles, 253.
PATRONS OF HUSBANDRY.—State Grange Session at Petaluma, 254.
AGRICULTURAL NOTES.—256.
MARKET REPORTS.—257.

BUSINESS ANNOUNCEMENTS.

(NEW THIS ISSUE.)

	PAGE.
Agricultural Implements—Baker & Hamilton.....	260
Agricultural Implements—Deere Implement Company.....	260
South Down Sheep—R. H. Crane, Petaluma.....	269
Incubators—Reliable Incubator Company, Quincy, Ill.....	263
Nursery Stock—J. S. Colfins & Son, Moorestown, N. J.....	258

See Advertising Columns.

The Week.

The working season of 1893 is nearly over; the talking season is beginning. And it is with no disparagement that we thus allude to the part of the year which is largely given to discussion, conference and consultation among agriculturists concerning the internal administration of their business and the relations of their industry to other lines of human activity. It is sometimes held that "talk doesn't count," and that "work" is the true moving force. The relations between talk and work are much like those between capital and labor. One can live perhaps without either capital or talk, but labor, accompanied more with capital and work, finds a valuable coadjutor in a proper amount of sensible talk. Probably the political economists would claim that a man's ability to labor is his capital and that really it is impossible to bisect the two factors of industrial success. Much the same unity exists between work and talk, for talk without work is like faith without works—dead. Earnest talk in the form of intelligent discussion, multiplies good work. It vivifies, guides and inspires it. Sound talk is the sign of thought, and he who thinks best works most intelligently and effectively.

Therefore we say: Welcome the talking season of the California farmers. The coming weeks will see conventions and assemblages of various agricultural interests in all parts of the State. Let all who can attend them and practice both addition and subtraction with reference to their valuable features. Each can both give and receive benefit, and still more remains. It is a re-enactment of the widow's cruse of oil and no oleo or cottonseed in it.

THE Florida orange grower has strange allies. We read an account by Mr. J. H. Leslie of Sumter county, in which he says that on the west side of Lake Panasoffkee there is not one alligator for fifty that were there seven years ago—a result of the indiscriminate slaughter for their hides. And what is the consequence? For the last few years the common rat has been increasing in numbers and in depredations. In his budded grove the trees have low, spreading heads, and the rats climb up them, cut off the fruit and devour them. On that account he has found it necessary for the last two years to give encouragement to various kinds of snakes, and finds they are keeping the rats in check; but of the two kinds of animals he much prefers the alligator as an ally in keeping down the rats. And the editor adds that in the village where he lives the rats have become so bold and aggressive that they climb up the sides of the houses and enter between the slats of the shutters in the night. Ugh! Florida can surely beat us on rat yarns.

The Dead Weight Factor in Fruit Shipping.

On another page of this issue will be found a report of an interesting meeting of the State Horticultural Society, at which quite pointed reference was made to some of the present evils in Eastern fruit transportation. The wretched delays which have cost California fruit-shippers so many thousand dollars this summer have been laid at the doors of Eastern railways where these fondlings will give least trouble. But the matter should not be allowed to rest. Eastern connections of the Southern Pacific should be pursued until some satisfaction is secured and the exact location of the trouble made. This will evidently be one of the chief duties of the shippers this winter, for, unless better service can be had in point of time, the business will be too hazardous for either profit or comfort.

There was another point made by Mr. Gray of the railway company, and that is the dead weight in ice and construction to carry it. Since the remark was made, the following more exact statement, prompted by the discussion at the meeting, has been published by the railway company in the form of a tabulated statement by Mr. Sproule as follows:

FRUIT IN REFRIGERATORS.

44,000 lbs.—22 tons car weight, non-paying.
8,000 lbs.—4 tons ice weight, non-paying.
24,000 lbs.—12 tons fruit, pays.

76,000 lbs.—38 tons dead weight, of which only 12 tons is paying load.

Add 44,000 lbs. 22 tons, non-paying returning empty refrigerator.

120,000 lbs.—60 tons of total dead weight, of which only 12 tons in all pays freight.

The distance from Sacramento, the usual shipping point in this State, to Chicago is 2350 miles. For this service the railroad charge is \$300 a car, and the Refrigerator Car Company, which is a separate organization, charge \$125 a car for ice and attention en route.

It is necessary to return the refrigerator cars empty, because it is impossible to wait for them to be loaded. None of the refrigerator car companies are rich enough to build cars in sufficient number to move California fruit crops unless the empty cars are speeded back empty. Mr. Sproule said he could not see how fruit-growers could expect lower rates than are now given them until they or their friends invent something better and lighter than the present refrigerator cars.

Aside from the blame which may attach to railway managers for their sins of omission and commission, this dead-weight problem certainly should be solved in some way. Of course the statement by Mr. Sproule exaggerates the evil to some extent. The railway must have some dead weight to haul in some kind of a car, and it is therefore not fair to charge up the whole weight of a refrigerator car plus the ice to the fruit carried. Perhaps the extra dead weight is equal to the weight of the fruit on the eastward trip, with the return of the car to be otherwise accounted for. It is not fair to charge the fruit nor the fruit-grower with it. Economical railway management should soon be able to cope with that part of the dead weight. It may be unavoidable just at present, but should not long remain so.

But what can be done to do away with this extra dead weight, whatever it may be? That is one of the most important questions just at this time. Mr. A. T. Perkins of Alameda, a member of the Horticultural Society, believes he can answer it and at the San Jose meeting on October 27. Possibly others have ideas on the same subject which they have reduced to demonstration of their practicability. It is a good time to bring them forward.

THE proper fruiting of the Bulletin Smyrna fig without capriciousness is again brought into prominence by an exhibit made by Leonard Coates of Napa at the meeting of the Horticultural Society last week. Mr. Coates in 1883 planted some cuttings of the Smyrna figs, which had been imported. His cuttings, like those planted by others, produced barren trees. The fruit would form, but the blossoms were all female and not being fructified would fall before they matured. From one of these barren trees Mr. Coates planted a cutting. This cutting produces what seem to be Smyrna figs. An examination will be made by Mr. Maslin, who has given the subject much attention, to find if they contain perfect seeds, or if they contain only the hulls of seeds. The first crop of Mr. Coates' tree fell prematurely. It is the second crop which apparently reached perfection. Mr. J. C. Shinn of Niles says that a few of their Bulletin Smyrna figs occasionally reach full size, and we notice a report in another column that Mr. F. A. Kimball showed good fruit at the recent San Diego fair. And so we are again hurled at the problem as to whether we can get perfect Smyrna figs without the blastophaga, or whether some native insect is doing the blastophaga act. We shall see ere long.

Weather Furies on the Atlantic Side.

The Southern States are suffering this fall more than their share of meteorological mischief. The cyclone of last month played sad havoc on the southeast coast and extended its injuries northward through the peninsula peach region and beyond, causing great destruction to life and property. This week there comes another weather disturbance centering in the Gulf of Mexico and driving angry waters over the lowlands of the States all the way from Louisiana to Florida. Hundreds of lives and millions of property are reported among the prey of the storm. Great destruction has befallen the orange crop of Louisiana, both trees and fruit being ruined in some cases. Full details are not yet available, but evidently the South is out of luck this year. What more does this distressful division of time carry with it?

It is apparent from all sources of information that the general condition of the Eastern fruit supplies has been much lowered by the ills to which we have alluded. The September crop report of the Department of Agriculture says:

"In the report of this office for August it was shown that in but three or four of the Middle Atlantic States and the Pacific States did there exist prospects of good to abundant crops of apples and peaches. It is mainly important, therefore, to chronicle further changes there, and unnecessary to again point out the failure in other commercial sections, in even the best of which, if we except isolated orchards, the prospects are not for more than half a crop, and that of poor quality." This means, of course, that throughout the great West and South there has been well nigh a failure of the fruit crop. The report goes on to show that—

New Jersey, Delaware, Maryland and Virginia were the States of commercial importance having the highest condition in the Eastern section, and these States still maintain that position, though with much lower percentages. The almost unprecedented storm of the 28th and 29th ultimo has spread disaster over a considerable portion of this territory, and probably no crops have suffered more than the apple and peach crop.

In some counties it is asserted that fully 50 per cent of the fruit, both apples and peaches, was blown from the trees, while the most exposed orchards have been decimated by uprooting and splitting. On the other hand, the rain that accompanied the storm was badly needed, and fruit left on the trees, as much doubtless was in orchards sheltered by woods or other physical circumstances, or where the storm was less severe, will be better than any yet harvested. The product so far has been below the standard of quality, owing to the excessive dry weather.

No doubt it is in part the condition of Eastern fruit affairs thus indicated which is improving the market for California dried fruits and it may also help our shipments of late fruits, notably plums and pears and, indirectly, grapes as well, though the Eastern grape crop is good as a rule and may largely meet the local demand.

All these facts tend to confirm the prediction which we made some time ago, that before another fruit crop can come in everything in the line of California fruit in cans or sacks will be cleared up by Eastern consumption at better prices than was thought possible two months ago.

W. T. KIRKMAN, of Atwater, sends us a sample of his late seedling peach of which we gave a favorable opinion last year. He claims for the variety freedom from curl, good flavor and size equalling the Wheatland and Salway, a small pit which does not split, consequently gives no cavity for rot and mold. It ripens with or a little later than the Salway and is superior to it in color and quality. These points seem to be justified as far as we can judge from the fruit, and certainly the variety deserves wider trial as a yellow freestone. Mr. Kirkman intends to keep it on trial another year before offering it for sale. This is a wise course, although certainly the variety is of much promise.

SOMETHING WORSE than the scalp bounty seems to be on the track of the coyotes of Arizona. A traveler returned from the Verde river, where he has spent some months in camp, and says that the coyotes in that section are effected with hydrophobia to such an extent that it is dangerous to travel through the country, and especially to camp at night. A few days ago one came to his camp, and had it not been for his dog he would have been bitten. He succeeded in shooting it after it had severely bitten the dog, which has since gone mad. Several of them have been killed by prospectors in that country.

THE Persian grape varieties sent to this State by Prof. Van Deman, recently pomologist of the U. S. Department of Agriculture, are beginning to fruit. Mr. Coates exhibited at the Horticultural Society half a dozen varieties which ripen with the Sweetwater, and thus bid fair to extend our variety of early table grapes. The colors are white and dark and the forms incline to oval and in some cases almost to spindle-shape. The names are even more peculiar than the grapes. Another season will bring quite a showing of these new grapes.

From an Independent Standpoint.

The situation in the Senate has degenerated into a deadlock. The repeal measure has the votes but the anti-repealers have the floor; and there the matter hangs. In defiance of all decent precedent and of every principle of fair play, Senator Stewart and his associates from Colorado and Idaho are holding the Senate to a course of inaction, it being their declared policy to prevent anything from being done unless the Senate will do what they demand. The rules which govern the procedure of the Senate are based upon the idea that the members of that body are gentlemen. It is assumed that the majority will not arbitrarily force a vote without allowing proper time for debate; and that the minority will not introduce motions or make speeches merely to delay and obstruct the proceedings. But this is one of the seasons when all signs fail. It is found that Stewart and his colleagues from the silver mining belt care nothing for good manners or for the principle of fair play, and that they propose to exhaust every expedient of delay and obstruction. It is impossible to force a vote by "cloture," because to do so would involve a change in the rules which the Stewart crowd could defeat by the same tactics now being applied to the repeal measure. There seems nothing to do but to wait in the hope that the folly and stubbornness of the so-called silver Senators will be corrected by the effect of public opinion. They will soon learn that nothing is to be gained by arbitrary opposition to the established American principle of majority rule. No permanent advantage ever came to any cause or to any party by filibustering; for there is in the public mind an innate contempt for the dishonesty involved in parliamentary trickery. It is an axiom that when men refuse to fight fair they have no real faith in their own cause. Every day of delay forced upon the Senate by the mining Senators adds emphasis to their selfishness, heaps upon them public condemnation and contempt and damages the interest for which they contend.

The demand of the obstructing Senators is for "something favorable to silver"—that is, for some legislation which, like the Sherman law, will make a market for silver bullion. It is precisely as if the Senators from the wheat-growing States should demand that Congress make a market for wheat and block all proceedings in the hope of enforcing such action. These men call themselves bimetallicists, but they are not bimetallicists. Their scheme is not bimetallicism; it does not tend toward bimetallicism, and is in fact inconsistent with bimetallicism. It proposes not to restore to silver its money character, but to treat it as a commodity measured in its value by gold. Bimetallicists like Senator Voorhees do not stand with them, for they know that their plans lead not toward, but away from bimetallicism and the universal benefits of that policy; that they are based upon the mere immediate requirements of the silver mining communities of Nevada, Colorado and Idaho. It is a situation in which there can be no compromise on the part of the majority, for any sort of concession would be in violation of the principle contended for. We have had enough of half measures in this matter of financial legislation to demonstrate how inadequate and foolish is any course in variation from sound principle. Our present financial trouble has grown chiefly out of a policy of temporizing, and from this time on there must be no move that is not a right one.

There is the smallest chance of a compromise, since the concurrence of the President is essential, and that is not to be looked for. That Mr. Cleveland's position is precisely what it was at the beginning of the session is demonstrated by the following letter written last week to a citizen of Georgia. While nominally a personal letter, it is in fact a direct communication to Congress and to the people. Mr. Cleveland says:

I want a currency that is stable and safe in the hands of our people. I will not knowingly be implicated in a condition that will justly make me in the least degree answerable to any laborer or farmer in the United States for another shrinkage in the purchasing power of the dollar he has received for a full dollar's worth of the product of his toil.

I not only want our currency to be of such a character that all kinds of dollars will be of equal purchasing power at home, but I want it to be of such a character as will demonstrate abroad our wisdom and good faith, thus placing upon a firm foundation our credit among the nations of the earth. I want our financial conditions and the laws relating to our currency to be so safe and reassuring that those who have money will spend and invest it in business and new enterprises, instead of holding it. You cannot cure fright by calling it foolish and unreasonable, and you cannot prevent a frightened man from hoarding his money. I want good, sound and stable money, and a condition of confidence that will keep it in use.

Within the limits of what I have written I am a friend of silver, but I believe that its proper place in our currency can only be fixed by the readjustment of our currency legislation and the inauguration of a consistent and comprehensive financial scheme. I think such a thing can only be entered upon profitably and hopefully after the repeal of the law which is charged with all our financial woes. In the present state of the public

mind this law cannot be built upon nor patched in such way as to relieve the situation.

I am, therefore, opposed to the free and unlimited coinage of silver by this country alone and independently, and I am in favor of the immediate and unconditional repeal of the purchasing clause of the so-called Sherman law.

I confess that I am astonished by the opposition in the Senate to such prompt action as would relieve the present unfortunate situation. My daily prayer is that the delay occasioned by such opposition may not be the cause of plunging the country into deeper depression than it has yet known, and that the Democratic party may not be justly held responsible for such a catastrophe.

We print this letter almost entire because a summary could scarcely do justice to it. It is clear that the President will be no party to any compromise providing for the continued purchase of silver bullion, since such compromise would be a clean repudiation of the principle set forth first in his message and again in the letter above quoted. He intends, it is plain to see, that repeal shall be accomplished in the right way or not at all, and in this he is heartily to be commended.

In this last utterance by Mr. Cleveland, there is a suggestion of friendliness to bimetallicism which, though not as positive as we could wish, is nevertheless very welcome. Upon this remark the bimetallicists may fairly hold him to co-operation in future schemes for the concurrent use of gold and silver upon terms that will render these metals relatively equal in value. This is the demand of bimetallicism, and it should be the chief motive of our policy when, by the repeal of the mischievous Sherman law, the way is clear for the making of a sound, stable and just system of national finance. Such a system, we repeat, cannot be made while this law remains upon the statute-book, for in its principle and in its effect it bars the way to the adaptation of true bimetallicism.

The Van Alen story, to which we made reference last week, turns out hardly so bad as the first report, but bad enough and shameful enough in a conscience. The charge, it will be recalled, was that last fall Van Alen subscribed fifty thousand dollars to the Democratic campaign fund upon the promise of ex-Secretary Whitney that he should be given the Italian Mission. Van Alen denies that he exacted any such promise and Whitney denies that he made any such bargain; but the facts remain that Van Alen did give the money; that he has no other claim to political preferment and that his name has been sent to the Senate for the Italian Mission. In the letter in which ex-Secretary Whitney denies that there was any bargain with Van Alen he commends the appointment and declares there is reason for it in "his (Van Alen's) very patriotic, generous and cordial support in the late campaign when friends were few and calls great." In other words, while there was no actual bargain with Mr. Van Alen he ought to have the place because he put up money when money was needed. This is clearly Mr. Whitney's idea of it; and it accords perfectly with political and moral standards formed in the political and legal service of the Standard Oil Company. This expression of Mr. Whitney's, exposing as it does a low ideal of political character and duty, is another instance of how a good man trained in the service of corporate wealth and greed may become blinded to considerations which seem very important to men of ordinary conscience. To Mr. Whitney the fact that Van Alen gave fifty thousand dollars to the Democratic campaign fund seems a sufficient reason why he should be appointed to a high office; to men whose moral natures are not warped and biased by the corrupting power of wealth, the same fact seems to make the giving of an office to Mr. Van Alen a gross violation of propriety.

In view of Van Alen's character and of the fact that the President must have known what manner of man he is, the appointment is most extraordinary. There is, in fact, only one explanation of it, and that is that it was given in payment for the money which Van Alen subscribed. Any pretense that there are other adequate reasons is too absurd for consideration. Van Alen is an extreme type of the New York gilded youth. He inherited four million dollars in New York real estate, which has since grown to twelve millions; and he has a further claim to distinction in having married a daughter of the late John Jacob Astor. He is a fop of the very first water. For example, he employs two English valets to look after his person and his clothes. He will wear no linen that has been laundered a second time. His canes number sixty-two and his umbrellas thirty-eight. His hair, which is soft golden in color, is parted exactly in the middle, the cut of his beard is in imitation of the Prince of Wales; and, until very recently, he affected the single English eye-glass, though he has had to give it up upon the advice of an oculist. He spends most of his time in Europe and has publicly declared that America is no fit place for gentlemen to live. In short, he is a nasty, offensive little dude, who dishonors his parentage and his country by his silly affectations. He wants the Italian mission, not be-

cause it would give him an opportunity to serve his country, or for any honorable motive, but simply as a mark of social distinction. His plan, as it is announced, is to buy or hire a palace in Rome and, as the American minister, to shine in the exclusive aristocratic circles. Of course, the United States has no use for this particular species of ass. At Rome, or elsewhere, he would misrepresent and discredit the country. But worse than this is the fact that it is seriously proposed to set in a high place a man with no claims based upon character, accomplishment, or any species of personal fitness, but upon a donation of money to the Democratic campaign fund. The people of the United States stand a good deal in the way of political degradation, but the time has not yet come when they will allow public posts of dignity and distinction to be knocked down to the highest bidder. If Mr. Cleveland does not have the grace to withdraw Van Alen's appointment, we hope and believe the Senate will decline to confirm it.

There is not the slightest doubt that Congress will so modify the Geary law as to allow the Chinese in the country another six months for registration. The matter is in the hands of the House Committee on Foreign Affairs, whose chairman (McCreary) stated a bill extending the time for registry would soon be reported. The failure of the Chinamen to register was due to bad advice from American lawyers, and now that the validity of the law is demonstrated, they will tumble over each other in their haste to get certificates. Of course there will be a mighty howl when the extension of time is made, but it will come from a class who are of less value to the country than the Chinese themselves.

State Horticultural Society.

A Field Day on Fruit Marketing.

The last meeting of the State Horticultural Society was notable because of the presence, by invitation, of a number of men who are prominent in the shipment of California products. Also a general invitation had been extended to all interested, and the audience taxed the capacity of the hall in which the meeting was held.

President B. M. Lelong occupied the chair, supported by Vice-President Leonard Coates.

Nominations of officers to be voted upon at the October meeting were made as follows: Honorary President, Prof. E. W. Hilgard, Berkeley; Pres., B. M. Lelong, San Francisco; Vice-Pres., Leonard Coates, Napa; Treas., A. T. Perkins, Alameda; Sec'y, E. J. Wickson, Berkeley. Directors—N. P. Batchelder, J. L. Mosher, E. W. Maslin, Howard Overacker, S. J. Stabler and H. A. Brainard.

Emory E. Smith made the following reports of progress from two committees of which he is chairman:

According to the instructions of the California State Horticultural Society, the American Pomological Society was invited to meet in San Francisco during the coming winter. No reply has been received from the secretary of the society, but the statement has been made in Eastern journals that the society has accepted the invitation and will hold its next meeting in San Francisco during February next.

Director General De Young of the Midwinter Fair informs your committee that nothing has been done as yet toward the organizing of the horticultural exhibit at the Midwinter Fair, but he urged that the State Horticultural Society take the lead in preparing and urging others to prepare exhibits. Pamphlets containing classifications and all information pertaining to the Fair can be had upon demand at the headquarters in the Mills Building.

A communication was read from C. D. Willard, secretary of the Los Angeles Chamber of Commerce, requesting the appointment of delegates to the Irrigation Congress to be held in Los Angeles, October 10th. On motion of Mr. Buck the president was authorized to make such appointments.

THE DISCUSSION ON FRUIT SHIPPING.

Hon. S. J. Stabler opened the discussion, urging the need of local organizations of fruit-growers. In every fruit growing section, said he, whether large or small, there should be a society to regulate the marketing, and the majority of the organization ought to govern. By this plan petty rivalries will be obviated and all will be benefited. Concert of action is what is needed. Although the decision of the majority may not be always for the best, yet it is safer to trust to them than for individuals to depend on their own wisdom. In his own district the benefits of organization have been distinctly felt. The result is that the fruit is gathered at a convenient point of shipment and has been well handled. Heretofore shipments have been made in a desultory manner. A fruit-grower would get a small quantity of products together and try to get them to market. The result would frequently be that he met with loss, and sometimes it happened that he never heard of his fruit again. This year, in the little section that I speak of, an organization has been at work, and the effect has been just what would be expected. The fruit has been shipped in full, square carloads, and has been shipped to the very best advantage. The experienced and wealthy growers felt the good of the plan as well as the smaller growers. One young man who had never tried fruit-growing before found his interests thoroughly protected and made a profit, where, if he had been alone, he would have suffered a loss. A widow, who knew nothing about business, entrusted her fruit to the association and got out of it three times as much as if she had attempted to handle it herself.

L. W. Buck, manager of the California Fruit Union, said that Mr. Stabler had touched the keynote to success. Co-operation, local and State, is needed to secure the best

financial results. Fruit-growers are not in the business for fun. They wanted to make a fair profit on their products.

"Mr. Stabler has already explained the benefits of local organization," said Mr. Buck. "The additional benefit of the State organization is equally manifest. The object is to prevent the crowding of a small market with more fruit than it can handle. By this method we keep our fruits from different parts of the State on the road for the best open markets in the country.

"That advances the interests of all fruit-growers in the State, for it keeps prices up and uniform in all directions."

Mr. Buck was besieged on all sides for an explanation of the way in which the California Fruit Union is disposing of its goods in Chicago. He said that Adams, Lewis & Co. conduct what has been called the "closed auction house," about which there has been some complaint. There are no doorkeepers; the hall is open to all who desire to enter. There is no such thing as a closed market. The California Fruit Union sells through Adams, Lewis & Co., and has secured better prices for the fruit-growers of California than could be obtained by any other method. It is true that purchasers are limited to members of the Chicago Dealers' Union, but they are the honest dealers who are willing to give honest prices. The union was organized to protect the legitimate trade from the incursions of the peddlers. Those peddlers were formerly in the habit of smuggling damaged fruit into boxes of sound products, thus reducing the grade of a line, securing the lot for themselves, and thus defrauding the genuine dealers as well as the growers. Mr. Buck said that, so far as he knew, the objection to this kind of sale came only from those who did not patronize it.

Mr. Buck urged the need of greater speed in the movement of fruit than was had this year. During the latter part of the season the railways seemed to get tired and sent in cars several days late. This was the ruination of the fruit. In the handling of fresh fruits, prompt delivery is more important than freight rates.

Richard Gray, traffic manager of the Southern Pacific Company, said: "The Southern Pacific railroad is deeply interested in the welfare and growing prosperity of California, and this is indissolubly connected with the development of the fruit-growing industry. The Southern Pacific has kept its contracts in regard to making time on fruit cars, and has impressed on its connections the importance of maintaining the promised schedule time. I am aware that some of the roads approaching New York, Boston and other large cities have neglected to do so. This was not our fault. We delivered the goods on time to our connections, and used our best efforts to keep them briskly moving to their destination."

A. G. Freeman read a paper on fruit marketing which is given in full upon another page.

DISCUSSION.

After the foregoing address discussion was general.

E. W. Maslin said that at a recent meeting of the State Board of Trade, W. H. Mills suggested that some of the common carriers might be induced to extend the field of shipment of fruits. Mr. Maslin was hopeful that the fruit-growers would think this matter of sufficient importance to be seriously considered. The idea of sending to towns where smaller quantities than carloads could be disposed of ought to be kept prominent.

Mr. Buck said that in order to accomplish what Mr. Maslin sought for it would be necessary to obtain from Eastern roads certain concessions that the California Fruit Union has not been able to get—concessions that even the Southern Pacific Company of this State has not yet accorded.

Mr. Maslin insisted that the fruit-growers of California must exploit the new markets. They must send fruit to all the smaller towns, and have an agent at each place to help introduce it. The Fruit Union will not do this. They cannot be expected to do it. Their part of the business is supply the market after the fruit-growers have developed it.

Mr. Gray observed that Mr. Mills is full of good ideas, but in his plan of opening the smaller markets he is in advance of the times. Before the loading and unloading of cars by piecemeal can be accomplished something must be invented to keep fruit from decaying as it does now.

Capt. Brainard, of San Jose, also spoke of the need of opening new markets, citing the case of Buffalo, N. Y., a city as large as San Francisco, which had no direct shipment of California fruits—at least not until recently, if at all.

Mr. Maslin emphasized his previous statement that all such towns should be looked after.

FREIGHT RATES ON FRUIT.

Mr. Stabler said that at the beginning of the fruit traffic from this State eastward the railroad had charged \$1000 a carload to Chicago. They have made reductions from time to time until finally they have reached \$250. I heard a railroad man remark that he expected to see the time when fruit will be shipped to Chicago for \$50 a car. I hope that may prove true even before there is a competitor, but I don't believe it will. I hope there will be a competitor, one that will not draw out fortunes of millions of dollars and then try to run their business in a way to make interest on a huge bonded debt. At any rate, I hope we may be able to get better figures than those now ruling. The railroad company ought to do better. If they will come down in the ratio that new orchards are coming into market, there will be no reason for grumbling. The products of California orchards will probably double in four years. Let the railroad cut its rates in two and fruit-growers may yet live.

This brought Mr. Gray to his feet. "If Mr. Stabler will set down with me for half an hour," he said, "I will convince him that the present rates on fruit are reasonable. I will prove to him that the railroad company gets no more than half a cent a mile per ton, which I think he will agree is not exorbitant. The great trouble in the fruit traffic lies in the refrigerator cars that are used. We have to transport an icehouse on wheels. We have to

haul 4200 pounds of dead weight to get 2400 pounds of paying freight."

Vice-President Coates said that the question of rates is not so important as the matter of time. What the fruit-grower wants to know is the definite date on which their fruit will reach the market. Then the fruit could be gathered in a condition to meet the requirements of the case.

J. D. Monteagle, of Tulare county, said that much loss had resulted to shippers in his part of the State because it took so long to get fruit to market. The railroads had not done their part of the work. Unless better arrangements can be made next year he would not attempt to ship Malaga or Muscatel grapes, as it was a losing game.

AN ICELESS PROCESS.

By invitation, Rev. A. T. Perkins gave an outline of a dry-air process of fruit shipping which he had developed in the interest of California fruit-growers, and which had produced excellent results. He agreed to give a fuller description at the next meeting of the society.

J. C. Shinn of Niles also spoke of a new process of which he heard from the East and had under investigation.

THE NEXT MEETING TO BE HELD IN SAN JOSE.

President Lelong said this was so important a question that he had been requested to have its discussion continued at the next meeting, to be held at San Jose on the last Friday of next month. It was so ordered. Capt. Brainard was appointed to prepare for the meeting at San Jose, which will be held at the headquarters of the Santa Clara Fruit Exchange, beginning at 10:30 A. M. and continuing during the day. All interested will be welcome.

Cleaning Dried Fruit with a Grain Fan.

TO THE EDITOR:—During the windy days, on the dry ground, dust, leaves and straw fly through the air and settle on the trays. Don't let it worry you. When you take up the fruit don't stop to pick anything out, but dump the entire contents of the trays into the boxes. Just before sacking, run the whole business through an old-fashioned fanning mill and it will come out free from all foreign substances and clean. It will be in very much better condition than it could possibly be in without some such treatment.

If any one questions this, he would be fully convinced by watching for five minutes the cloud of dust, leaves and straw which floats away to leeward as the operation is carried on and examining the condition of the fruit before and after running through the mill.

The fruit requires to be assisted with the hand from the hopper of the mill down upon the screens, but two good men will run through a carload of fruit, in good shape, in a day, at a very much less expense than it would be to pick out the leaves and straw by hand, leaving the dust in. It is true you lose the weight of the dust, but the better price obtained should much more than compensate for that.

It is for the best interest of the California dried-fruit industry that our product should be sent to market in the best possible condition, so pass around all wrinkles and ideas which will tend in this direction.

IGNACIO VALLEY.

The Sweet Olive.

A correspondent of the Santa Cruz *Surf* inquires if the sweet olive is cultivated in California. Some years ago the Marysville *Appeal* published an article on the sweet olive of the Grecian isles, and the writer declared it the most palatable of olives. This article attracted the attention of James Waters, our local nurseryman, and he wrote the *Appeal's* correspondent concerning this much-praised fruit. He received a reply giving place where trees could be obtained, and he wrote the United States Consul at that port and interested him in the matter. In time a shipment of the trees was made but we believe that lot was lost.

The following season Mr. Waters wrote again, and in time a lot of trees was obtained from the interior of the island where they grow; they were carefully packed by the Consul, and after several months travel reached Watsonville. Most of them were in good condition and they have been used as a stock from which to propagate trees. We are of the impression that they are the only trees of this variety on the coast and perhaps in the country. They were obtained with great difficulty and heavy expense. If the writer of the query in the *Surf* will visit Mr. Waters' nurseries, he can find the sweet olive tree. Where it grows in Greece its fruit is much preferred to that of the Italian and Spanish olives.—Watsonville Pajaronian.

Growing Interest in Shropshires.

The increasing interest in breeds of sheep which fit the demand for early lambs and good mutton carcasses and for a heavy wool clip as well, is seen in the popularity of the Shropshires. If the sheep-grower in these times is to make a profit he has to pull both the meat and the wool strings, and if he does this intelligently he need not complain of his flock. The growing fame of the Shropshires is seen in the experience of the well-known breeder and importer, H. Mecham, of Petaluma. He has had good sales this season, clearing out everything in the shape of a ram which he had. Mr. Mecham's son will arrive in California about two weeks with another importation of 200 head, selected with great care. We look upon the growing popularity of the Shropshires as a fortunate feature of our outlook in sheep husbandry.

UP TO SEPTEMBER 30TH the amount of beets delivered at the Ohino factory was 27,146 tons. The crop was then half harvested. The output of sugar from the factory to that date has been 8,944,000 pounds, equal to last year's total output.

State Grange at Petaluma.

The twenty-second annual session of the California State Grange, P. of H., began on Tuesday (3d inst.) at Petaluma. The town was elaborately decorated in honor of the visitors, who numbered about 200, and the citizens vied with each other in the good offices of hospitality. The day was largely devoted to preliminary exercises, including the reading of official reports, some of which are printed on another page of this issue.

On Tuesday evening a general reception and entertainment was tendered the visitors by the people of Petaluma. Complimentary addresses were made on behalf of the citizens of Petaluma and by the masters of Two Rock and Petaluma granges; and responses were made by officers of the State Grange. A general programme followed, including a violin solo, duets, vocal solos, recitations and music by the band.

To day (Wednesday) the morning was devoted to hearing reports and the afternoon will be spent in a fraternal visit to Sebastopol. The trip will be made by rail and it promises to be the star social incident of the meeting.

Many causes have combined to prevent a large attendance this year. The session comes at a busy time; many usually attendant upon the State Grange have gone to Chicago and others have been kept at home by the tightness of the times. Nevertheless there is a good crowd here and there is every promise of a fine session.

The election is to take place Thursday morning. The general opinion points to Mr. A. P. Roache as the coming master, though several other names are mentioned. For secretary there are half a dozen candidates, including present incumbent Mr. A. T. Dewey, Mr. Don Mills, Mr. J. D. Huffman, Mrs. Hattie S. Jones and some others. It is expected that Mr. Geo. P. Loucks will be induced to accept re-election as member of the Executive Committee.

There is manifest disinclination to allow the present master (Davis) to retire from official grange life, and he will probably be induced to accept the chair of State Lecturer, for which he is pre-eminently qualified.

Heavy Shipments of Fruit.

SAN JOSE, October 2.—Nearly 8,000,000 pounds of the products of Santa Clara county were sent to the markets last week, according to the statements of the Southern Pacific Railroad. The shipments to eastern points amounted to 5,554,785 pounds and to California points 2,262,600 pounds. The heavier shipments to the East were: Green fruit, 1,450,540 pounds; dried prunes, 2,162,515 pounds; canned fruit, 780,510 pounds; dried peaches, 660,350 pounds; dried apricots, 317,280. The remainder was made up of other dried fruits, wine and brandy, garden seeds, etc. The total fruit shipments to the East from San Jose this season are already 24,687,840 pounds.

THE dangers to which underground wires in tropical countries are liable are illustrated by a picture which has been sent from India, says *Invention*. This picture shows a piece of rubber cable (Hooper's core) perforated by a root of grass, which still retains its vitality and thrives vigorously. It appears that the piece of core in question, after being treated with a composition which was supposed to make it proof against white ants, was buried, for a six-months test, unprotected by any armor, in soft, damp soil at Calcutta. On the piece of core being dug up the grass was found to have grown through it. What might appear an impossibility is explained by the statement that roots of the particular grass have very hard, sharp points, not unlike needles.

WORLD'S FAIR MEDALS are falling in showers in California at present. The following have received such tokens for olive oil: G. F. Hooper, Sonoma; Mrs. Emilie Roberson, Auburn; J. L. Howland, Pomona; F. A. Kimball, National City; Elwood Cooper, Elwood; Charles A. Wetmore, Livermore; Quito Olive Farm, Santa Clara; Ralph Selby, Santa Ynez; F. Gloss, Auburn; Julius P. Smith, Livermore. Sherwood Hall Nursery Co. received a medal for sweet peas and the California Nursery Co. for roses. It is reported that a whole bunch of medals and diplomas will come for California wines.

COL. WM. FORSYTH, M. F. TABPEY AND W. W. PHILLIPS have been appointed by the Fresno raisin-growers to go to Washington and labor with the Ways and Means Committee for the retention of the duty on raisins. Every effort will be exerted to have the present tariff on raisins retained and a tax placed on Zante currants. In regard to the latter, it will be endeavored to have the tariff thereon fixed at one and one-half or two cents, but if the committee fails in this they will be satisfied with the restoration of the old tax of one cent a pound on Zante currants.

It is reported from Portland that the surplus of wheat for shipment from the northwest will be about the same as last year—12,000,000 bushels. A large amount of Willamette valley wheat will be milled. The shipments from Portland will be 7,000,000 and from the sound 5,000,000, a large part of which will probably go to San Francisco, as there is only 12,000 tonnage listed for the sound against 60,000 for Portland. The wheat market in Portland is moderately active. Farmers are offering freely and quite a large number of ships are to be loaded.

A LARGE proportion of the surplus cattle of Eastern Oregon will be shipped to Omaha this fall. Fifteen thousand head have been bought in Malheur county for shipment to that point, and about the same amount in Umatilla and Morrow counties.

HOMER LAUGHLIN, an Eastern capitalist from Liverpool, O., is at Oceanside looking over the headwaters of the San Luis Rey, with a view of taking the water to supply the city and the surrounding lands. The city offers a bonus of \$30,000.

HORTICULTURE.

Pickling Ripe Olives.

The olive harvest is approaching, and we understand that in some parts of the State, at least, very good prices are being offered in advance for olives for pickling. Much interest will no doubt pertain to accounts of procedure to produce satisfactory pickles. We have given in previous years the methods of different experts on this matter, and we now present the results of many experiments made by B. M. Lelong, Secretary of the State Board of Horticulture, as described by him at the last meeting of the Olive-Growers' Association:

GATHERING THE FRUIT.

In the first place the olives must be ripe and perfect. The idea of knocking them from the tree is all wrong. In knocking from the tree the fruit becomes bruised, which you may not at first see, but after the fruit is in the bottle, in the liquid, a spot will develop, and the olive will get soft. Olives for pickling must be picked from the tree by hand, and instead of picking the entire tree at one time it must be gone over several times, picking only the ripe olives, which should be put in water immediately, and afterwards taken to the packing-house and put through a lye process to extract the bitterness. The most important point connected with picking ripe olives is to keep them so as to be showy after being put up. The first thing that is essential in pickling the olive is patience, and the operation requires a great deal of it and care in looking them over. Last year I offered \$20 a ton over the price of the olives if picked if this way, which was \$60 a ton, but I must say I could get but few to pick them as I wanted. My reason in doing that was because, if I had them picked by hand, the largest and ripest olives would be gathered at one time, and could be put up in bottles and placed in fancy grocery stores and be attractive, which you cannot do with olives that are knocked off with poles. Such fruit is not worth \$20 a ton, as there is a great deal lost. When so gathered you get rubbish, small fruit, green fruit, etc., and you can only use one-half that fruit. Green olives do not pay to put up, and you cannot compete with the foreign, especially as they are allowed to come into our markets duty free. Green olives are only fit for saloons; they are very indigestible. It seems to me the object should be to put up the ripe article, something that has no competitor and is nutritious—a food. The ripe olive has no competitor, but to sell it must be put up in an attractive way. Growers have paid very little attention to gathering the olives carefully, and, of course, the reason is that they have other fruits which come in at that time, and the olive so far has cut little figure with them, and they do not care whether they sell them or not. But it will not continue that way. There are plenty of people who have from five to one hundred acres or more in olives. They will have to find a market for their fruit, and will have to go over the trees two or three times in picking the fruit, especially with the Mission. Of all the varieties I have had to do with, I find the Mission stands more hard treatment than any other.

ESSENTIALS OF SUCCESS.

In pickling the olive to be perfect and to keep, time is required. Some people have an idea that the quicker they can get their money the better; possibly it is so with some kinds of fruits, but it will not do with the olive. You cannot pickle the fruit in one or two weeks; yet I have seen fruit put up and placed on the market in less than two weeks. On opening some of those bottles it has been found that the lye had not penetrated to the pit and consequently the fruit was not perfect, and as soon as placed in bottles would generate gas from the raw flesh, which is a very sour substance and poisons the liquid, and finally will rise to the surface. These olives [showing samples] are the result of an experiment I have been trying for six years; they are the Mission. They were put up three years ago. You will see there is no scum, and that the liquid is clear and the olives perfect. What is here said refers to the Mission olive only. This is how it is done:

THE USE OF LYE.

In the first place your olives must be picked from the tree. You must have vats in which to treat them, with a lye solution to extract their bitterness, and tanks in which to place the fruit afterward. The vats should be shallow, because the pressure on the fruit is so great from the fruit above that a great deal becomes disfigured and unattractive. The vats are made as large as one pleases to have them, and not over 30 inches high. These are half filled with the lye solution, made of one pound of Greenbank powdered potash, 98 per cent strength, to ten gallons of water. The olives are put in the solution, rising to within four or six inches of the top. (Do not put the olives in the vats first, because they will shrivel.) It is best to dissolve the potash in two gallons of water; then add to the water in the vat; stir well, and put the olives into the solution. The liquid must be kept in motion; that is, every little while draw off a bucketful or two and throw it back on the olives. This is done to prevent the lye from spotting the fruit. The olives are kept in the solution four hours. The lye is then drawn off as soon as it becomes colored, and water added again. This is repeated for at least two days. If then the liquid has become clear, leave the fruit in the water a few days longer—four or six days. Then test the olives; cut them with a knife and it will be found that the lye has only penetrated part way and has not reached the pit. They will be better—the part not reached by the lye in the first treatment—and the pit must be reached by a second application of lye. (The bitterness can be extracted by leaving the olives in the solution a longer time, but it will soften them, especially the riper ones.) The lye being prepared in as at first, the water covering the olives is drawn off and they are immediately covered with the lye solution. They are kept in the solution the same as at first—four hours, and the lye is kept in motion by drawing off a bucketful (as at first) every once in a while and plac-

ing it back in the vat. The lye is then run off and the fruit immediately covered with water, and as soon as the water becomes colored with the lye it is drawn off (as at first) and the vat filled up with water again. The water is changed often, until all trace of lye is removed. The olives are kept in water two or three days, and then are again tested. The lye will then have reached the pit and they will be no longer bitter, although a slight bitterness will be observed, which will leave the fruit after being placed in brine.

Olives grown in varied situations differ in bitterness, and a third treatment with lye is sometimes required to extract it from the fruit, or by leaving them in the lye a longer time.

The fruit having undergone the lye treatment, is ready to be placed in brine. Here again you need patience. (Olives must not be put into a strong solution of salt at first, as the salt will cause them to shrivel and their commercial value will be destroyed.) You want to be right there; do not trust it to any one, unless a competent person. This is the time you want to be very careful about the fruit. The brine in which the fruit is first put must be very weak—four ounces of salt to the gallon of water. This is made by boiling the salt and adding to the water in the tank. The olives are then transferred from the vat to the tank, by means of wooden shovels. [Mr. Kimball said he did this with a perforated wooden shovel.] This first brine is very weak; you can hardly taste the salt, but this must be done so as to force the olives to begin to take salt without causing them to shrivel. After being in this light brine a week, draw it off and add a brine made of eight ounces of salt to the gallon of water; then after being in the second, or stronger, brine a week or ten days, draw the brine off—it costs comparatively nothing—and immediately cover the olives with a solution made of fourteen ounces of salt to the gallon of water, in which leave the fruit standing. The brine must be changed after it has become colored by the pulp of the fruit while standing, to prevent them from becoming rancid. You will soon notice that the olives begin to generate an acid, from the crude parts of the fruit, and on this rising to the surface of the water you will observe that a thin film of scum has begun to form. Just skim this off and add a little more liquid. This will continue to form and should be removed. When the olives become perfectly pickled that film will not form any more. (You will observe that if olives are put in bottles when they are throwing off this substance which forms the scum, it will in time ruin the entire contents.)

GRADING AND BOTTLING.

The olives having been properly pickled, the assorting and bottling follow. Olives after being picked can be handled without bruising, but must be in a room without a current of air passing through, or sun shining on the fruit, which would shrivel them. For assorting, a machine sold by Craig, Mosher & Chandler can be used, or one built on the same principal, called the Gray. Only two choice grades need be made, the first (largest) for bottles, and the second for kegs. What remains can be selected, put in kegs, and sold as a cheaper grade. The first and second grades should always be handled by hand afterwards; girls will handle them quickly. None but perfect berries should be put into bottles or kegs. It is very important that bottling be done with care, and that after the olives are bottled no scum rises in the bottles. The olives, as I said before, must be perfectly pickled, and in addition to this, the liquid in the bottles should be made so as to be clear and not to deposit. The liquid for the bottles is made of the same strength as the brine in which the olives are kept—fourteen ounces of salt to the gallon of water. Some care must be exercised in preparing this solution. The salt is boiled in fifteen or twenty gallons of water and added to the balance in a barrel of fifty gallons, and to this is added a solution of one-half pound of alum. The alum clarifies the solution and causes all floating particles to settle. In using the liquid it is taken from the top. In Europe, so far as I can learn, the solution is put in the bottles cold, but as the olives are perfectly pickled no scum forms. In order to be doubly sure I put the solution in hot; that is, hot enough so that when corked down there is enough gas generated to keep the solution from spoiling. (To accomplish this, do not fill the bottles with olives to the neck.) If the solution is put on too hot, of course it will cook the fruit. The olives being cold the hot solution has no effect on them if the bottles, upon being filled with the liquid and corked down, are immediately immersed in a tub of cold water. This cools them, and the solution going in hot, enough steam is generated between the solution and the stopper to prevent the olives from spoiling, and at the same time keeps the solution from becoming strong or rancid.

In filling the bottles with the liquid I use a tin funnel with a large opening at the bottom, and in this funnel I have another funnel made of wire, to hold in place a cloth through which the solution passes and prevents floating particles from going into the bottle. As they are filled with olives the bottles are at once filled with brine, the operator filling them through this funnel. Then a girl puts the covers on the bottles, pulls down the wire stop fastener, and at once places them in the tub of water, and they become at once cooled, but not until after a gas has formed in the bottle, for which object the solution is put in while hot. When olives are put up in this way they will never scum and will keep for many years.

QUESTIONS ANSWERED.

Question—Is the water used boiling hot?

Mr. Lelong—No, sir; but hot enough to generate steam. I take the salt and boil it, and in boiling salt a lot of scum rises to the surface and you must skim this off until it does not form any more, and pour this into the water in the barrel. In making brine you can use a fifty-gallon barrel; in it put thirty gallons of water and boil the salt in fifteen or twenty gallons of water. When you put these twenty gallons of salt solution into the water in the barrel it will

be hot enough. The alum is dissolved separately. After you have added the salt add the alum and take a stick and stir it around, then leave it to settle, and as the alum goes down it will take every particle of impurity from the water, and in a few minutes it will be as clear as crystal. This is quite a point. If you take salt and simply mix with water and put in the bottles, those impurities you saw going down when the alum was put in will settle in the bottles and in a short time will destroy the market value of the contents. Of course, care must be taken, so that in using a hot solution you do not cook your olives, and you must cool them immediately.

Question—How strong is the solution of alum?

Mr. Lelong—For fifty gallons I use a half pound of alum. You need very little, only to clarify the solution. You will find on cutting these olives open [showing samples] that they are perfectly pickled in the pit; you will find now free they come. The olive is not a free stone; it is as tight as any fruit; but this process makes it free. The lye separates the stone from the flesh and you will find they are full of oil. Every particle of them is full of oil, and that is something you do not get in the green olive. The young wood of any tree will have about the same effect on the system as green olives. They are nothing but wood—undeveloped fruit—and it is not fruit fit for eating until it is ripe.

Question—What kind of wood is used in the casks?

Mr. Lelong—Oak wood is best. If you use redwood the lye will go right through it. To keep your casks clean and pure, after you are through with them put in one or two pounds of concentrated lye, without dissolving—it will dissolve itself in time—and fill the cask with water; then when you want to use them, throw that lye water out and rinse them, and they are ready for use, and will always be found to have a sweet taste.

Question—What grade of lye do you use?

Mr. Lelong—The 98 per cent. There is a great difference in lye. I get the Greenbank, which is supposed to be pure, and 98 per cent is about as high as you can get it. It dissolves more readily, and has less impurity, and is not as biting as many so-called potashes. The moment you put it in the water it will dissolve; pouring the water on the lye causes heat, and it will dissolve itself. In dissolving you want to take cold water and stir the lye in it, then put it on the fire if you wish.

Question—Do you use the same solution for the first and second treatments?

Mr. Lelong—Yes.

Question—How do you transfer those olives from the vat to the tanks?

Mr. Lelong—Scoop them out from the vat to the tank. Before you draw all the water off in the vat take and scoop them, using a wooden shovel. For home use a second-hand whisky barrel is as good as anything you can get. The olives are treated with the lye in the barrel the first and second times, as before stated, then changed and the brine put on them in the same barrel.

About Nurserymen.

TO THE EDITOR:—The man who buys a tree and pays therefor good hard cash has a right to get what he ordered. The man calling himself a nurseryman who takes the other man's money with any doubt in his mind as to the variety he is selling his patron is a scoundrel and ought to be punished, because he robs the purchaser of three or four years of his life, labor and valuable time, which no hand on earth can make amends for. He robs the planter's children of their bread which three or four years of labor, watching and incessant care with the expectation of reward, under the belief that he had dealt with an honest nurseryman, should entitle him and his family to.

The English vocabulary is wanting in words to express the chagrin and exasperation of the disappointed farmer while looking back over these lost years—years recorded only upon the calendar of eternity—years that can never be lived over again. Any other article of merchandise may be immediately replaced on the discovery of its faultiness—but not so with a tree. It takes years of valuable time to discover the practices of a fraudulent nurseryman.

The whole trouble is this. Nine-tenths of the so-called nurserymen of to-day are what might be justly termed "sapient parvenu," who know nothing whatever about the business they represent. They possess about enough intelligence to understand that there is some money in the business so long as they can find a gullible public to patronize them. These self-styled nurserymen know enough to plant a few peach, almond or plum pits, and after the same have grown a little, to secure the service of a few Chinese discharged from some of the leading nurseries, to bud them, depending entirely on these ignorant Mongolians for information as to varieties and all other details and then advertise themselves with flash headlines as nurserymen, when in fact they simply "press the button and the Chinaman does the rest," and the suffering public weep and will not be comforted because they find themselves swindled.

Any ignoramus can stick a few pits in the ground and hire a Chinaman to bud and care for them after they have grown, and call himself a nurseryman. But in heaven's name is this the sort of a man one would wish to go to for information on chemical properties of soils, climatic influences, location, proper methods of planting, cultivation, pruning, proper varieties, laying out of grounds, and a thousand other complicated etceteras with which the thorough nurseryman is familiar, and who, through a practical experience of many years, is able to impart to his patrons a knowledge of orcharding that is impossible to acquire through any other source?

The amateur comes to this coast, for instance, with more or less money to invest in fruit lands. He has heard all about the grand possibilities of this wonderland, and yet on his arrival, although he may be possessed of money with which to purchase lands, he is lacking in experience in horticulture—the very vocation he would choose—and one which he finds supersedes all others for profit on this side the "Rockies." He naturally seeks for that information

which is most likely to lead to success in his chosen line. From whom does he expect correct data? Surely not from those who have just embarked upon the experimental sea; because his own intelligence will teach him that what they tell would be suppositious, theoretical, unfinished and hence unreliable and he sees he cannot afford it. In this case his only course is to turn to the veteran nurseryman—a man who has spent many fortunes and the best part of a lifetime in establishing beyond the pale of experiment a business upon which the future prosperity of the country rests.

Such men as Col. Wilder P. Barry, Bernard Fox and many others no less illustrious have passed away, but they have left behind them horticultural and arboreal monuments that the corroding hand of Time can never tarnish. These were horticulturists and nurserymen worthy of the name, yet brilliant as their names sparkle before the tree and plant-loving world, they were very slow to press themselves into the front ranks of their exalted callings.

The true, honest and thorough nurseryman should not only be in possession of a complete knowledge of trees, vines and plants and the proper methods of their propagation and cultivation in detail to secure the best results, with the faculty of imparting his information in a comprehensive method to others, but he should be endowed with an innate love for these things aside from any mere money consideration; because it must be admitted that the man

Who reads in Nature's book
The wants that Nature craves

Will always be a good, thorough and reliable man to patronize.

But there is still another class of self-styled nurserymen found in all horticultural districts far more dangerous to the genuine planters than any of the upstarts I have been talking about. These are the "dealers," or "scalpers," as they are more commonly called. These tree fiends have absolutely no knowledge whatever of trees or plants. In the business they see alone the almighty dollar. Little care they what the buyer gets so long as they get his money. They know nothing, and care less about varieties. These parasites buy, bargain and trade for trees regardless of race, color or previous condition of servitude; their sole object is traffic. A buyer calls on one of these frauds today with a list of what he wants; he is told to call tomorrow. To-morrow he calls and finds the smiling "scalper" has his list complete. He takes his trees home, plants them, cares for them, studies them and waits patiently. At the end of three or four years he discovers that the pencil of the wretch from whom he bought was the important factor in propagating the supposed varieties, which existed only on the labels. Should the planter curse the nurseryman? No, sir! Let him "chew the cud" of his own discontent for avoiding the established nursery and hieing to a "scalper," with an idea of false economy. After three or four years the trick is discovered and redress is sought. Where is the dealer? The place that knew him once knows him no more forever. It is to be regretted that this latter class of self-styled nurserymen should be found uniting with those of high standing in "Nurserymen's Associations," clamoring for legislative protection against excessive damages for fraudulent trees sold and delivered. Will the suffering people never acquire wisdom?

A. KAMP.

San Jose, Sept. 29, 1893.

Fruits at the San Diego Fair.

TO THE EDITOR:—The balmy breezes that float over San Diego hardly suggest the fall of the year. There is no hint of Indian summer. The "Harvest Home" is here, however, and San Diego county gathers a wealth of fruit, grains and vegetables into a four-story building on one of her principal streets. Her county fair is not a horse race with a small pavilion side show, but an exhibit of what this wonderful country can do.

The eight long tables on the first floor may groan beneath the weight, but they must at the same time smile at the beauty of the fruits they uphold. The unexpected is what impresses one, and the loads of apples where one has been taught to expect chiefly citrus fruits is indeed a surprise. They are not little things "merely to show that apples can be raised here." They need no apology whatever. They would be a credit to the Coast Range valleys, to Oregon, to Canada, to the Garden of Hesperides itself. They are not the carefully gathered fruit of a few pampered trees, for they are here in quantity and all varieties. Many are the new names, though the old favorites are here also. One thinks of Dr. Holland's lines written in the apple cellar:

These are the Rhode Island Greenings,
Excellent apples for pies,

And a line describing each kind to—

Here let your quest have a close,
Fill up your basket with those;
Bite through the vesture of flame,
Then you will gather
All that is meant by the name.
Seek no farther.

Here is a great apple with the appropriate name, "Fill-basket." Another excellent apple is the Colvert, and another is that excellent variety known as Sixteen Ounce Pippin; but they have grown, in this wonderful soil, to deserve the name of Twenty Ounce Pippins, and so they were labeled. There are so many kinds of "vestures of flame" that I forbear to name them and will mention only the Wealthy.

Smith's Cider apple, large and reddish, the Lawver, very solid, with the bluish tint of the Rainbeau, and the Queen Charlotte in ivory white were very attractive. White Pear-mains, scarlet Jonathans, mottled Fall Pippins, and red Bellflowers are among the familiar faces.

After the awards were made, the apples that wore the blue ribbon, badge of the committee's approbation, were placed on one of the long tables on the second floor, and that table, if set down in the Horticultural Building at the World's Fair, would attract attention. The apple that everybody exclaims over is very large, rather flat than oval,

and of a beautiful shade of pink, between pomegranate red and crushed strawberry. It is a seedling, and is known as the Ellis Beauty. It is a novelty worth cultivating.

The pears should by no means be overlooked. The Bartlett leads, of course, and some fine specimens are shown; more accurately, only fine specimens are shown. The Assumption, russet with a hint of yellow showing through, the Seckle, a little favorite because of its sweetness, and the smooth, yellow Howell are shown.

The various kinds of plums receive some attention, but by far the most showy is the Japanese Kelsey. Some of surprising size seemed vying with peaches. Of the latter the Orange Cling and the Blood Cling are noticeable. Late September is, however, hardly the time for the best in peaches. For grapes it is exactly the season, to judge by the display. The raisins from the Muscat are the kind that have made a name for San Diego.

Grapes on plates, grapes in piles, in pyramids, and some splendid Black Moroccos on a small arch, grapes in quantity and of first quality are a feature of the fair. The slender Cornichon, or "lady finger," is named as a shipping grape, and among the odder varieties is the Zante currant, really a tiny seedless grape that grows in large bunches and was originally grown only on the island of Zante in the Mediterranean.

It is with a feeling of satisfaction that one sees deserved attention given to the fig. A display in glass shows the principal varieties, and a description of each would make an article by itself. The less-known and little-grown kinds include Ellermie Smyrna, almost a raspberry color when preserved, the White Marseilles and White Genoa, small and delicate, very nearly alike, Brown Adriatic, and the Brown Turkey with its delicate skin that makes it the fig for pickling. A novelty in this line is the Bulletin from the ranch of F. A. Kimball. It is as large for the fig as the Washington Navel is for an orange. This exhibit should go to the Midwinter Fair. Aside from the Mission fig and the Adriatic and Smyrna, the fig is too little known and prized. Eastern people appreciate it as an entirely new fruit.

Among the novelties are chestnuts and grape fruit, a finer sort of pomelo, also variegated lemons that seem to masquerade in the dainty tints of green and white, as if each were dressed in variegated myrtle leaves.

Lemons are a pride of this county, and they may well be. The first prize was awarded the Eureka, and goes to "Goldenclad" shippers at Sweetwater. The Villa Franca is the largest kind shown, and the Flemish Beauty is very attractive. The Bonny Brae, originated by Mr. Higgins of Sweetwater, is the prettiest of all, but not easily handled. In fineness of skin it excels every other variety and is in some ways much like a lime.

Although this is a "betwixt and between" season for oranges, a very creditable showing was made. One plate held only one Washington Navel and one Mediterranean Sweet. There was room for no more, though a third might have been squeezed upon the edge. One who has eaten San Diego oranges is glad the fruit can be raised in so many places, but he prefers his from San Diego county. The first prize for general display of oranges was awarded to W. C. Kimball of National City. The fruit was grown at National Ranch, "Olivewood," where oranges may now be seen in all stages of growth—the ripe fruit on the trees, the young crop and the blossoms.

The muskmelons that wore the blue ribbon were shaped like cucumbers and about two feet long. The mammoth potiron pumpkins were the kind one reads of, all weighing more than 100 pounds, and one 170. Other vegetables, notably beets, were in proportion. Such a country ought to turn its attention to the manufacture of beet sugar.

So much for the lower floor and the prize tables upstairs, with no mention of the special exhibits there—the sea moss, the stuffed animals, silk-making exhibit and half a dozen others. The third floor is devoted to machinery. But it is the fruits that one wants to see, and they are a succession of pleasant surprises. It is a great deal to say of San Diego county fruits, that they exceed one's expectations.

LAURA B. EVERETT.

FRUIT MARKETING.

The Marketing of California Fruits.

(By A. G. Freeman before the State Horticultural Society at its September meeting.)

I have been asked by your organization to take some part in the discussion of the marketing of California products, and as a natural course will direct my attention chiefly to those products in which I am most interested in handling—that is, dried and canned fruits rather than fresh fruits.

Who or what makes the market or the market prices of a product? We admit that manufacturers of a certain article which goes into general consumption—in other words, a necessity—may control the price to a certain extent by manufacturing just so much as consumers need. This involves controlling the entire product, which is often attempted but rarely achieved; but that the producers of any agricultural product of any considerable amount can control the price of that product, we most emphatically deny, and claim that all attempts at organization and co-operation for the purpose of controlling the price are time and money thrown away.

We say, for example, that dried peaches are worth 8 cents per pound; that prunes are worth 5 cents; that raisins are worth certain prices. What makes them worth these prices? Is it not a fact that the fundamental laws of supply and demand, of production and consumption, make the market or fix the price of any product? If so, when we say dried peaches are worth 8 cents per pound to the producers in California, does it not mean that the consumers will pay the price, plus freight and selling charges, with the wholesalers' and the retailers' charges added? I claim that the market price of all products is primarily governed by the law of supply and demand, or of pro-

duction and consumption. That the market price of a product is often lower than it should be before the product goes into consumption, and often higher than it should be when controlled by speculators, I admit, and, as evidence of the first proposition, I will invite your attention to the course the market on dried peaches and apricots has taken this season. Owing to the prevailing hard times and general distrust among tradespeople, the market price for dried peaches and apricots at the beginning of the season was fixed at an extremely low figure, and the product moved slowly until it went into actual consumption. The moment it was fairly well distributed into the consuming sections the demand rapidly increased, and we have had a constantly advancing market ever since. This advance has been occasioned wholly and entirely by the prevailing consumptive demand, as the tradesmen have fought the advance every inch, and had no confidence in it.

That the market price of a product is often too high when controlled by speculators is self-evident; we need only to look at the recent collapse in provisions in the Chicago market as an example of this principle, or if we wish to look nearer home, at the abnormally high prices we obtained for our dried peaches in 1891. Dried peaches that we sold at 20 cents per pound net cash to the producer eventually went to the consumer at one-half that price, and after having been carried for six months by the speculator. There is an idea quite prevalent that the market price is largely the creation of manipulators—the middlemen—while the truth of the matter is these men or firms whom we call shrewd operators, and whom we are apt to think of as the makers or creators of market prices, are simply the ones best able to detect the various caprices and whims of this most capricious damsel, the market.

We are apt to think of the market as the slave; ourselves the masters. This is entirely a false position as the very reverse is true. The market value of a product is governed by laws and principles which work as surely as those that govern the planets, and woe to him or them who act contrary to these laws.

The successful trader is not the master of the market, but its most fawning slave, ever ready to anticipate its slightest whims; hence we are apt to overrate the influence of the seller or middleman—large operators or combinations organized to control prices—and to underrate the great and sure laws of supply and demand.

A large number of holders with a small product each, is more conducive to a firm and advancing market than a small number of holders each having a large product. Large aggregations of a product always give prospective buyers an exaggerated idea of the size of that product. This principle has almost daily proof in the great grain and produce exchanges of the country where the statement of a large visible supply always reduces the price and a statement of a small supply advances the price. It is also generally the case where there are many sellers there are few buyers; the healthy market is where but a limited supply in comparison to the demand is offered at any one time. The conclusion is, that small individual holdings of any product with but limited offerings at any one time, are more conducive to a firm and advancing market than large aggregations. Generally speaking, the time to sell is when some one wants to buy. The mistake is more often made of holding a product beyond the real selling period, rather than of selling too soon; the producer who always waits for the top sells oftener at the bottom. When a product sells freely at a market price it is frequently interpreted as the sign or precursor of an advance, and held beyond the selling period.

With these few thoughts as to what the market price really is, or what makes it, we will turn our attention to the servants of the market, the middlemen, as we call them, or brokers—the people who find the product for selling and obtain the most favorable buyers for it. These men are, up to date, a necessity; they are in business because the demands of trade have called them. It has been found cheaper so far, in the exchange of most articles, for the middlemen to make this exchange, rather than for the seller to go direct to the buyer, or for the buyer to hunt up the seller; hence the middlemen, and every attempt made so far to get rid of them has been the creation of other middlemen—more often of two in place of every one displaced.

After the middlemen comes the wholesale grocer. In the distribution of food products the wholesale grocer has been found indispensable. His stock consists of hundreds of articles for consumption as food, and so far no agency has been found to take his place. The wholesale grocer sells his goods through various agencies, but most largely through the agency of traveling salesmen. The men are from force of circumstances among the most bright and active men in business, and have done more to put California products before consumers than all other agencies combined. A food product that has anything in itself to recommend it to consumers, put into the hands of these salesmen, is sure to go into active consumption. We often hear producers in California bewail the fact—which is not a fact—that our products are not properly put before the consumers, when the truth is they are being put before the consuming public and really forced into consumption by thousands of these competent traveling salesmen.

As any food product increases in volume, the profit to the middlemen, the wholesale and retail grocers decreases, or in other words, when any food product increases in volume to that extent that its use becomes general, the natural competition among wholesale and retail grocers reduces the profit to the minimum. For instance: When raisins are used for a desert fruit, or sold as a confection out of a fancy package containing an expensive lithograph, they are classed as a luxury and sold at a large margin of profit by all dealers through whose hands they pass; but when they are put into common cotton or jute bags and sold as an ordinary article of daily food to working men and women, the margin of profit is extremely small. This holds good with any food article under like conditions. A fancy package invites fancy prices; a large package, especially with dried fruits, tends to induce larger sales and consequently greater consumption.

THE FIELD.

The Amended Game Laws.

The Board of Fish Commissioners has issued a timely bulletin, in which Mr. F. P. Deering, attorney for the board, gives a full opinion concerning the points which may arise between the game law of the State and the powers conferred upon county supervisors by the County Government bill. This opinion is too long for reproduction in our columns, but we presume copies can be had by addressing the board at its office in San Francisco. We quote what seems to us the points of the most general interest:

First—With respect to fish, I consider it clear that the supervisors have no power to pass any ordinance, either as to the close season or as to nets and seines, that is in conflict with the general laws of the State upon the subject.

Therefore, as to fish, I am of opinion that, while supervisors may make regulations for the protection of fish, and as to the size and kind of nets and seines, they cannot change the open or close season for fishing, nor can they authorize the use of a net or seine forbidden by the general law.

Second—With respect to game, the County Government bill authorizes supervisors to make regulations for its "protection," and declares that "when such regulations are made," the State laws for the protection of game are suspended in that county.

The power is here given to make regulations generally for the protection of game, but only for its protection.

Section 636 of the Penal Code, above quoted, authorizes the supervisors to do one other thing, and only one, namely: "Change the beginning and ending of the close season named in Section 626" of that Code, so as to make the same conform to the needs of their county.

Therefore, I am of opinion that to protect the game itself supervisors may make regulations which shall take the place of the State law, and, should the needs of the county require a longer or a shorter or a different close season, the supervisors may prescribe this also.

With respect to deer: It is part of the history of the law as it now stands, which permits the killing of deer from September 1st to October 15th, that six weeks was intended by the Legislature to be the extent of the open season, and I am of the opinion that supervisors may change this period of six weeks so as to make it begin on the 1st of July, for example, and end August 15th, if such a regulation would be for the protection of deer in that county, or if the needs of the county make it advisable.

I wish to call your attention, however, to the fact that supervisors may legislate only for their county, and that persons will be protected by the ordinances only so long as they are in that county.

It is a misdemeanor for a person to have in his possession any deer at a time when it is unlawful to kill deer. The Code makes it unlawful to kill deer except between September 1st and October 15th. Therefore, while the supervisors of Marin county, for example, might for that county change the open season for killing deer to the six weeks beginning July 1st, yet if any sportsman from San Francisco should shoot deer in Marin county in July, and take it into San Francisco, or any other county where the general law had not been changed by the supervisors, he would subject himself to prosecution.

Again, the law, Section 626, Penal Code, forbids the selling or offering for sale of the hide or meat of deer. This law the supervisors cannot change; therefore, deer meat and deer hides may not be sold nor offered for sale, nor may deer shot in one county under an ordinance permitting it there be carried into another county where the general State law is in force.

OPEN SEASONS FOR DEER, QUAIL, DOVES, WILD DUCK AND TROUT IN THE VARIOUS COUNTIES IN CALIFORNIA.

Under the general law of the State, shooting game and catching fish are allowed only during the following seasons:

Deer, from September 1st to October 15th.
Quail, from September 1st to March 1st.
Doves, from August 1st to March 1st.
Wild duck, from September 1st to March 1st.
Trout, from April 1st to November 1st.

The above open seasons, however, have been changed in some of the counties by local ordinances, and in such counties the local law prevails. Counties in which changes have been made in the general law as to deer, quail, doves, wild duck and trout are as follows:

Alameda—Deer, July 20th to September 2d.

Butte—Deer, August 1st to November 1st.

Quail, October 1st to March 1st.

Doves—July 15th to January 1st.

Calaveras—Doves, July 1st to March 1st. The commission has not seen this ordinance, but the County Clerk writes that the change has been made.

Colusa—Deer, August 1st to October 1st.

Doves, July 1st to March 1st.

Contra Costa—Doves, June 15th to March 1st.

Del Norte—Deer, July 1st to December 15th.

Doves, June 1st to January 1st.

El Dorado—Quail, October 1st to March 15th.

Glenn—Deer, August 15th to October 1st.

Killing of Mongolian pheasants is prohibited.

Humboldt—Deer, July 15th to October 15th.

Quail, October 1st to March 1st.

Doves, August 1st to March 1st.

Inyo—Grouse and sage hen, August 1st to January 1st.

Kern—According to the County Clerk, the quail, grouse, partridge and duck seasons are from November 1st to January 15th. The commissioners have not received the ordinance.

Lake—Deer, August 1st to October 1st.

Doves, July 1st to March 1st.

Fishing for black bass is prohibited in this county.

Los Angeles—Deer, July 15th to September 1st.

Marin—Deer, July 15th to August 15th.

Quail, October 1st to February 1st.

Doves, August 1st to January 1st.

Mendocino—Deer killing prohibited until August 1, 1895.

Monterey—Deer, July 15th to September 1st.

Doves, July 1st to March 1st.

Wild duck, August 1st to March 1st.

Quail, October 1st to March 1st.

Napa—Deer, July 28th to September 5th.

Quail, August 1st to March 1st.

Snipe or rail, September 1st to May 1st.

Nevada—Deer, September 1st to December 1st.

Quail, October 1st to March 1st.

Doves, July 1st to March 1st.

Orange—The commissioners have not received the ordinance, but the County Clerk writes that the open seasons are:

Deer, August 15th to October 1st.

Doves, August 1st to February 1st.

Wild duck, snipe and rail, September 15th to March 15th.

Placer—Deer, September 1st to November 15th.

Quail, September 15th to March 1st.

Doves, July 1st to January 1st.

Plumas—Deer, September 1st to January 1st.

Doves, July 1st to January 1st.

Wild duck, August 1st to March 1st.

Sacramento—Rail, October 1st to May 1st.

Doves, July 15th to March 1st.

Wild duck, October 1st to March 15th.

Quail, October 1st to March 1st.

San Benito—The County Clerk writes that the deer season in that county is from August 1st to September 15th.

San Diego—The County Clerk writes under date of August 29, 1893, although the commissioners have not seen the ordinance, that the open season for deer in that county is from July 1st to October 1st, for doves August 1st to May 1st, and for ducks "the whole year," which, if so, is not constitutional.

San Francisco—It is a misdemeanor to sell, offer for sale, or have in possession between March 1st and October 1st, quail, hob-white, partridge, grouse, wild duck, snipe or rail, without regard to where taken or killed.

San Joaquin—Doves, July 20th to March 1st.

San Luis Obispo—Deer, July 15th to September 1st.

Doves, July 15th to December 1st.

Quail, October 1st to March 1st.

San Mateo—Deer, July 15th to September 1st.

Quail, September 15th to March 1st.

Doves, July 1st to December 1st.

Santa Barbara—Deer, August 1st to September 14th.

Santa Clara—Deer, July 15th to September 1st.

Santa Cruz—Deer, August 1st to September 15th.

Shasta—Deer, July 15th to November 1st.

Doves, June 25th to January 1st.

Sierra—Trout-fishing prohibited from April 1st to July 1st.

Siskiyou—Deer, September 1st to November 15th.

Quail—September 1st to February 1st.

Solano—Deer, July 1st to August 15th.

Quail, October 1st to March 1st.

Doves, July 1st to February 1st.

Sonoma—Deer, July 22d to September 4th.

Quail—October 1st to March 1st.

Sutter—Doves, July 15th to January 1st.

Tehama—Deer, July 15th to October 15th.

Doves, July 1st to January 1st.

Tulare—Quail, October 1st to March 1st.

Wild duck, October 1st to March 1st.

Trout and black bass, June 1st to September 30th.

Tuolumne—Deer, October 1st to November 15th.

Doves, July 1st to February 1st.

Quail, October 1st to April 1st.

Ventura—Deer, July 15th to September 1st.

Hunting quail, doves and wild duck for market is prohibited in this county.

Yuba—Quail, October 1st to March 1st.

Doves, July 1st to March 1st.

Wild duck, September 15th to March 15th.

Hunting and trapping pheasants is prohibited.

The ordinances from which the above table was compiled were furnished at the request of the commission by the respective county clerks.

In the following counties no changes have been made in the general laws: Alpine, Fresno, Lassen, Mariposa, Merced, Modoc, Mono, San Bernardino, Stanislaus, Trinity and Yolo. Amador has an ordinance which it was expected would be acted upon in September.

AGRICULTURAL ENGINEER.

How to Build Good Roads.

(Concluded from our last issue.)

GRADES OF ROADS.

Many of the older roads of our country were laid out with grades far in excess of what should have been allowed. When the abutting property had been improved to any great extent, these hills cannot be reduced without great cost for damages, in addition to the great outlay for surfacing. In such cases the roadway will have to be improved on practically the old grade. If this should exceed five or six feet to the hundred, the wear from surface water will be great and much difficulty will be experienced in obtaining a road which will quickly divert the water into the side gutters without producing ruts or gulleys. If the natural soil be sandy, it can be covered with a thin layer (from four to six inches thick) of clay or sandy clay, having a crown of about one inch to the foot. On this clay lay a coating of fairly coarse gravel about two inches thick. Under the action of rain and traffic the gravel will be gradually worked into the clay, until a compact, even mixture is had, which will withstand the wash of water very well. Ruts will work ruin to any hill road. Therefore, as the ruts begin to show in a new road they should be filled in by moving the surplus material at the sides into them.

THE BROKEN-STONE ROAD THE BEST.

Unquestionably, the most economical road to build is one made of broken stone, if the stone can be found at a reasonable distance. It is a prevailing belief amongst men with no experience that any kind of stone is suited to road building, and that it may be applied in any manner.

The same custom prevailed before Macadam's time; and then, as well as now, there were many failures from this cause, and an immense waste of money.

If we recall what has already been said about the roadway constituting a roof over the foundation, we can readily see that large stones thrown at random into a wet soil will not lie close together; the mud in which they rest will be pressed upward by the weight of the superincumbent material until the stones cease to be of value on account of the mass of mud on top.

TOP AND BOTTOM STONE.

On the other hand, if the stones at the bottom be large and carefully laid to practically cover the ground, leaving only small spaces, and if these spaces be filled as far as possible by smaller stones, then a pavement is provided

through which the mud cannot press upward, and the stones will remain where they are first placed, while the road will be good and durable. These large stones will afford not only a good foundation, but the small interspaces will act as an underdrain to the roadway. It is to be borne in mind that under such conditions free outlet must be furnished, or the result will be the reverse of what was expected, as the water will stand about the stone and soften the ground so as to render it unfit for a foundation. Over the top of a foundation so prepared may be laid either gravel, as before described, or broken stone. If broken stone is to be used, it should be laid on in layers, with fragments of nearly equal sizes, the larger bits on the bottom and the smaller ones on top.

THE SUBSTRUCTURE STONE.

What is usually used for such purposes is stone at the bottom, which has passed through a 2½-inch screen and not through a one-inch. On this is placed a layer which has passed through a one-inch screen and not through a quarter or three-eighths-inch screen. The whole surface is then covered by a layer of fine screenings about one inch thick, which have passed through a quarter or three-eighths-inch screen. This stone should be thoroughly compacted by a heavy roller, each layer by itself, before the next layer is spread on. The dust would better be watered as well as rolled, so as to insure its being worked in to fill all the interspaces in the larger stone. The fragments of stone should be brought as close together as their shapes will permit.

A STONE ROADWAY.

When this is done the bulk of the roadway will be of stone, while but a small amount of dust or "binder" will need to be used. A road built in this manner will shed water and at the same time bear up a loaded wagon without being rutted or wearing uneven. The small stone on top will be slowly crushed beneath the wheels of passing wagons and furnish a constant supply of fresh binding material for the larger fragments beneath, thus preventing their being kicked out.

To recapitulate: First make a firm bed; lay the stone on this in nearly equal sized fragments; roll each layer, and use stone dust or good gravel for a binder, with water enough to wash the dust into the voids. Don't use any clay or loam with the stone, as either material absorbs water and destroys the bond of the stone, while it also makes dust in dry weather and mud in wet. Its use may give apparently quicker results, but it will prove a sure element of destruction. On sandy or gravelly soil there need not be any large stone at the bottom, nor so much depth of any kind of stone. The smaller broken stone may be laid directly on such material to a depth of four or six inches with excellent results. The depth will depend on the expected volume of traffic over the proposed roadway.

WIDTH OF ROADS—MACADAM.

The width of a road should be regulated by the traffic. Fifteen or sixteen feet of finished way is usually sufficient for a country road, which may be increased through villages to 20 or 25 feet, finishing outside of the gravel or stone with the natural soil.

In selecting stone for a macadam road, that which is hard and tough is the best. Trap work meets all the requirements better than any other. There are several kinds of hornblende granite which give good results. Some of the conglomerates, amygdaloids and felsites are suitable. None of the slates, schists or sandstones are of any special value; they are too soft and are soon converted into mud. The micaceous granites make but poor road material. The poorest of these, however, are far better than mud, and can be used if no better are available.

It may often be profitable to have a geologist look over the ground if no good material appears in sight. In our own experience we have known of towns using an inferior rock when a first-class one could just as easily be had, if the road officers had only known where to find it.

We have attempted to outline a few general principles which should guide one in building roads.

SELECTION OF MEN TO BUILD ROADS.

There still remains a very important point which we have not touched on, and that is the selection of men who shall have charge of such work. If we wish the services of a doctor or lawyer, we select that man whose training and experience have been such as will give us confidence in his judgment. We should not think of going to a doctor to build us a house or a lawyer to instruct us in caring for our farm. Neither should we call in the lawyer, the doctor or the farmer to build and take care of our roads. There is no more sense in one proposition than in the other. The art of road-building is one that can only be attained by experience. A man who is to be intrusted with such work should be honest and firm, capable of handling men and teams; and in addition to this, he should be instructed in road work and made familiar with methods. Most towns think they are too poor to afford instructions of this kind to the road officers, but such economy is of the kind "which saveth at the spigot while wasting at the bung."

WASTING MONEY.

As a rule, most of the road money is wasted in a vain attempt to do too much, and in building without any knowledge of methods or materials.

The older countries of Europe passed through just such an epoch as we are now passing through, and came out into the light nearly a hundred years ago. Nothing was done of any value until the old system was abandoned and a new one adopted. The old system was like our present one; the new system placed trained men in charge of the highways, and as a result it is the exception to find poor roads while the money outlay has been in many cases far less.

INSTRUCT THE BUILDERS.

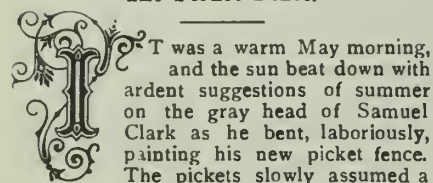
We may select the best available local men to supervise our road-building, provided we furnish suitable men to instruct and guide them. A careful study of the whole subject seems to indicate that such instruction may be obtained through a State commission with advisory powers.

THE HOME CIRCLE.

Autumn.

The year grows still again, the surging wake
Of full-sailed Summer folds its furrows up,
As after passing of an argosy
Of Silence settles back upon the sea,
And ocean grows as placid as a cup.
Spring, the young morn, and Summer, the
strong noon,
Have dreamed and done and died for Autumn's
sake;
Autumn that finds not for a loss so dear
Solace in stack and garner hers too soon—
Autumn, the faithful widow of the year,
Autumn, a poet once so full of song,
Wise in all rhymes of blossom and of bud,
Hath lost the early magic of his tongue
And hath no passion in his failing blood.
Hear ye no sound of sobbing in the air?
'Tis his. Low bending in a secret lane,
Late blooms of second childhood in his hair,
He tries old magic, like a dotard again,
Tries spell and spell, to weep and try again,
Yet not a daisy hears, and everywhere
The hedgerow rattles like an empty cage.
He hath no pleasure in his silken skies,
Nor delicate ardors of the yellow land;
Yea, dead, for all its gold, the woodland lies,
And all the throats of music filled with sand,
Neither to him across the stubble field
May stack or garner any comfort bring,
Who loveth more this jasmine he hath made,
The little tender rhyme he yet can sing,
Than yesterday, with all its pompous yield,
Or all his shaken laurels on his head.
—Boston Commonwealth.

The Picket Fence.



It was a warm May morning, and the sun beat down with ardent suggestions of summer on the gray head of Samuel Clark as he bent, laboriously, painting his new picket fence. The pickets slowly assumed a dark red color under the trembling motion of his withered hands. As a fence, it was beautiful, straight and even, cutting the green sward beyond into narrow parallelograms. The dark red was a rest to the eye in all that wilderness of green. Samuel Clark paused from time to time and looked at it, sighed, and shook his head. It was plain that he worked under protest.

"Tain't no use," he mumbled. "Might jest as well have built this fence years ago." He rubbed the paint in with vicious vigor, partly to relieve his feelings and partly for the economy of the paint. "If a man can't run his own farm, he might as well be dead—or a woman—a heap sight better be a woman. There ain't no way but their way. I ought to have guv up long ago."

It took him a long time to express so much. His words were separated by long pauses, and spoken in a voice at times scarcely audible; but the wind, softly fanning his gray hair, was gentle of hearing, and there was nothing else to listen.

His knowledge of women was not wide, but deep—deep and varied. One small woman, in her short eighty years, had held for him all the mysteries of her sex. She had died ere time had exhausted her infinite variety, and he, plodding away in the hot sun, felt her coercive presence very near. Then, just to be sure that she still slept peacefully, that she was not listening to his complaining on the sly, he turned and sent a furtive glance down the straight row of apple trees to where the orchard ended in a tangle. Beyond, a gentle knoll brought the village graveyard into sight. There stood her headstone, tall and white, just as she had planned it years before. Long it had waited for the legend on its white surface to be finished:

SACRED TO THE MEMORY
OF
MARY CLARK.

Died

Aged

"The wicked cease from troubling, and the weary
are at rest."

The blank space was now filled:

May 1, 1891.

80 years, 10 mos., 6 days.

Samuel had looked at it approvingly the day after she was laid to rest, and declared it "a mighty pretty stone—so sort of peaceful." Yet now, not three weeks later, as he eyed it furtively, there was no approval in his glance. The sunlight was shining warm upon it, and flickering shadow leaves were caressing the grave. From the top of the shaft fell folds of weeping. Oddly enough, it looked to his dimmed eyes like herself, with her old shawl pinned around her head, all bleached to a dazzling whiteness.

"She needn't be a-peekin'," he mumbled. "I'm a-buildin' of it!" He turned again to the fence, working more slowly, for he was

weary; more steadily, for he was watched.

When had he not been watched? From the day his young step-mother vowed to do her duty to "Little Samuel," the sense of being taken care of had weighed upon him.

He was a queer combination of authority and servility, obstinacy and docility. "Samuel is all right," his step-mother was wont to say, "if you jest come up on his deaf side." For Samuel had a deaf side, and it was on that side that his servility and docility developed themselves. Authority and obstinacy had been born in him. He had not been born deaf, but it came to him when he was quite young, with its meek attendant handmaids. It had made him shy with strangers, halting in his speech, slow in his thought. And Mary Clark, born to protect and rule, put her motherly arms around him and protected and ruled him ever after; while Samuel, born to rule and to be served, chafed against her authority, but his dumb lips could not voice his protesting thoughts. It took him so long to frame and utter them that they were drowned ere half finished in a torrent of exclamations, among which was always the one he never had a chance to answer: "Well, Sam-u-el, what are you driving at anyway?" He wished he were totally deaf and dumb and done with it. One sweet and daring plan—to run away—had brightened the monotony of his existence, but the great world of silence had always beaten him back. Against his will he had grown into the habit of turning his eyes to her for interpretations whenever any one spoke, for she had cultivated a peculiar, distinct enunciation, which he could understand with comparative ease. What would he do when she was not near? This did not make him grateful, however. He must use her, and his silent rebellions were more fierce in consequence.

They were both old when Samuel's father died and left two-thirds of his small property to Samuel, and Samuel and the other third to her. She was not averse to this arrangement. She was willing that Samuel should have everything if only she might manage it for him. She was anxious to labor, to slave for him. All she asked for herself was to be followed, to be obeyed implicitly—for the follower's own good. And lo! the day after his father's funeral, Samuel, the grave, the silent, began to assert himself, and that with long-latent stubbornness. He had long ago learned from his father that man is divinely constituted to be obeyed and served.

Samuel commenced the new regime by taking his father's place at the head of the table before she told him to. He also put two spoonfuls of sugar in his tea instead of one, as was his custom, and absolutely refused to eat bread with his sauce. Moreover, he met her look of astonishment with a defiant grunt, and his little, gray eyes gleamed in a way that showed he had made up his mind. He would be boss in his own house. He took sauce twice.

Mary Clark felt the foundations sinking beneath her feet. She, too, had been counting on a season of freedom. She scraped some butter from the piece of bread she was eating, and remarked, as if thinking aloud (she had to think very loud in order to make Samuel hear): "The old gather together; the young scatter. Father's gone, an' ther's no tellin' when all he's slaved an' dug for all these years will be gone too—scattered to the four winds of the earth!"

She sighed, and, with eyes fixed prophetically, gazed on the wastefulness of the future. Samuel, the spendthrift, stirred his tea. The death of his father had turned certain speculations of his into absolute knowledge. He had lived in a quiet corner of the world, where Nature for the most part took her course unmodified by seemingly alien forces. Severe storms and pestilence were unknown there. Death was usually as the dropping of the sear and yellow leaf—the blade, the ear, the full corn in the ear, and the harvest. It was thus that the monarchs of the forest fell and the young saplings stood. It was thus that his father had died. It was thus that she would go at last, and he would be free. Evidently she had not thought of this. He had best remind her.

"Life's unsartin. All got to die some time. Best be ready," he said in a cheerful tone.

This was the beginning of a long struggle. Each occupied ground that was impregnable, and a retreat to their fortresses ended most of their skirmishes for the time.

Then Samuel Clark reminded his mother, scarcely ten years his senior, that she was old, and must soon die, and then he would wear his best clothes, rent his farm and board in town or travel. Her only defense was: "Yes, Sam-u-el, but I hope to be able to lay you away first. You know, Sam-u-el, you're deaf, and you'd be cheated out of your eye teeth. I hope to be spared as long as you need me, Sam-u-el."

And Samuel, who knew what this kindness and care meant, was not softened. He knew that it was true—his deafness and the ability of the world to cheat him. Dearer than himself was his little property, which he so longed to enjoy in his own way. He felt powerless, yet impotently wielded his own weapon. "All got to die. The old die first." In his thought the flower of youth was yet to bloom for him.

As to the picket fence, it seemed to Samuel that she had always wanted it. Given a passion for flowers, a firm faith in the economic value of chickens, and no picket fence, the result is easily imagined. Mary Clark's husband had considered flowers a sinful waste of land and labor. What were door yards for, if not for the chickens? And Samuel felt that in order to be the man of the house he must clothe himself as with armor in the opinions of his father. He could not remember the summer when flowers had not bloomed around the door; and that they might do so, his youth had passed in a wearying chase after chickens. When he had become old enough to go to the fields, generations of brindled dogs had worn out their lives in the same occupation.

Like his father, Samuel abhorred a blossom that was not harbinger of an edible fruit. Apple blossoms were beautiful to him because of the apples to follow. They were more beautiful after the petals had fallen, revealing the round green ball at their base which dispelled the fear of a barren pistil. But he had grown accustomed to the flowers in the door yard. He would have missed them had they failed to appear. He would have missed those vigilant skirmishers, the chickens, had they been limited to a space of their own. He would have missed the persistent reminders of his mother that "If that there fence was only built—" and his own unfailing antagonism. Perhaps he would not have liked to miss any of these things.

"I tell you what it is, Sam-u-el Clark, all I want is to get you away long enough, and I'll build that fence myself," she said at last, desperately.

"No tellin' what may happen before next spring," the old man crowed, his bleared eyes lighting. "Perhaps you won't be here by that time. Best be ready. All got to die. The old first."

"Well, Sam-u-el, if I die first, I don't expect no picket fence. There won't be any money to build it with, or any farm to build it on, inside a year. You know you're deaf, Sam-u-el. They'll cheat you out of everything you've got."

"I'll risk it! D— it! I'll risk it," yelled Samuel with unusual vim. But this time he had gone too far.

"I will have that fence, so there now, Samuel Clark!" and that very afternoon she drove to town and ordered the materials. The next morning they came and a man to make of them a fence.

Samuel eyed the work sullenly. His mother was silent but triumphant.

As Mary Clark stood in the shade of her apple tree, giving her orders as to the distance apart and depth of post holes, a figure emerged from the house and, when she caught sight of it, was jogging rapidly down the road. It was a thin figure, not very tall. Its clothes hung loosely about it. Its hat was jammed down to its ears, and its gray hair flaunted out beneath the rim. Across its shoulders was a stout stick, at the aft end of which dangled a bundle. She had gone too far also. Samuel was running away.

"Humph!" sniffed Mary Clark; "I bet that picket fence he'll be back to dinner."

But he was not. At three o'clock she ordered the work stopped, hitched her horse to the buggy, and started after him. She found him ten miles down the road, seated on a rail at the corner of a fence.

"Sam-u-el!"

No answer. He was staring straight before him with dull eyes. Perhaps he did not hear her. His face showed white through the streaks of dust. So lonely and hopeless he looked. It touched her to the heart. Little Samuel! Had she not vowed to take care of him? She climbed out of the buggy and went to him. She touched his hand.

"Why, Sam-u-el, you're cold! Get right in the buggy and come home!"

"I won't!" said Samuel, without looking at her.

"Well, you will—if I have to carry you!" She took hold of him. He seized the fence behind him and faced her with blazing eyes.

"You let go o' me!" he yelled. Then he began to cry, and make terrible choking noises, as the dumb do.

"Sam-u-el, Sam-u-el! what's the matter with you? Have you plumb gone mad?" She shook him helplessly. "He's stopped workin' on the fence. I won't build it if you don't want it—there, now!"

Samuel's sobs became less frequent; then they ceased.

"Now, Sam-u-el, I want you to get right in an' come home. You'll have a fever first thing you know out in this hot sun—an' cold as you be when you ought to be b'ilin'."

"Don't care if I am. Might jest as well, if I can't be boss on my own farm!"

He said it slowly, distinctly, pushing the words out. Once he would be heard if he never spoke again. And Mary Clark, finding herself overreached, gave in with a very good grace. She, who always drove, insisted upon his driving home. Perhaps it shortened her life, for the next spring she died.

A few straggling flowers from last year's scattered seeds made a sickly showing against the brick wall. The chickens scratched at them viciously, and then sunned themselves on the doorstep unmolested. Samuel missed her more than he would have dreamed possible.

"I wisht I had a-built her that fence."

Be on your Guard.

If some grocers urge another baking powder upon you in place of the "Royal," it is because of the greater profit upon it. This of itself is evidence of the superiority of the "Royal." To give greater profit the other must be a lower cost powder, and to cost less it must be made with cheaper and inferior materials, and thus, though selling for the same, give less value to the consumer.

To insure the finest cake, the most wholesome food, be sure that no substitute for Royal Baking Powder is accepted by you.

Nothing can be substituted for
the Royal Baking Powder
and give as good results.

"'Twouldn't have cost much," said he, pretending to himself that he had opposed her in the cause of economy. Yet this mild regret could not lessen the sense of joy and elation that took possession of him. The feeling that he was at last really his own master grew stronger. But he was still very shy with outsiders. He wanted to rent his farm and be free to go where he would, but he was afraid to do business with any one; afraid he would commit himself before witnesses to conditions which he never heard—as she had so many times told him he would.

One morning Mr. Dever, a lawyer from Newark, who had always attended to their few legal affairs, stopped in front of the house and beckoned to Samuel.

"Good-morning, Samuel," he shouted. "I just happened to think, when I saw you, of a little paper down at my office. Sorry I was away three weeks ago. They say she went easy. Eh? Yes. Glad to see you looking so well, Samuel. Well, that little paper, guess I'll have to read it to you. It's a will Mrs. Clark had me draw up. It isn't of any importance, but she wanted it done. Come down some time this week and we'll look it over."

This was news to Samuel. A vague misgiving possessed him. A will? Why had she made a will? He felt as if a hand had reached out from eternity to rob him of his few years of freedom.

That very afternoon he called on Lawyer Dever, and listened to the reading of the will.

"I do give and bequeath all my property, both personal and real, to wit, the northwest third (including dwelling house and barns) of the northeast quarter of section thirty, range twenty, township five, in Litchfield county, Ohio, known as 'Clark Farm,' also two thousand dollars stock in Newark National Bank—to my beloved son, Samuel Clark; providing he does build and maintain during his life a picket fence four feet high and painted red, to inclose the doorway and clothes lot lying west of the apple orchard; the same to be completed one month after my death.

"Providing this is not built at the time specified, and maintained in a neat and respectable manner, I do leave all my property, both personal and real, all moneys, bonds and stocks, to St. Mary's Orphan Asylum of Newark—except ten dollars which I leave to my beloved son Samuel, with which to purchase a little remembrance of me."

"There, that's the will. Sorry I've given you so little time to build the fence. Guess there ain't no hurry if we don't say anything about it. What was the matter with the old lady, anyway? Why didn't she build the fence herself?"

But Samuel was staring helplessly at the wall. At last, "Will it hold?" he asked tremulously.

"Why, you don't mind building the old lady a fence, do you? Of course it will hold, unless you break it, and I doubt if you could work that. You're not her own son, you see. And if you could it would cost—well, the amount of the property. The St. Mary's would fight you, of course. Confound you, Samuel, why don't you want to build the fence?"

Samuel arose. Words—rebellious, protesting words—strove thick and fast for utterance on his stiff tongue. Their import was that he could never be boss in his own house, lord of his own person, keeper of his own soul. As he shambled out, his newly acquired youth fell from him and left him older than he had ever been, more withered, with a trembling that was new to him. Always, always, in one way and another, she had had her own way. It always would be so. The living might be thwarted, but the dead—

The will was certainly a great shock to his mind. When he reached home he went quietly to his room. Soon after he might have been seen stealthily leaving the house and pattering down the road, his stick and bundle over his shoulder.

Again he was running away. It was late when he reached the fence corner, and long he waited, but no one came to coax him. At last when the moon rose he realized that no one would ever come; that the house might stand there for years and no one would know he had gone.

He reached home in the gray of the morning, and crept in, cowed, beaten.

It was afternoon when the painting was finished. Samuel Clark turned, brush and paint pail in hand, and looked through the rows of apple trees to her grave. It was in shadow now.

"If there's anything you want, jest too for it, and I'll git it with pleasure. You needn't be standin' there so meek like. You've had your own way."

A fragrant breeze drifted through the apple leaves, and their disturbed shadow upon

her seemed like the swaying of those marble garments. But she did not turn around, as feared; he could not see her face.

"I never said nothin'," he muttered, and with head bowed, as to a yoke, he tottered into the house.—L. B. Bridgman in Harper's Weekly.

Mr. Beecher on Christian Song.

There is almost no heresy in the hymn-book. Many of our very best hymns are Unitarianly written, but they are orthodoxly sung; and our most stringently doctrinal hymns, when brought into emotion, are as palatable to the Unitarian as to the Calvinist. Some of the noblest hymns that are moving through the ages, distributing God's bounty from their wings, were written by Roman Catholics. The unity of man's life is expressed in hymns and psalms, while the exterior is full of fightings, separations and alienations. So in hymns and psalms we have a universal ritual. Everybody loves the hymn-book with the right hymns and the right tunes, with no fences nor walls of division raised between them. With such a hymn-book Princeton sings with Andover, and they together sing with Allegheny. Universal experience, as of sorrow or joy, brings them into most intimate and profound sympathies. Where truth has had a lyrical form, and has been addressed to the imagination and the emotions, it has been most effectual in bringing men together. In other words, it is the theology of the heart that unites men. It is only the theology of the head that splits men asunder.

Then there are many hymns and tunes which are radiant with histories—our histories. Our very childhood is embalmed in sacred tunes and hymns. Our early lives and the lives of our parents hang in the atmosphere on sacred song. All the things which make the memory of youth tender and beautiful may be renewed by the singing of hymns that are sacred. Hymns that in themselves are poor and barren may become to us gorgeous.—"Mr. Beecher's Unprinted Words," in the October Ladies' Home Journal.

DOMESTIC ECONOMY.

PRESERVED TOMATOES.—Take one lemon and one pound of light brown sugar, to one pound of tomatoes. Grate the thin yellow rind of the lemon, then pare off the thick white part which is not to be used, slice it thinly and remove all the seeds. Scald and peel the tomatoes. Put water enough with the sugar to dissolve it, and when it is boiling, remove the scum, and add the tomatoes. Cook slowly for two hours.

PLUM JELLY.—Put the plums, which may be either damson, red, or peach plums, into the preserving kettle with water to cover. Heat slowly, and simmer until the plums will mash readily, then turn into a flannel jelly-bag, and drip until the pulp is dry. Boil the juice rapidly twenty minutes, skimming often. Remove it from the fire, measure, and return it to the fire; as soon as it boils again, add as many bowls of sugar as you have of juice, and boil until it jellies, which will be fifteen or twenty minutes. Pour into tumblers, and stand aside two or three days, then cover with paper, and put in a cool, dry place.

GRAPE JELLY.—Wash the grapes and free them from the stems. Put them in the kettle and mash them until all broken. Heat slowly, and cook until the juice is well drawn out. Then place a square of cheese-cloth over a colander, and set the colander, over a bowl. Turn in the grapes, and let it drip without any pressure. Measure the juice, and allow an equal measure of sugar. If wild grapes are used, allow a little more than an equal portion of sugar. Boil the juice fifteen minutes. Skim and strain again, then add the sugar, and boil until the surface looks wrinkled, and the liquid jellies on the edge. Skim well, and turn into glasses.

SWEET PICKLES.—Take very large, ripe yellow cucumbers, wipe, pare, and take out all the seeds and soft parts, and cut in long, thin pieces. Put in perforated steamers or colanders over night, with fine salt between each layer. Some time next day, having drained off the water that escapes, cook until tender in vinegar to cover them. Take out the pieces as fast as they are done, taking care that they do not break or cook up, and set away. Scald more vinegar (having poured away the first liquid), adding to each quart one and one-half pounds brown sugar. Tie in a muslin bag a generous quantity of spice—stick-cinnamon, cloves and allspice—and put in the vinegar also. When well heated, add the cucumbers. This should be kept in stone or earthenware, well covered, in a cool, dry place.

YOUNG FOLKS' COLUMN.

The Horse That Wore Spectacles.

"SAY, boys," said Tom Phelps at recess one Friday, "what do you think we've got in our barn? You could never guess!"

Then the guessing began, and a great many queer things were thought of; but none were right, and finally they had to give it up.

"Well," said Tom, laughing, "of course you couldn't guess, for you never heard of such a thing. It's a horse that wears spectacles!"

"Oh!" said the boys who had gathered around Tom; "its mean to fool us that way. Didn't think you were joking." And they were turning away to their games when he called them back.

"But I'm not joking. You know our horse Prince?"

"Yes!" came from a dozen boys at once. Didn't they know him! Hadn't they ridden behind him, filling Mr. Phelps' wagon running-over full—if ever he chanced to drive along just as school let out—a hundred times? And hadn't they ridden on his back in the pasture three or four in a row, and tumbled off three or four in a heap, and petted him, and given him apples or sugar whenever they saw him? Every boy in Manlius knew Prince, and to know Prince was to love him; for a more intelligent, kind and gentle horse never lived.

"What about Prince?" said several in a breath.

"Why, papa thought he was getting blind. He had always acted as if he couldn't see just right, and so the other day papa took him to a—what do you call it?" said Tom, trying to think of the big word he wanted.

"Was it an oculist?" said a voice.

"Yes, sir," answered Tom; for it was the teacher, Mr. Bragdon, who spoke. He had joined the group, and was listening with interest to the news about Prince.

"This man looked at Prince's eyes just the same as he would look at anybody's, and found he was near-sighted, the way some people are. Then he wrote out something to tell how to make spectacles for Prince. Papa had them made and put upon a horse, and Prince wore them yesterday."

"How did he act, Tom, the first time the spectacles were put on?" asked Mr. Bragdon.

"He acted at first as if he was sort of frightened, but it didn't take him long to get used to them; and now we think he likes them."

"Well, that is wonderful!" said Mr. Bragdon, as he turned to go into the school-room; and before recess was over half the boys had agreed to go to Tom's the next morning to see how Prince looked in his spectacles. Mr. Bragdon was invited, too; for all the boys liked him, and thought they always had a better time when he was along.

Bright and early Saturday morning a troop of jolly boys called for the "teacher," and were tramping gaily up the carriage road to the Phelps' farmhouse, when whom should they see but Tom and his father in the big wagon, driving Prince right toward them. How funny Prince looked with his great goggles, and how the boys laughed! It seemed as if Prince tried to laugh too; for he shook his mane, and opened his mouth in such a funny way.

"He looks like a professor," said one.

"Or an owl," said another.

"Doesn't he look wise?" said a third.

"Why shouldn't he? He knows more than any of us," retorted one of the Prince's most ardent admirers; and so the talk went on until Mr. Phelps ordered the visitors to "pile in" and go for a ride. They needed no urging, and their gay laughter as they went through the quiet town brought more than one staid body to the window to see what the matter was. No doubt more than one turned away with a sigh, to say, "It's only Deacon Phelps and that parcel of boys he's so fond of carting round with him."

When the ride was over, Mr. Phelps said, "Now I'm going to turn Prince out to pasture. Yesterday he acted kind of queer and sorrowful when I took the bridle off. I wish you would watch him to-day, Mr. Bragdon, and see what you think is the matter."

So they all waited and watched eagerly to see what Prince would do, and the boys who were used to his playful ways were astonished to see him walk slowly part-way across the barn with his head down, and then stand still like a person who is blindfolded, and does not know where to go next.

"I believe he's crying," said little Jack White in an awed whisper; and I think the

boys would not have been astonished to see real tears drop from his eyes.

"Go on, Prince," said Mr. Phelps, kindly, but he did not stir till taken by the nose and led out of doors. Then he walked slowly down the path toward the meadow, the whole group watching him in silence.

"He seems to miss the spectacles," said Mr. Bragdon, after a moment.

"Yes," replied Mr. Phelps, that's just the way it seems to me."

"Look at him now!" cried the boys. "He is coming back!" And, sure enough, Prince had turned and was on his way back to the barn. Slowly he came, went straight by the boys, never stopping for sugar or caress, to the barn door which had been closed, and there he stood whinnying softly.

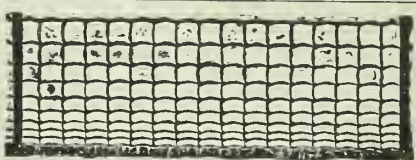
"He's asking for those spectacles, papa," said Tom, eagerly, "Do put them on."

"Yes," said Mr. Bragdon; "why not see what he will do?"

So the bridle was put on, bit and all; but Prince did not seem to mind the bit. Just as soon as the spectacles were on and fastened he rubbed his nose lovingly against Mr. Phelps' arm, as if to say, "Thank you," and then kicked up his heels and pranced away down to the pasture in the happiest possible manner.

"Well, I declare!" exclaimed Mr. Bragdon, "that was what he wanted." And he and Mr. Phelps talked it over while the boys ran away to the meadow to have a romp with their friend.

This is a true story. The horse who wears spectacles is now living, and I'm sure you will all join with me in hoping that he may live to wear them many years.

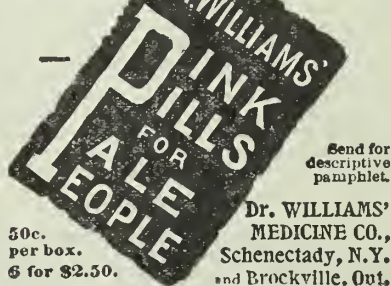


Clear Case of Jim Jams.

When you see the little cut at the top of our ad., standing on its head, bringing the big meshes near the ground, and the little ones with strip of grass on top, you may know the printer "has got 'em again." Some day he will invert the picture of a patent medicine survivor and make trouble.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich

Nerve Tonic Blood Builder



RELIABLE INCUBATOR

And Brooder Combined. 400 stamps will bring you a Catalogue and book of hundreds of testimonials of successful artificial hatching by the "Reliable." The best, most durable, easiest operated, made of best material & workmanship. A conceded fact. Reliable Incubator & Brooder Co., Quincy, Ill.

Horse Owners! Try GOMBAULT'S Caustic Balsam

A Safe Speedy and Positive Cure. The Safest, Best BLISER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

Will \$500 Help You Out? If so, you can have it. We offer you the Sole Agency for an article that is wanted in Every Home and Indispensable in Every Office, something that SELLS AT SIGHT. Other articles sell rapidly at Double the Price, though not answering the purpose half so well. You can make from \$500 to \$700 in three months, introducing it, after which it will bring a Steady, Liberal Income, if properly attended to. Ladies do as well as men, in town or country. Don't Miss this Chance. Write at once to J. W. JONES, Manager, Springfield, Ohio.

PATRONS OF HUSBANDRY.

State Grange Session at Petaluma.

Address of Worthy Master E. W. Davis.

Officers and Members of the California State Grange, Patrons of Husbandry—

FRIENDS:—For the fourth time, as Master, it becomes my duty to submit for your careful consideration an account of my stewardship. In doing this, I am not unmindful of honors conferred, of responsibilities assumed, and of work yet undone. The fields have been golden and ready for the harvest in so many places and at the same time that I have found, alas too often, myself unable to do the work expected of a true and faithful Harvester, or of a competent and successful Master. With the conditions as they were and are, the best work possible was done and a short account of stewardship is herewith submitted.

THE NATIONAL GRANGE

Held its 26th session at Concord, N. H. Your chosen representatives were present at the opening of the session, at every regular meeting, and at all times spoke, voted and worked for the Good of the Order, according to their ability and best judgment. The work accomplished by the last session of the National Grange is a part of the history of this Order, and by it we must be judged. It is to be hoped you have familiarized yourself with the published Journal of Proceedings, a copy of which has been forwarded to each subordinate Grange under your jurisdiction.

GRANGE WORK.

During the spring an effort was made by the Executive Committee to reach the farmers of this State by means of public speakers and open meetings, in the hope that some good might result to our Order. Accordingly, speakers were sent south, east, north and west. Owing to the lack of enthusiasm, caused no doubt by the pressure of "hard times," but little was accomplished, and after a reasonable but comparatively inexpensive effort the work was discontinued, to be resumed at such time and in such manner as this body, or its proper representatives, may determine.

LEGISLATION.

According to instructions from this body, an effort was made to have the last Legislature pass a few laws not unfriendly to the industrial classes of this State. A law, looking to the rights of widows to settle the estates of deceased husbands, was asked. The Legislature failed to pass the bill urged by our Legislative Committee. A bill to allow the organization and operation of Farmers' Mutual Insurance Companies was urged by the committee and finally passed by both branches of the Legislature, but failed to become law because of the action of Governor Markham. On this subject, as well as on the subject above named, the members of our Order in this State are a unit, and there can be no doubt of our ability to pass both such laws at the next session of the Legislature; and if we will take time by the forelock and see that none but friends of agriculture are elected to the Legislature, we can pass these laws despite the veto power. Our Legislative Committee, aided by friends, did secure the passage of the Re-Assessment bill, whereby it is expected the railroads will be compelled to pay all back taxes. This one measure is a great victory for the Grange, and the farmers and tax-payers of the State ought to give the Order of Patrons of Husbandry due and proper recognition for the work done by the members of our Order, both those in and out of the Legislature. Too much credit cannot be given the Legislative Committee for services rendered.

THE FINANCES OF THE STATE GRANGE

Are in a most satisfactory condition. There was, September 1, 1893, \$538.20 in the hands of the Treasurer belonging to the General Fund and \$1963.58 to the credit of the Lecture Fund, making a sum total of \$2501.78. The Executive Committee have deemed it prudent to husband these funds rather than to spend them during these hard times, and then fail in rebuilding the Grange. The committee are of the opinion that the money can be expended to a better advantage in the near future than could have been done during the past year. They also believe that a fairly good credit, backed up by money in the treasury, is better for the Order than a depleted fund and a host of hungry creditors. If the farmers and business men of our nation would profit by this method of doing business and not attempt, as too many of them do, to transact two dollars' worth of business with but one dollar in capital, there would be fewer failures and less cry of hard times.

LECTURE WORK.

During the past spring and early summer the Worthy Lecturer and several of the Deputies were asked to go into the field. They did so, and no doubt each of these officers will report the result of his labors to this body for consideration.

The Master has met many appointments during the year, and has done his best to hold up the banner and defend the principles and purposes of the Grange. In connection with and in addition to this line of work, he has also written about one column per week for the RURAL PRESS, and has assisted in conferring the degrees and disposing of sundry Harvest Feasts at times and places too numerous to enumerate.

SALARIED OFFICERS.

It seems to me proper that the Master, Lecturer and Secretary should each have a fixed salary for work done. These salaries should be determined by this body before officers are chosen. Don't ask the Executive Committee to do this work. It is yours. Let the Committee on Finance make recommendations and let this matter be determined by the State Grange. There is a big tax on the time and pocket-book of each of these officers, and this Order ought to pay something for it. The laborer is worthy of his hire.

TEMPLE TO CERES.

The National Grange is anxious to erect a National Home. It needs some financial help. I hope this body will take such action as will encourage our subordinates to assist in the construction of this Home. Let the Committee on Good of the Order tell how it may be done.

TAXATION.

By the efforts of the State Granges of New York and Pennsylvania much personal property in each of those States has been discovered which has been escaping the keen eye of the assessor. It will be well for this body to take such action at this session as will stimulate assessors to find hundreds of thousands, yes, perhaps millions, of dollars of personal property in our larger cities which are now escaping taxation. Those of us on the farm have found the assessor listing every old hen, every flat-iron, every old set of harness and all other sorts of personal property (and that is right), while he has as successfully failed to find the bonds, notes, deposits and certificates of bank stock of the city "gentleman of leisure." This is not just. Let each pay in proportion to his worth. This subject of taxation is of more consequence than you may have imagined. It is far-reaching in all its operations, and affects the poor people of our State in a most serious manner. The millionaire can fight his tax levy, but the poor widow cannot afford to do so. Let all property, without regard to ownership, pay its proper share of the burdens of government. See that the farmer, the mechanic, the widow and the artisan pay no more, in proportion to their wealth, than the millionaire railroad magnate and the well-salaried president of soulless corporations. This is an important subject. Look to it. See

that proper committees are appointed and that proper legislators and tax officers are elected.

THE OFFICIAL ORGAN

Has been ably managed, and Brother Alfred Holman has taken a deep interest in the cause of agriculture and in the prosperity and growth of the Grange. He knows as well as any one can know, the wonderful influence of the newspaper. The members of the Grange cannot pay too much attention to the power of the press; and the purity of tone, of sentiment, of purpose, and of the man, must also be considered. A good man may not be able to publish and edit a good paper, but a bad man should not be permitted to publish any paper. The tone of the newspaper ought to be high, sweet and pure, so that the music of the brain would be in harmony with the melody of the heart. It is a pleasure to say that the RURAL PRESS has filled this niche in the newspaper realm. There is reason to regret that the Grange department of the PRESS has not contained more Grange news and correspondence. An earnest effort has been made by the management to secure such news, but the success was not as great as was to have reasonably been expected. The subject of an official organ, and the relations of the RURAL PRESS to the California State Grange, are matters for your consideration at this time.

AMENDMENTS.

The following proposed amendments to the Constitution of the State Grange have been legally submitted to the several subordinates and now come to you for final consideration and action. Let them be considered carefully, remembering that a fundamental law should only be changed when it is certain to be improved.

J. D. Huffman, W. L., offered the following proposed amendment: That Art. II, Sec. 1, of the State Grange Constitution be amended to read as follows: The membership of the State Grange shall consist of Masters of the subordinate Granges and their wives, if Matrons, and where the wife is the Master of a subordinate Grange, her husband, if a fourth degree member in good standing, shall be a voting member of the State Grange. Past Masters and their wives, when Matrons, are honorary members and are eligible to hold office, but not entitled to vote.

Referred to the Committee on Constitution and By-Laws.

No. 2.—Offered by E. C. Shoemaker, W. A. S. of S. G., and recommended by vote of Tulare Grange: That Art. II, Sec. 1, read as follows: The membership of the State Grange shall consist of two fourth degree members from each subordinate Grange. These members shall be the Master and wife from each Grange. In case the Master be a Patron having no wife, or his wife be not a member, then the Grange shall elect a fourth degree member who is in good standing. If the Master be a Matron, and she having no husband, or the husband be not a Patron, then the Grange shall elect a fourth degree member who is in good standing. Each member so elected shall enjoy all the privileges and rights now accorded the Master and wife. Each Grange shall elect two alternates who are in good standing. Past Masters and their wives are honorary members, and are eligible to hold office, but not entitled to vote.

The Executive Committee, in examining the foregoing (No. 2), recommended a change providing for the election of a fourth degree member, of opposite sex to the Master, as a member of the State Grange, and one alternate of each sex.

No. 3.—Offered by A. T. Dewey, Sec'y of S. G., and recommended by vote of Temescal Grange: That Art. II read as follows:

SECTION 1. The membership of the State Grange shall consist of Masters of the subordinate Granges and their wives or their husbands who are fourth degree members. Past Masters and their wives or husbands, who have attained the fourth degree, are honorary members, and are eligible to hold office, but are not entitled to vote.

SEC. 2. Two alternates shall be elected separately by ballot, by each subordinate Grange during the three months preceding the annual session of the State Grange. In the order elected, they shall be designated as first and second alternates. These alternates shall vote and otherwise act as representatives while at the State Grange only when a vacancy exists by the absence of the Master, or the Master's wife or husband, or by the Master having no wife or husband who is a fourth degree member. Delegates shall have attained the fourth degree and fill vacancies respectively as numbered, alternate No. 2 acting only while there are two vacancies. All alternates shall pay the regular fee upon applying for the fifth degree.

SEC. 3. Wives or husbands of Masters, if members of the fourth degree in good standing, shall be eligible to appointment as Deputy Lecturers.

I would suggest that Section 1 of Article V of the By-Laws of the State Grange be so changed as to allow the Worthy Master to appoint a Fourth Degree Patron as County or District Deputy. It frequently happens that some one, not a Past Master, would make a most efficient worker in our Grange fields. What we most need is workers. Let us have them for Deputies and this Order will surely grow in numbers and in usefulness.

THE TRADE CARD

Plan is yet in operation and many reports are made of money saved and to be saved by a skillful use of this little piece of board. Those who have combined orders in buying report great savings.

JUVENILE GRANGES.

By enactment of the National Grange, it is lawful for the several State Granges to cause to be organized under their control, Juvenile Granges. These Granges must consist of at least thirteen children of the farm under 14 years of age. There shall be a Matron in each Juvenile Grange. A Ritual has been prepared by the National Grange. No Juveniles have yet been organized in this State. It will be well for this body to give this subject consideration, and if deemed for the good of the Order, to take such action as will secure the organization of Juvenile Granges. Applications from the Little Grangers to be, have come from Santa Rosa, Merced and Grass Valley, and in the order named. Give this subject your attention.

EDUCATION.

It is greatly to be regretted that any part of our educational system should be less perfect than any other part. That an effort has, now and then, been made to cripple the Agricultural Department of our State University goes undisputed. It is well that this body keep a watchful eye on that effort. It pleases me to be able to say that the Grange is an important factor in the cause of public education and is doing all in its power to establish libraries, reading circles, debating societies, maintain long terms of free schools, with competent teachers, and to encourage free and independent thought and hold and honest speakers, writers and thinkers. For fuller and more definite information on this all important subject, reference is hereby made to the excellent and complete report on the subject of education submitted by Hon. Alpha Messer, Master of Vermont State Grange, to the last session of the National Grange, a copy of which will be found in the Journal of Proceedings of that body. For the following excellent ideas the Order is indebted to Brother George Ohleyer of Yuba City Grange:

"We are admitting scores of young people. They ought to flock to the Grange for education and shelter. It gives them company, society and recreation. It teaches them rules of order; shows them the importance, for their own sake, of appearing at ease in company. They are given to learn and to find the flaws in their elders. Their tastes and requirements should be consulted and supplied. The child at 14 to 20 takes little interest in the grand drama of life in which the parent dwells and delights. He feeds upon lighter victuals. His existence is as a gurgling rill over the pebbly bed. He or she may have discarded the doll or the bobbyhorse, but is not ready for the weighty affairs of life. Their minds are young and unclouded; they are susceptible of learning and of absorbing knowledge. Besides, those of maturer years enjoy the harmless antics of the young, and hence should gladly supply the required sustenance.

"For this purpose the Grange should authorize the publication of a volume devoted to its literary uses. It should be composed of ma-

terial especially suited to the Grange and the farm. It should be made up of cbarades, dialogues, recitations, etc., and in such a way as to reveal the pleasures of country life. This might be done in one volume to cost not to exceed 50 cents, or it might be published in small parts, semi-annually or quarterly, at a very small cost, the contents in that case being always new and attractive. The Grange should, of course, compile the work, but need not print it. The market thus assured would find ready publishers, and the venture might even return a handsome profit to the compiler."

KINDRED THOUGHTS.

Under this head permit me to suggest that the subject of finance ought to have your earnest consideration, not from any partisan point, but in the interests of those who toil. There can be little doubt that the people of this nation want an honest dollar, whether gold, silver or paper, and that each should have the purchasing and debt-paying power of the other. As to the exact ratio of gold to silver is not for me to say, but it is for me to say that silver ought to be recognized as lawful money. Silver is the poor man's medium of exchange. It is time the many millions of wage-earners should be heard in Congress, even on the money question.

The subject of transportation ought also to be considered by you. It is an all-important consideration for the farmer who gets but 1¢ per hundred for his wheat, delivered in San Francisco, to know how he is to pay freight out, buy bags, pay taxes and have enough left to support wife and family; and this brings up the question of jute bags made at the San Quentin Prison. It may be well for this body to examine carefully the Ostrom law, and make such recommendations, if any be necessary, as will enable the next Legislature to overcome the difficulties encountered this year. Let such amendments be devised as will cause the bags, when made, to go to the producers of grain, and not lie within the locked gates of the prison from one year's end to another.

This thought suggests another of a kindred nature: to wit, that before the next session of this body a general election will be on in this State. It behooves us, as heavy tax-payers and loyal citizens, to see that primary elections are not run by professional politicians, and that County and State Conventions do not nominate men unfit for our votes. It matters not with what political party you may affiliate, see to the primaries and conventions. Let us see if a host of men who pay heavy taxes cannot be chosen to the Legislature. Let us see that mental and moral worth have some recognition. Why not have a farmer for Governor? The farmers of this State can have one if they will unite and make the demand. In unity there is much strength.

The cause which has engaged many hours of our time, viz., the best means of strengthening the order of Patrons of Husbandry, is an ever-present question. This body, through its several committees, ought to devise proper ways and means for the up-building of the Grange. It is not for me to do more than suggest that live officers, a good journal, competent lecturers and an interested membership are all important. No one of these factors can be omitted, if success is to follow. No greater mistake can be made than to put into the field speakers who are unable to meet all the live issues of the day. The farmers of our State are wide awake. They want advanced ideas. Our speakers and writers must meet this requirement or they had better not report for duty.

The following resolutions, offered by S. Goodenough, Worthy Chaplain, at the last session of the State Grange (see page 47 of report for 1892), was placed on file for action at this meeting, to which your attention is duly called: "In view of the present difficulty of reaching legislative bodies with the weight of public sentiment, and believing that some direct and effective method of so doing is desirable, the State Grange of California hereby memorializes the Legislature of this commonwealth to provide by suitable legislation for the exercise of the right of 'The Initiative' by the people."

THE BIENNIAL ELECTION

Of officers occurs at this session. It is a matter of great importance. Approach it with due care and consideration. Remember to select competent and energetic persons. Honor those who will honor the office, the Order and themselves. Let no local prejudice or sectional feeling move you to vote for or against any Patron. Be guided by the rule of "The greatest good to the greatest number." See to the prosperity and honor of the Grange first; the other factors will take care of themselves. You are also to elect a member of the Executive Committee in place of Bro. Geo. P. Loucks, of Contra Costa county, whose term expires by limitation. You will please remember that Section 3 of Article III of the Constitution of the California State Grange prohibits the election of two members from the same county. The hold-over members of the committee are Bro. B. F. Walton of Sutter county and Bro. Cyrus Jones of Santa Clara county. In the selection of Bro. Loucks' successor please bear these facts in mind.

WOMAN'S WORK

Has had merited recognition in this State during the year. From that committee you will no doubt get valuable information. But you ought to assist this committee to carry out the work outlined. They have undertaken many valuable things, among which are the organization of Juvenile Granges; the proper observance of Ceres, Pomona and Flora's festivals; the erection of a National Grange Home; the more universal observance of the Fourth of December, and other work of a valuable kindred nature. The power and the influence of the women of the Grange is beyond estimate. Many a Subordinate Grange owes its vitality and success to the work of the women. All honor to their sex and to their services! May the women of the Grange continue in their policy of love, devotion and fidelity to the Grange! May their steadfastness increase as the years run away, and, if so, the perpetuity of the Grange is once and forever insured.

OUR DEPARTED.

During this year the "Dark Shadow" has crossed our threshold, and, unbidden and unwelcomed, has entered our inner gates. Though the Gate-keeper and the Steward and his assistants were at their posts, and faithful in the discharge of every duty, yet the Messenger of Death—He who visits Granges without our annual word—has called from our midst and removed to fields of usefulness—where some of our cherished ones. We have profited by their words in days past, but their voices on earth are forever hushed, while now we see their vacant chairs, only to be reminded that all flesh is as grass. We know that man cometh forth as a flower and is cut down, and that in the midst of life we are in death. The scythe, in the hands of the Reaper—Death—has garnered from our number Sister auline Newkom, formerly Worthy Flora of the California State Grange. At the time of her death she was in company with Bro. W. D. Woodworth, W. Past Master of Yuba City Grange. You have all read how the turbulent, treacherous, muddy waters of the Feather and Yuba rivers claimed them both. Sister Samuel Myers, wife of Past Master Myers of March Grange, and Bro. O. Dennis, Past Master of Eden Grange, have also been called to that bourne from whence no traveler ever returns. Let us bow the head in reverence, shed the silent tear, have the memorial page set apart and suitable resolutions adopted. Peace be to their ashes! Let us imitate their virtues and profit by their well-spent lives.

CONCLUSION.

Pestilence has not invaded our homes and epidemic disease has passed our country by without serious assault. Peace and plenty have been our share. The World's Columbian Exposition, the child of our Republic, surpassing in excellence and detail anything heretofore known, has been the center of attraction for all nations. And now it is to be followed by our own Midwinter Exposition, in which we of California have a deep interest. It is for this body to take such action on this subject as will be for the credit of agriculture and the Good of the Order.

The year 1893 has been one of wonderful productions. No one need be told of the overflowing granaries nor of the overburdened trees and vines. Worldly goods have been abundant and cheap; yet

there is a feeling of unrest and discomfort among the people. I need not tell you, nor any thinking people, what the Grange is doing, or has done, or is going to do. Its foundations have been laid broad, deep and secure. It is no ephemeral organization. It makes its members greater men and better women. It teaches that half a truth is not enough, but that truth beareth away the victory. It teaches that factiousness is weakness and that intelligence is strength; that doing is better than being, and that human happiness is the acme of all earthly ambition; that no one is so large and wise that he may not err, and none of its members so unimportant that their opinions must be ignored. The Grange has a definite policy, tersely and elegantly expressed in the Declaration of Purposes in these words: "In essentials, unity; in non-essentials, liberty; in all things, charity."

In surrendering the gavel and other insignia of office to you, and in returning to the ranks, it is more than a pleasure for me to be able to say the Grange ship, "California," is sound and staunch. She is ready for any voyage. To whatsoever port she has carried me and mine, we have found a cordial welcome from true-hearted Patrons. May my successor be as safely transported and as hospitably received! To all those, be they officers or otherwise, who have done so much for my pleasure and comfort and for the Good of the Order, my warmest thanks are tendered. May the work we ought to have done be splendidly done by another, and, when the ripened fruits and falling leaves of life give way to the life of the Hereafter, may it be said of each of us, "Well done, good and faithful servants!" And, as we meet for the first time in this beautiful city, whose hospitable people will do so much to make our stay enjoyable, let us strive to make a record for ourselves, for our Order, for agriculture, that will be like the silken thread made at yonder factory—strong, beautiful and attractive—a thread, too, like that, because it is yet to bind in closer union parts that are now far removed from each other. May our silken band of fraternity bind all the tillers of the soil in one harmonious whole. As fire and water purify things material, so may this Order purify the social, political, financial and moral atmosphere. To this work let us lend and unite our energies. As the vine seeks the sunlight, so may we seek the truth, ever remembering that

"New occasions teach new duties;
Time makes ancient good uncouth,
He must onward still and upward
Who would keep abreast of Truth."

Fraternally submitted,

E. W. DAVIS.

Overseer's Report.

Worthy Master, Sisters and Brothers:—Yet once again I crave your kind indulgence for a few brief moments, that I may be given an opportunity to render an account of my official labors during this ever memorable year.

A peculiar combination of circumstances prevented all "Field Work," as well as many contemplated literary efforts.

In special contemplation and general observation, however, I have not been idle, and while you will doubtless maintain that only "He who wields the sabre should hold a right to the glory of the charge," it should not be forgotten, that in order to be a good ploughman one need not always hold the plow, notwithstanding the old adage that, "He who by the plow would thrive, must either hold himself or drive."

Unfortunately, how many of our faithful Sisters and Brothers have both held and driven the plow of labor, and yet not thriven.

The outlook for next year's crop on the Grange Farm is not as promising as it should be, in fact one's serious apprehensions are, that it may not even equal the yield of the present year, and while the coming season may be good or bad, wet or dry, early or late, it must be patent to the most obtuse mind that a radical change in various directions in the system of conducting the Grange Farm is an imperative necessity, if the fertility of its soil is to be maintained and its future crops rendered of sufficient profit to justify the expense of its operation.

Systems, like nations, appear, play their parts, engraft their good and their bad upon the world, then disappear, while yet other nations or systems are reared upon their ruins, to dazzle for a time and then be wafted into oblivion, mayhaps leaving like their predecessors some trace of their existence in a ruined mound or a brazen image, which even time cannot annihilate. Such are the edicts of progress, and the various Grange systems are no exception to its laws.

It being the duty of the Overseer to note the requirements of the farm and its laborers, I offer no apology for the following statement, other than a desire to have it distinctly understood that it is not my intention to cast any aspersion, to create any uncomplimentary inference, to censure in any manner either the system, the efforts or intentions of the noble men and women who have sacrificed so much, who have so patriotically and assiduously labored for the best interests of this Order, and in whose companionship and presence I feel deeply honored. I am as ready and willing, to the extent of my humble ability, to both point out and defend the boundless good the Grange has accomplished as any one, and hope to be not misjudged (for saying that which causes me pain) on the ground that our true friends are they who tell us our faults with a view to their correction.

The Grange in this State is not in the condition its most ardent admirers desire, and that, too, notwithstanding our honored Past Masters, Matrons, and Officers unselfishly gave it their best thoughts and efforts; notwithstanding its Executive Committee are shrewd, far-seeing, business men; notwithstanding that our brilliant, eloquent and indefatigable Master has placed it on so lofty and intellectual a pinnacle.

There are thousands of earnest men and women (possessing their full share of the frailties of humanity) who have not received at the hands of the Grange what they expected, who are really disappointed, hence lapsed as members, or are lukewarm in its support.

There must be a reason for this, and we need not look far to discover its solution. The Grange promised much. In proof of the fact that its promises would be fulfilled, and that fulfillment beneficial to its votaries, I need only tell you that this State Grange increased its membership in a single year from a trifle over 3,000 to nearly 17,700 members. Many thousands of these were disappointed, as their absence here-to-day too plainly proves, and that, too, while there in highest heaven gleamed the Beacon Light of our incomparable Declaration of Purposes, that truest declaration of independence ever made, that "Bible of the rights of man." And, thank God, in this instance of womanhood. There it stood, its effulgent rays scintillating like purest diamonds that they were, ready, willing and anxious to fulfill every obligation, to redeem every pledge, to honor every promise, and through its co-operative laws, its fraternal bonds, its undying truth, to give that for which the world has suffered, that for which patriots have shed their best blood, that for which martyrs have suffered the torments of the damned—perfect equality, liberty of thought and action, and a sound business system—which, while boldly demanding justice for self, as sincerely accords it to another. With such possibilities to recommend it, the wonder is that it had not outstripped both Church and State in conservation of power; but when the plain question of why it has not is submitted, the answer is easiest given by asking another question: Have we been true to its laws and edicts? Have we faithfully supported its mighty arms of co-operation? Have we loyally supported its lofty head of progress? Have we bravely and staunchly supported its corner-stone of character, the elevation and consequent perfection of manhood and womanhood? Have we unified and warmed our hearts and lives at its quenchless fires of fraternal love and confidence? Have we even kept it abreast of the times? Let he who can answer.

But enough of the past. Let us to the future. The panacea for present ills is what is needed, and though fully aware that conceit is a more fatal disease than consumption, I respectfully recommend, at least as palliatives, the following suggestions:

The first imperative need is an "Official Organ," wholly under the control of the State Grange. It should be cheap, clean, resolute, progressive, aggressive if needful; a direct and easy means of communication between all Subordinate Granges, and published at a price as near cost as possible.

Second, there should be sent forth a series of tracts, monthly visitors, to at least every rural home, each series aiming at a direct and specific purpose. They should be truthful, inviting, convincing.

While our past experience with independent newspapers

has not been blissful, for reasons obvious to all who care to know, I yet believe that a safe venture in that direction would be of incalculable good to the order.

Third, I believe it to be the part of wisdom, and one of the necessary adjuncts to the successful existence of the Order here, that a suitable tract of land be purchased in some centrally located, accessible part of the State, and be set apart as park, picnic ground and Grange Headquarters; a trysting place, a rendezvous, a bivouac for every soldier of agriculture. Here should be held State, inter-State, county and other picnics, Grange fairs, Chautauques, etc.; here also should be discussed at stated times, public questions of interest to the Grange, the State and the Nation, and invitations be extended to all holding different opinions on any proposed subject to express them. Such meetings would redound to the credit of the Order and the good of all.

Fourth, the Grange should supply the want filled by an organization in San Francisco, which for a membership fee of \$12.00 gives advice to farmers as to the best points to ship their produce; to whom they can sell at the best price; what houses are reliable and what not; see that shipments are properly weighed and handled, and correct returns made for same. This feature could be made both useful and profitable.

Fifth, Another factor of great weight could be secured through co-operation of the State Grange with the "Coast Weather Bureau," whereby daily weather signals could be given to nearly, if not quite all farmers. While the value of this might not fully appear at present, it could be eventually woven into a beautiful system of scarcely now conceived importance.

Sixth, Another great need in rural homes which the Grange could supply, is domestic help. We could co-operate with the various State Granges and through them receive reliable help, at as low if not lower wages than that now paid for a majority of help that is only such in name.

These proposed lines of effort are not to be in lieu of the great accomplishments the Grange is achieving, but as a majority of mankind are not possessed of an appreciative eye for stars, comets, rainbows, and poetry, and as a vast majority are possessed of the qualities which recognize the full worth of the "Almighty Dollar," they are offered in the hope that a closer blending of the practical and necessary with the artistic and beautiful, shall effectively estop the selfish and mistaken claims of many, that they receive no material aid for the time and money expended in sustaining the Grange, either Subordinate, State or National.

I am fully aware that I will be met with the remark, "It takes money" to carry out these plans, to which I reply, it also takes money to make money, and if a few hundred dollars, or as many thousand, were expended in the prosecution of these plans, or some better ones (which I sincerely hope will be presented by some of the able members of the Order), thereby increasing our membership ten thousand within a year (an achievement not beyond reasonable possibilities), we believe it would be a paying investment.

CONCLUSION.—To you, Worthy Master, for your kindly consideration, forbearance, and many courtesies, I acknowledge myself profoundly indebted. To you, Worthy Past Masters and Matrons, whose deathless examples have been my hope and guide, I am sincerely grateful. Of you, Worthy Officers, I am proud of the distinction of having been numbered among such pillars of progress, such true men and women. To you, Sisters and Brothers, for your loyal support, I return my heartfelt thanks. And now, with envy towards none, with respect for all, with love for many, I surrender into your worthy hands the high and honorable trust so confidently placed in my keeping, with no scar upon its fair face, with no blot upon its record. May your mantle of authority fall upon a more worthy Overseer; may the affairs of this noble Order of "peace and good will" extend to the farthest verge of our beloved nation, and may its stars of hope entwining bonds of friendship encircle the earth and weld the chain of affection which binds the present to the future. All of which is respectfully submitted.

A. P. ROACHE, Overseer.
Watsonville, Santa Cruz County, Cal., Aug. 31, 1893.

HAMILTON FRUIT GRADER.

(PATENTED MAY 13, 1890.)

FOR SEPARATING AND ASSORTING IN DIFFERENT GRADES BOTH GREEN AND DRIED FRUITS.

It is Simple, Durable and Efficient.

It has become the leading Fruit Grader of California. Col. Hersey has ordered three of these Fruit Graders this season. Send for catalogue and testimonials.

—A VARIETY OF—

Fruit Cars, Transfer Cars, Turntables and Dipping Baskets
ALWAYS ON HAND.

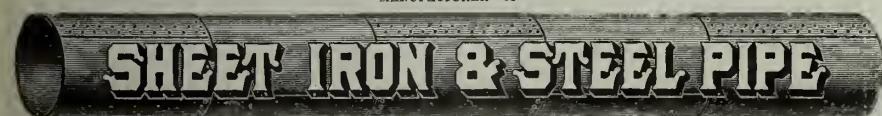
MANUFACTURED AND FOR SALE BY

W. C. HAMILTON,

SAN JOSE, CALIFORNIA.

FRANCIS SMITH & CO.,

MANUFACTURER OF



SHEET IRON & STEEL PIPE

FOR TOWN WATER WORKS.

Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes.

NO. 130 BEALE STREET, SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.

GRANGERS' BUSINESS ASSOCIATION, SHIPPING AND COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.

Full Cargoes of Wheat furnished Shippers at short Notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

A. M. BELT, Assistant Manager.



ONLY 25 YEARS OLD
AND A GIANT!

THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.

DEWEY & CO. { 220 MARKET ST., S. F. } PATENT AGENTS.
Elevator, 12 Front.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

Oroville Register: On a hill above Forbes town this week we saw a fig tree in bearing. At the altitude of the town is nearly 3000 feet, it gives one an idea of the vast territory in this county over which the fig can be grown.

Palermo Progress: Dried peaches from orchards under the supervision of the Palermo Land and Water Company have been shipped, sold, and returns received, at fair prices. Although there has been a slight advance in the market since they were sold, still the figures realized were large, as the peaches were shipped and marketed before their usual shrinkage.

Oroville Register: H. P. Morrison brought ne down from Cherokee this week a leaf of a tobacco plant grown by Mr. Cheshire of that locality. The plants average four and a half feet high, and this leaf was 18 inches broad by 28 inches long. Mr. Morrison said this was about the average size of the plants. Mr. Cheshire has about 300 of the tobacco plants this season, which is the first he has ever grown in the county.

Fresno.

Republican: C. Goodell, of the Wheatvale district, brought in some samples of excellent peaches and pears from three-year-old trees grown on his ranch, 30 miles southwest of the city. This fruit is grown on unirrigated land and cannot be excelled for flavor, and is entirely devoid of the watery character which renders much fruit inept. The land is a clay loam subsoil, overlaid with vegetable mold, and when it shall have been brought under irrigation, bide fair to eclipse portions of the county now famous for producing fine fruit.

Fresno Exporter: The demand for raisin trays continues. Vineyardists find themselves short on trays and long on grapes. Many expedients are resorted to to supply the deficit. Old newspapers are used, and the use of straw is suggested as making a good bed on which the grapes may be spread. When dry the raisins can be lifted with a pitchfork and dropped into the sweat-box. The stemmer will take out any straw lifted with the fruit.

Kings.

Grangeville notes in Hanford Sentinel: We were informed that a certain lady who owns a vineyard less than ten miles from this place sold all of her layer and cluster raisins to the retail trade of San Francisco last year. She received 25 cents per pound. None but the best goods were put in the boxes. The dealers did not want any fancy paper or pictures, but they did want the best goods and lots of nice white paper. This lady has got more business ability than a carload of men, as men go.

Lake.

Lower Lake Bulletin: The almond crop of D. M. Haneon's orchard is now being gathered. For a young orchard the crop is unusually large, some trees yielding upward of 20 pounds. These nuts will be shipped to San Francisco, where they are quoted at 15 to 17 cents per pound. This will be the first shipment of that character ever made from Lake county. Mr. H. now has 1400 trees.

Napa.

Star: A vineyardist near Oakville is reported to have sold his wine to a Napa merchant a few days ago for 14 cents, to be delivered in that place.

Star: Grape-picking has been progressing in many vineyards this week among the early varieties, but will not be in full blast until Monday. The vintage will then be on, the wineries running and everybody busy.

St. Helena Star: Louie Risley brought to our office a sample of string beans grown on Castner's place, which he is selling, that measured 28 inches in length. In previous issues we have referred to a 38-pound watermelon, a 4½-pound tomato, peaches measuring 10 inches in circumference, and an apple weighing 21 ounces. We have also had fine large hops on exhibition in our office, and for variety now have two sunflowers, the largest measuring 34 inches in circumference.

Los Angeles.

Pomona Progress: The quantity of prunes grown in the Pomona valley this year is closely estimated at 1900 tons. One or two fruit-buyers say the crop is nearer 2200 tons. The reports of the fruit-driers in this place to this date show that about 900 tons of prunes have been handled. There are five large fruit-drying establishments here.

Orange.

Gazette: The next beet payment, to be made our farmers on the 15th prox., will amount, according to Mr. Hamilton, secretary of the Chino refinery, to \$17,000, making \$30,000 so far this season. After that will come the final payment, which will probably be \$15,000, making a total of \$45,000 for the season's crop. The beet men have made money this year.

Anaheim Gazette: Mr. E. A. Sparks' sugar beets, brought into the warehouse last Saturday, go a trifle over the world-beating qualities of Mr. Loomis' products. Mr. Sparks' beets polarized 24.5 per cent of saccharine and the coefficient of purity was 95 per cent. He hauled in two loads, weighing 12,515 pounds, and the check received for them calls for \$43.20. Twenty dollars a load for beets is not had. Mr. Loomis' beets polarized 23.9, so it will be seen that Mr. Sparks' beets are entitled to the medal.

Gazette: A hay-baling contest took place last Monday between the Dunn boys' Kanasee lightning baler and Charley Norman's derrick

baler. The contest was a ten-hours' run and took place in the hay fields west of Stevens' place below town. Each gang worked to win, and at the close of the day's work it was found that the Dunn boys had come off victorious, with a total of 21 tons and 680 pounds baled, to Norman's 20 tons and 175 pounds. The Dunn boys thus demonstrated their baler's superiority, but it was always a hard matter to get away with them.

Riverside.

San Jacinto Register: If you don't know beans when you see them, call at this office and see string beans that are string beans. They are 10½ inches long and 1½ inches through. They were raised by J. G. Reinhardt.

Riverside Press: Shippers of honey complain that the product is coming in pretty slowly just now. The foreign demand is not as great as usual at this time of the year, and prices continue pretty low—four and four and one-half cents per pound.

Riveride Press: F. P. Hosp has shown us a new vegetable which he thinks will prove a substitute for the cranberry. He received the seed from Siam, and has tested it the second season. It is an annual of the hibiscus family, grows about three feet high and keeps producing new seed pods until frost comes. "Jamaica sorrell" is the common name for the plant, and it is claimed to be excellent for jellies.

San Jacinto Register: Several days ago there arrived from Siseon, northern California, in San Jacinto 10,000 trout for Strawberry creek and 20,000 for the Hemet dam. The entire lot consigned to the dam had died on the road and one-half of the Strawberry lot. The trout were about an inch in length. In two years they will weigh two or three pounds each and make fine sport for the camper who visit at Strawberry valley for the summer.

San Bernardino.

Chino Champion: Mr. Gird now has some 700 head of cattle in his yard and pastures fattening on beet pulp. The results from the use of pulp for feed seem to be giving even better satisfaction this year than before. The cattle eat it with a relish from the first, and are taking on flesh wonderfully fast.

Santa Barbara.

The Independent reports the following observations from an extended trip through the valley: Lima beans show a falling off in yield as compared with our first estimates. The cause is learned to be the result of a second growth on the stocks, thereby reducing the strength in the pods and preventing a filling of the same. While the crop will be a fairly good one, the output will fall below the crop of 1891, but larger than that of 1892. Other varieties of beans are thrashing out well and promise good weight and quality. Liberal shipments of small white are now moving by rail to the East. The walnut crop in Santa Barbara county promises a fair yield and of fine quality. While the general average will be less than last year, the quality is better. Prices are low, but compare favorably with other products. Prunes are averaging well, and make a better article when dried than in former seasons.

Santa Cruz.

Pajaronian: The Salinas valley has sent in nearly 6000 tons of beets to the factory to date. The Salinas beets are showing a high percentage of sugar—running from 15 to 19 per cent—and are yielding from 15 to 20 tons per acre.

Santa Cruz Sentinel: J. S. Yonng, whose orchard is in Rodeo gulch, sends a carload of apples to Denver. The fruit gathered in the Young orchard stands at the top of the market of the Pacific Coast. His apples are large, highly colored and of superior flavor.

Pajaronian: Up to date the beet factory has run out nearly 600 tons of sugar. There was some delay at the opening of the campaign, but the sugar output is now satisfactory in every way. The standard of the sugar has been running from 92 to 94—a very good showing.

Pajaronian: Over 10,000 tons of beets were delivered at the factory in the first two weeks of the campaign ending Saturday night, Sept. 23d, and over 2000 tons have been delivered this week. The September delivery is expected to reach 15,000 tons—meaning a payment of \$75,000 on Oct. 16th.

Sonoma.

Cloverdale Reville: The hop crop of this county this season is estimated at 10,000 or 11,000 bales as against \$400 for last season. Sonoma will take her rank this year as the second hop county of the State, Sacramento coming first with a yield of about 14,000 bales.

Democrat: Hunt Bros. & Co.'s cannery closed down Wednesday afternoon, Sept. 27th, for the season. Though the quantity of fruit handled was only about half that of last year, considering all things the company says it has been a successful run. Orders for fruit have been received in sufficient numbers to indicate an improved market, and no trouble is anticipated in the way of winding up the season's pack. About 1000 tons of fruit have been handled, and over \$7000 were paid out for labor.

Republican: Deputy Collector of Internal Revenue W. S. Davis has returned from the northern part of the county, where he was called upon official business. He says the grape crop in that part of the county is backward, and that the crop is light in many places. The rains damaged the grapes pretty badly, especially the Zinfandels. He was at the wineries of the Cloverdale Wine Company, Walden & Co., and F. Alberte, and he also visited the must-condenser at Healdsburg. Walden & Co. expect to crush 2000 tons of grapes and make 100,000 gallons of brandy. Grapes are bringing \$6 to \$9 per ton, which does not make a very flattering prospect for the vineyardists. Mr.

Davis tells of a man in that part of the county who had splendid success with his prune crop. He had two acres from which he gathered 30 tons. These he sold green for \$20 per ton. Six hundred dollars from two acres of land is certainly a pretty healthy return, he thinks.

Sutter.

Farmer: Shipments of green fruit from this locality continue, but the output is not so heavy as a few weeks ago. Growers are realizing about one cent per pound for the peaches. Plums are bringing high prices, and grapes doing exceedingly well. The weather being cooler the fruit carries well and arrives in good condition.

Tehama.

The Corning Observer says: "The shipment of green fruits from Red Bluff to the East have been a failure, while others made large returns. The failures occurred with those who shipped themselves, and those who had good returns shipped through J. T. McMurty, for Barnett Bros. Trying to be growers and speculators is what has ruined farmers, and fruit-growers who try the same plan will always lose." There seems to be something wrong in the way the Tehama people have gone about it. In Sutter county, in Riverside county, in Los Angeles county and, most notably of all, in Santa Clara county, the fruit-growers have accomplished great things by being their own shippers. If the Tehama men will learn the Santa Clara method and follow it, they will compel the *Observer* to change its philosophy.

Corning Observer: To-day (Saturday) will be shipped the first whole carload of grapes from the Aitken vineyard. During the week about twenty Chinamen and several whites have been picking and drying the grapes. A dollar a day and board was offered to white men to enter the vineyard, but several preferred to remain idle than work. The grapes have been shipped by J. T. McMurty of Sacramento for Barnett Bros. of Los Angeles. Four years ago there were neither grape vines nor fruit trees planted around Corning, except a few in house lots; to-day several carloads could be filled with grapes and fruits, if the growers worked together in an organization. This being Corning's first year, much of that could not be expected; but as grapes and fruit will be many times greater next, if the crop is fair, an organization will be formed to pick and ship the fruit.

Tulare.

Porterville Enterprise: Deer are reported to be plentiful this season. One party, it is said, killed thirteen in twenty minutes. We will here state that it is against the law to kill deer at any time.

Citizen: T. W. Maples' thrashing outfit finished the season Friday and came in town presenting a novel appearance. The large traction engine was drawing the separator, derrick, seed-cleaner, water wagon and feed wagon. The machine has averaged over 1000 sacks per day for the season.

Times: Charles Thompson finds the codlin moth much worse in his apple orchard this year than for some time. He attributes this to the fact that he did not allow his hogs to run in the orchard last year and eat up all the windfalls. He believes if this were done every year that the moth would be deprived of any suitable place to lay eggs for the next season and thus leave the following crop.

Times: Josiah Gregg of Vialia moved his bees, consisting of 213 stands, to the vicinity of the lake last summer. He sold 40 stands and had 88 stands stolen. He removed the remaining 85 stands to a point six miles west of Tipton last spring, where they have been doing nicely during the summer. He will have about five times as much honey this season as he had last and it is of the finest quality.

Yolo.

Grafton cor. Mail: The market hunters are getting ready for a slaughter of the innocents on Oct. 1st, when it will be lawful to sell wild ducks in the San Francisco market. The funny thing about it is that they can kill ducks here prior to that time. All that is necessary is that they shall not be exposed for sale in San Francisco until the morning of the first instant.

Ventura.

Ventura Democrat: G. Kaltmeyer, whose farm lies a few miles east of town, reports that from a field of 26 acres he thrashed 1049 sacks of barley. These weigh nearly 114 pounds, making the yield per acre about 4500 pounds. We believe this is the highest yield of the year.

PERSONAL.

If CAPT. ISAAC P. SNOW, formerly in my employ, will send his address he will hear of news to his advantage. ROLLIN P. Saxe, St. Elmo Hotel, Los Angeles, California.

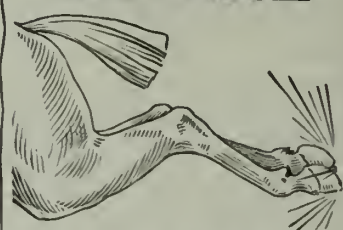
\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California street San Francisco.

Hay Pressing.

If you are interested in pressing hay write Truman, Hooker & Co., San Francisco. They will save you money.

DON'T BLAME



A HORSE FOR KICKING

or for eating more than his share if you don't keep him warm. Two or three dollars invested in a good blanket will save you many dollars in feed, and your horse will look better and do better. This is the mark by which you can distinguish the good from the bad in blankets.

5/A Blankets are made in 250 styles to suit every horse, every purpose, and every purse.

Made only by

WM. AYRES & SONS, Philadelphia.



C. H. EVANS & CO.,

(Successors to THOMSON & EVANS.)

110 and 112 Beale Street, S. F.
MACHINE WORKS,
Steam Pumps, Steam Engines
And All Kinds of MACHINERY.



DEEP WELL
PUMPS

WANTED!

\$7500 FOR A TERM OF YEARS ON IMPROVED land, town of Belmont, San Mateo County.

JOHN F. BYRBER,

22 Market St., San Francisco.

Almond Hullers FOR SALE!

—BY—

A. O. RIX, Irvington, Alameda Co., Cal.

TREE WASH.

"Greenbank" Powdered Caustic Soda and Insecticide.

T. W. JACKSON & CO.,

Sole Agents,

No. 5 Market Street, San Francisco, Cal.

MAKE YOUR OWN GAS!

BADLAM BROS.,

519 Market St., San Francisco,

SOLE MANUFACTURERS OF THE CELEBRATED SPARKLESS GAS WORKS. New process, safe and inexpensive, from \$100 upward. Light cheaper than coal oil. Send for catalogue and prices.

With 23 years of experience in the Watch, Jewelry and Diamond Business, I am in a position to supply the public with goods in the above line at the very lowest figures. Shall be pleased to give estimates on anything appertaining to the line, especially American watches. Goods sent C. O. D. with privilege to examine on receipt of forwarding charges.

J. H. PIERSON,

126 Kearny Street, : : : : : San Francisco.

S. H. MARKET REPORT

Market Review.

WEDNESDAY MORNING, Oct. 4, 1893.

The general course of the wheat market during the week has not changed materially from its recent position, except that signs of steadiness have been visible. Transactions have been large at current rates, but there seems to be less disposition among holders to realize. The tonnage situation has not changed for the better. Foreign markets during the week have been inactive and the tendency has been downward.

Berbohm's Corn Trade List has recently published a summary of the wheat supplies of the world for the ensuing year. The conclusion reached is that the exporting countries will apparently have an exportable surplus of 45,000,000 quarter tons, including grain from previous reserves and the new crop, while the indicated requirements of importing countries aggregate 50,250,000 quarters—or an excess of 42,000,000 bushels in requirements over supply. It is observed that "it must be confessed that with the present abundant supplies there are no signs of any such prospective deficiency of 5,250,000 quarters (42,000,000 bushels) as is here shown," and that "it is, of course, possible that the American official estimates are once more at fault."

In the calculation the United States crop is estimated at 470,000,000 bushels, and the exportable surplus, including previous supplies, 110,000,000 bushels. In view of the very large exports of wheat it will be some time before the actual deficiency in supply is apparent; and it is likely also that these abundant present supplies will have to be measurably cleared up before values advance in accordance with the actual state of things.

The Cincinnati *Trade Current* of September 28th reports that "there have been additional rains in the wheat-growing regions of the West the past week, which have favored wheat-seeding operations, and promoted growth where already sown. The general position is considerably more encouraging. The acreage of autumn-sown wheat now promises to show less deficiency than has been apprehended, although it is plain that there will be curtailment. In many instances the low price of wheat has had an influence in discouraging seeding or this grain, but this is quite a questionable course to adopt, for it is not at all improbable that values of wheat on the next crop may compare favorably with prices of other leading products."

"Wheat marketing in winter-grain regions appears to have been somewhat lessened, and is of very moderate volume. This is due partly to anticipation of better prices, and partly to the fact that wheat-seeding and corn-cutting operations have been occupying the time of farmers recently."

The following tables show the range of the Eastern, European and local markets:

LIVERPOOL.									
Thursday	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d
Friday	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d
Saturday	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d
Monday	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d
Tuesday	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d	50s 1/2d

To-day's cablegram is as follows:
LIVERPOOL, Oct. 4.—Wheat—Cheaper to sell. California spot lots, 8s 1/2d; off coast, 28s 1/2d; just shipped, 28s 1/2d; nearly due, 28s 1/2d; cargoes off coast, slow and probably cheaper; on passage, weaker; Mark Lane wheat, quiet but steady; French country markets, quiet but steady; wheat in Paris, quiet; flour, rather easier.

NEW YORK.									
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Thursday	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2
Friday	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2
Saturday	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2
Monday	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2
Tuesday	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2	72 1/2

The following is to-day's telegram—per bushel:
NEW YORK, Oct. 4.—October, 74 1/2; December, 73 1/2; May, 80 1/2.

CHICAGO.									
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Thursday	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2
Friday	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2
Saturday	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2
Monday	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2
Tuesday	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2	66 1/2

The following is to-day's telegram—per bushel:
CHICAGO, Oct. 4.—October, 64 1/2; December, 68; May, 73 1/2.

SAN FRANCISCO.									
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Thursday	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2
Friday	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2
Saturday	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2
Monday	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2
Tuesday	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2

*Storage paid for season.
The following are to-day's recorded sales on Call:
Morning—Informal Session—December, 700 tons, \$1.12 1/2; 1100, \$1.12 1/2.
May—200 tons, \$1.25 1/2 per cbl.
Regular Session—Spot, December's storage paid—100 tons, \$1.08 1/2.
December, 300 tons, \$1.12 1/2; 500, \$1.12 1/2.
May—100, \$1.25 1/2; 300, \$1.25 1/2 per cbl.
Afternoon Session—December—300 tons, \$1.12; 400, \$1.12 1/2.
May—100 tons, \$1.25 1/2; 200, \$1.25 1/2 per cbl.

Grain in San Francisco Warehouses.

G. A. Abel, grain-inspector of the San Francisco Produce Exchange Call Board Association, reports the stock of grain in city warehouses on September 30th as follows:

	June 30	July 31	Aug. 31	Sept. 30
Wheat, tons	5,030	2,584	5,884	9,396
Barley	6,355	11,995	16,181	23,506
Oats	2,515	2,436	1,743	2,029
Corn	2,324	2,205	1,537	1,165

The quantity of wheat in the warehouses at Port Costa on the 30th was 146,151 tons. A partial report from Stockton gives a total of 37,173 tons at that point. At the close of August there was 68,017 tons, and it is likely that it was still larger at the close of the month, as the quantity at Port Costa increased 31,600 tons in September. Allowing for only 60,000 tons at Stockton at the close of September, the quantity in Call Board warehouses was 215,547 tons, against 188,451 tons at the close of August, an increase of 27,096 tons for the month. A year ago the stock in these Call Board warehouses was 186,391 tons, including 129,289 tons at Port Costa and 62,920 tons at Stockton.

Visible Supply of Wheat.

During each week of September the visible supply

of wheat in this country east of the Rocky mountains was reported as follows:

Week ending—	Bushels.
4th	56,882,000
11th	56,140,000
18th	57,331,000
25th	58,693,000

The visible supply increased to 60,533,000 bushels for the week ending the 2d instant.

The highest point reached in August was 59,425,000 bushels.

Barley.

Trade has been dull of late. Brewing is still going forward to New York and England in considerable quantities. Yesterday's receipts were 4320 cbls. The offerings of bright feed have been rather light.

Thursday, highest	New Dec.
lowest	75 1/2
Friday, highest	75 1/2
lowest	74 1/2
Saturday, highest	75 1/2
lowest	74 1/2
Monday, highest	75 1/2
lowest	74 1/2
Tuesday, highest	75 1/2
lowest	74 1/2

The following are to-day's recorded sales on Call:
Informal Session—December, 100 tons, 74 1/2 per cbl.
Regular Session—December, 100 tons, 73 1/2 per cbl.
Afternoon Session—January, 200 tons, 75 1/2.
December, 100 tons, 74 1/2; 200, 73 1/2.
May—100 tons, 84 1/2 per cbl.

Other Cereals, Etc.

Oats and Corn move rather slowly and prices have not varied to any particular extent. Occasional shipments of Beans have been made, but the market cannot be said to be active, and prices have ruled easy. Hay continues firm, yesterday's receipts being only 57 tons. Hops are without any feature of special interest, and the market may be said to be in a waiting attitude. Rye rules slow and weak. Some very large shipments of Mustard were made during the past week.

OATS—Common to fair white feed, 95c @ \$1.05 per cbl; good to choice, \$1.10 @ \$1.15; fancy, \$1.17 1/2 @ \$1.20; Surprise, \$1.20 @ \$1.25; milling, \$1.15 @ \$1.30; black, 90c @ \$1.30; red, 95c @ \$1.05; gray, \$1.05 @ \$1.10.

CORN—Large yellow, 95 @ 97 1/2 c @ cbl; small do, 97 1/2 c; white, 92 1/2 @ 97 1/2 c.

BEANS—Peas, \$2.15 @ \$2.25 per cbl; Pink, \$2.10 @ \$2.20; Bayo, \$1.60 @ \$1.65; Small White, \$2.00 @ \$2.15; large do, \$1.80 @ \$1.90; Butter, nominal; Red, \$2.25 @ \$2.50; Lima, \$2.00 @ \$2.15.

HAY—Wild Oat, \$8.50 @ \$10 per ton; Wheat and Oat, \$10.00 @ \$11.50; Barley, \$7.50 @ \$9.50; Wheat, \$9.50 @ \$12.50; Clover, \$7.00 @ \$9.50; Alfalfa, \$8.00 @ \$10.00; Compressed, \$8 @ \$11.00.

STRAW—Quotable at 35 @ 42 1/2 c per bale.

HOPS—Quotable from 17 @ 20 c per lb for new.

RYE—Quotable at 90 @ 92 1/2 c per cbl.

DRIED PEAS—Largely nominal.

BUCKWHEAT—Nominal.

Mill Products.

There was an advance of 50c per ton for Bran and Middlings during the week, but increased supplies from Oregon give the market an easier tone. Flour has been active at steady prices. The exports in the past week were large. Other mill products have undergone no quotable change in a long time.

BRAN—From \$17.50 @ \$18.50 per ton.

MIDDINGS—From \$20.00 @ \$23.00 per ton.

GROUND BARLEY—From \$17.00 @ \$18.00 per ton.

ROLLED BARLEY—From \$17.00 @ \$18.00 per ton.

CHOPPED FEED—From \$17.50 @ \$18.50 per ton.

FEED CORNMEAL—From \$22 @ \$25.50 per ton.

CRACKED CORN—From \$23 @ \$25.50 per ton.

OILCAKE MEAL—From \$32.50 @ \$35 per ton.

FLOUR—Family Extras, \$3.65 @ \$3.75 per bbl.; Bakers' Extra, \$3.50 @ \$3.60; Shipping Superfine, \$2.60 @ \$2.90.

Vegetables.

Choice Onions are firm. Sweet Potatoes have advanced. Cucumbers and Summer Squash are held higher. Higher prices are also asked for Green Okra. Other articles remain about the same as before.

ONIONS—From 75 @ 95c per cbl.
POTATOES—Early Rose, 30 @ 35c per cbl in sks; Burbanks, 35 @ 40c per river; do Salinas, 65 @ 80c; Garnet Chile, 40 @ 45c; Sweet, 75 @ 85c.

VARIOUS—Green Peas, 1 1/2 @ 2c per lb; String Beans, 1 1/2 @ 2c per lb; Lima do, 2 @ 2 1/2 c; Cucumbers, 25 @ 35c per bx; Pickling do, \$1.25 @ \$1.50 per 100 lbs. for No. 1 and 50 @ 75c for No. 2; Summer Squash, 25 @ 40c; Green Peppers, 25 @ 40c for Bell and 40 @ 50c for Chile; Green Corn, 50 @ 65c for small crates and \$1.25 @ \$1.50 for large; do sks, 50 @ 65c; Tomatoes, 20 @ 35c per box; Garlic, 1 1/2 @ 2c per lb; Green Okra, 50 @ 75c per box; Eggplant, 25 @ 40c.

Fruits and Nuts.

Table Grapes did a little better yesterday, while Wine varieties were weaker. Plums were also doing better. Bartlett Peaches are very scarce, and somewhat higher prices are asked. The Watermelon season is nearly over. There is hardly any sale for common Lemons. Cranberries are plentiful and cheaper.

The Dried Fruit market is in good shape, though Peaches were rather easier. Early shipments of Prunes and Raisins are sought after. New crop Almonds are weaker.

FRESH FRUITS—Strawberries, \$3 @ 6c per chest for Sharpless; Raspberries, \$4 @ 5c; Huckleberries, 2 @ 4c per lb.

Apples, 25 @ 75c per box; Plums, 25 @ 50c per box as to kind; Bartlett Peaches, \$1 @ \$1.50; other Peaches, 35 @ 75c; Peaches, 25 @ 50c.

Grapes—Sweetwater, 25 @ 30c per box; Rose of Peru, 25 @ 40c; Muscat, 25 @ 40c; Malvoise, 20 @ 30c; Malaga, 20 @ 30c; Tokay, 25 @ 40c; Black Hamburg, 20 @ 30c; fancy Isabella, 50 @ 65c per crate; common do, 25 @ 35c per box; Wine, \$12 @ \$14 per ton for Zinfandel and \$10 @ \$12.50 for Native.

Citrus—Common to good California Lemons, \$1.50 @ \$2.50 per box; fancy, Santa Barbara, \$3.50 @ \$4.00; Santa Paula, \$3.50 @ \$4.00. Limes, Mexican, \$3.50 @ \$4; California Oranges, \$1.50 @ \$2.25.

Various—Bananas, \$1.50 @ \$2.50 per bunch. Pine-apples—Mexican, \$3 @ 4c per dc; Honolulu, \$2 @ 3c. CRANBERRIES—From \$7.50 @ \$8.50 per bbl.

DRIED FRUITS—New crop: Bleached Apricots, Royal, 10 @ 11c per lb and 6 @ 7c for sun-dried; bleached Moorpark do, 11 @ 12c; Apples, 3 @ 4c for qrs and 4 @ 5c for sliced; do evaporated, 7 @ 7 1/2 c; Peaches, bleached, 7 @ 8c; do sun-

dried, 5 @ 6c; Pears, 4 1/2 @ 5c for bleached halves; pitted Plums, 5 @ 6c and 3 @ 4c for unpitted; Nectarines, 6 @ 7c for white and 5 @ 6c for red; Figs, pressed, 4 @ 5c; do unpressed, 2 @ 2 1/2 c; do sks, 2 @ 3c; Prunes, 5c for the four sizes.

RAISINS—Fresno combination prices crop of 1893, f. o. b.: Cluster, \$2 per box; 4-crown London layer, \$1.50; 3-crown do, \$1.30; 4-crown, faced loose, \$1.40; unfaced do, \$1.30; 3-crown, faced, \$1.25; unfaced do, \$1.15; 3-crown, stemmed, loose, \$1. Bags—Three-crown, 4c per lb; 2-crown, 3 1/2 c; third grade, 3c; dried grapes, 2 1/2 c; seedless Muscatel, 3 1/2 c; Sultana, 5c. For 50-lb bxs, 1/4 c additional on sack prices.

NUTS—Brazil, 9 @ 10c per lb; almonds (new), 10 @ 11c; Walnuts, California, nominal; do, Chile (new), 9 @ 10c; Pecans, 10 @ 12c; Peanuts, California, 4 1/2 @ 5 1/2 c; do, Virginia, 7 @ 9c; Filberts, 10 1/2 @ 11c; Pinenuts, 12 1/2 @ 15c; Cocoanuts, \$5 @ \$5.50 per 100.

Butter, Cheese and Honey.

The Butter market shows a more pronounced degree of strength, and all fresh grades were higher. Pickled roll is unchanged. Cheese is steady.

BUTTER—Fancy creamery, 32 1/2 @ 33 1/2 c per lb; fancy dairy (rolls and squares), 28 1/2 @ 31c; other grades of fresh, 25c; pickled roll, 20 @ 22c; firkin, 18 @ 20c; creamery, in tubs, 24 @ 26c.

CHEESE—California, 8 @ 10 1/2 c per lb; Young America, 9 @ 11c; New York cream, 13 1/2 @ 14c; western, 12 @ 13c.

HONEY—New: Comb, water white, 8 1/2 @ 10c per lb in 1-lb frames; extracted, 5 1/2 c for water white and 5 @ 5 1/2 c for amber.

BEEWAX—From 22 @ 23 1/2 c per lb.

Poultry, Game and Eggs.

The Poultry market is overstocked and prices are lower. A carload of Eastern was due. The Game season opened on the 1st, but prices so far have been irregular. Eggs are very firm, with a further advance for Eastern.

POULTRY—We quote Californian: Hens, \$5 @ \$6.00 per doz; Roilers, \$2 @ \$2.50 for small and \$3.00 @ \$3.50 for large; Roosters, \$4.00 @ \$5.00 for young and \$5.00 @ \$6.00 for old; Geese, pair, \$1.25 @ 1.75; Ducks, \$4.00 @ \$5.00 per doz; Turkeys, live, 15 @ 17c per lb for Hens and 17 @ 18c for Gobblers; Pigeons, \$1.25 @ \$1.50 per doz.

GAME—Quail, \$1 @ \$1.50 per doz.; Mallard Ducks, \$3 @ \$3.50; Teal, \$1.50; Sprig, \$1.50 @ \$1.75; Widgeon, \$1.25; Small Ducks, \$1.25; Hare, \$1 @ \$1.50; Rabbits, \$1.25 @ \$1.50.

EGGS—California, 22 @ 30c per doz for store and 32 1/2 @ 37 1/2 c for ranch; Eastern, 24 @ 25c; extra, 26 @ 27 1/2 c.

Wool, Hides, Etc.

The receipts of wool yesterday were 317 bales, including 41 from Oregon.

The wool market might be said to have a rather more encouraging tone, but no marked improvement in prices is expected immediately. Hides continue dull and weak. Some shipments of Leather have been made to England on consignment.

WOOL—Prices are quotable as follows: California—Spring, year's fleece, 8 @ 9c per lb; 6 to 8 months, 8 @ 10c; Foothill, 9 @ 12c; Northern, 12 @ 14c; Extra Humboldt and Mendocino, 12 @ 13c. Fall—San Joaquin, plains, 3 @ 4c; do mountain, free, 5 @ 7c. Nevada—Choice and light, 12 @ 14c; heavy, 8 @ 10c. Oregon—Eastern, choice, 13 @ 15c; poor, 7 @ 9c; do Valley, 12 @ 15c.

San Francisco Meat Market.

Choice Beef is scarce and firmer. Mutton is without any particular change.

We quote wholesale prices as follows:

BEEF—No. 1 Steers, 5 @ 5 1/2 c per lb, and occasionally higher for prime; No. 2, 4 1/2 c; No. 3, 4c. VEAL—From 4 1/2 @ 5 1/2 c per lb for large; choice Dairy Calves higher.

MUTTON—From 5 @ 6c per lb for Wethers and 4 1/2 @ 5 1/2 c for Ewes; Lamb, 6 1/2 @ 7 1/2 c.

HOGS—Hard, heavy to medium, 5 1/2 @ 5 5/8 c per lb; Stock, 5 @ 5 1/2 c.

The Dried Fruit Market.

Following is the bulletin of the Santa Clara Fruit Exchange for the current week:

SAN JOSE, Cal., Oct. 4, 1893.

The advantages of co-operation and concentration of product in our valley are sufficiently manifest in the present conditions of the market to merit the approval of those who in its beginning were most skeptical. In fact, many who have not heretofore joined us are now subscribing as stockholders and bringing contributions of their product to help swell the business for the season of 1893. The shipments of dried fruit last week from our valley were nearly 3,000,000 lbs., of which one-fourth went through the warehouse of the Exchange.

Pears are sold from 5 1/2 to 6 1/2 cents. But little as yet has been done in this line. It is thought too early for them to be in active demand. The Exchange has made but one sale and that at 7 1/2 cents. Plums are from 3 to 4 cents unpitted. Pitted from 6 to 7 cents.

Peaches have steadily advanced from the first sales in other parts of the State at 5 cents till now they are in demand at

An Unusual Opportunity.

Every reader of the PACIFIC RURAL PRESS has a photograph of himself or herself or some friend that, reproduced with life-like accuracy and handsomely framed, would be of pleasant value.

The beauty and permanence of crayon portraits commend them to all, but hitherto the high price has deterred many. People naturally dislike to pay from ten to fifteen dollars for even a good portrait.

The PACIFIC RURAL PRESS has made such arrangements that any of its subscribers can secure a handsome crayon portrait for a trifling outlay. The price is set at \$2, and is put at that extraordinarily low figure to subscribers only. It is an unusual offer. The portrait will be gotten up in excellent style, will be 11 inches by 14, will be finely framed, the frame being 24 inches by 27, will have glass, etc., complete. The \$2 also includes boxing and packing—in short, a complete life-like portrait for two dollars, all ready to hang.

Any one sending \$2.40 for 12 mos. in advance or \$3 for 15 mos. in advance for a new subscription for the PACIFIC RURAL PRESS, or, if a subscriber already, either of these amounts for renewal, and two dollars additional, with the photograph they wish enlarged, will receive in return a finely finished portrait in crayon, fit to appear anywhere.

The PACIFIC RURAL PRESS makes no profit in this; it is a gift to our subscribers, present and prospective, and is an unusual opportunity to get a good picture at a nominal cost. This offer holds good for a short time only. Send the photograph you wish enlarged to this office, 220 Market street, giving postoffice directions plainly. The two dollars is for the portrait complete in this city. The freight charges are to be paid by the recipients of the portraits. Where several send from one postoffice address, those charges would be very light. Any size or style photograph will do to send, but of course much of the beauty of the portrait will depend upon the clearness of outline of the photograph from which the crayon portrait is made.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THIS WEEK ENDING SEPT. 12, 1893.
505,017—STOVE SHELVING—F. A. Anthony, Livermore, Cal.
504,850—AMALGAMATING PAN—M. P. Boer, S. F.
534,965—SPRINKLER—Caton & Warring, San Jose, Cal.
504,804—REPRIMERATOR—C. H. Fox, Delano, Cal.
504,978—SASH-HOLDER—J. H. Griswold, Oakland, Cal.
504,922—PUMP—W. A. Hart, Tucson, A. T.
505,044—ILLUMINATING TUBE—H. Hauslein, S. F.
504,924—METALIC TIE—P. H. Jackson, S. F.
504,923—PULLEY BLOCK—C. Matheson, Eureka, Cal.
504,995—SOLE AND HEEL PLATE—J. I. E. Nelson, Cedar Home, Wash.
505,002—ALMOND HULLER—W. G. Read, Colusa, Cal.
504,949—HEADLIGHT COVER—F. A. Stevens, Sacramento, Cal.
504,952—WINDOW SHADE—S. T. Stuver, Puyallup, Wash.
504,985—BUCKLE—F. W. Swartz, Arroyo Grande, Cal.
504,956—FLASHLIGHT CHARGER, ETC.—S. M. Williams, S. F.
505,014—FLASHLIGHT BURNER—S. M. Williams, S. F.
504,956—FLASHLIGHT BURNER—S. M. Williams, S. F.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast Inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Seeds, Plants, Etc.

GOLD DUST.

"Gold Dust Oling," says H. E. Van Deman, U. S. Pomologist, "is a yellow cling of medium size, round and regular in shape, and very firm in flesh. The color is very attractive, being dark yellow with a very red cheek. It bears heavily and carries to market with very little damage. Coming as it does before the main peach crop is gathered, it is about the first yellow cling of any special value and therefore finds a ready sale. Each year it gains in favor, but as it is a variety but recently originated the public know little of it. It is a very profitable variety." Price \$1 each, 35 per half dozen. For sale by SACRAMENTO RIVER NURSERY COMPANY, Growers of HIGH-GRADE Fruit Trees, Walnut Grove, Sacramento County, California. Our Specialties—Genuine Tragedy Prunes, Olyman and Japan Plums—price 15 cents each; Sacramento River Bartlett and Peaches—price 10 cents each.

Pepper's Nurseries.

ESTABLISHED IN 1858.

For Sale at Low Rates, a General Assortment of Hardy Deciduous Fruit Trees.

I do not buy trees to sell; what is offered is grown in my own grounds and free from scale bugs. No scale bugs of any kind to be found in the Nursery. No agents employed. Order direct from the nursery and procure your trees true to label. Order early, as early planting is the most successful with deciduous trees. Prices furnished on application.

Address W. H. PEPPER Petaluma, Cal.

NEW Lincoln Coreless Pear TREES.
Also Japan, Golden Russet, Idaho, Vermont Beauty, and others.
UTS Japan Mammoth, Success, Advance, Chestnuts, Japan, Persian, English, Walnuts, Pecans, etc.
NOVELTIES Elaeagnus Longipes, Trifoliate Orange, Wineberries, Junesberries, etc.
NEW Strawberry, Raspberry, Blackberry, Currant, Gooseberry, PLANTS.
Apple, Pear, Plum, Quince, TREES.
J. S. COLLINS & SON,
Moorsetown, N. J.

Seeds, Plants, Etc.

AN INVITATION

IS EXTENDED TO ALL INTERESTED TO VISIT THE SAUSAL FRUIT FARM DURING THE FRUITING SEASON, WHERE ALL VARIETIES ARE TESTED THAT ARE GROWN AT

NAPA VALLEY NURSERIES

AN INSPECTION OF THE NURSERIES ALSO SOLICITED. CLEAN STOCK, UNIRRIGATED, PROPAGATED FROM BEARING TREES.

LEONARD COATES, NAPA, CAL.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrabalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

OLIVE TREES.

ALL KINDS OF

Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,

Pomona, Cal.

Santa Rosa Nurseries.

AN IMMENSE AND WELL ASSORTED STOCK.

TREES TRUE TO NAME.—Warranted clean and raised without irrigation.

PEARS AND PRUNES at about HALF USUAL PRICES till my surplus is sold.

Price List mailed free.

Address R. W. Bell, Santa Rosa, Cal.

ORANGE, LEMON & CITRON TREES.

If you have a Lemon or Orange grove, or wish to start one, remember that the success of your grove depends on the trees you plant. Common seedlings will give you a poor crop. Remember now that you are in time! If you will get your plants from this island, which, in point of fact, is the real citrus producing region in the world, in the course of time you will have a very profitable grove of the best Sicilian varieties. We only ship trees three years old, budded on the sour stock. Real trees and not common seedlings. Our leading varieties are: ORANGE:—Mountain, Etna, Aderno, Paterno, Blood, Oval and Mandarin. The LEMON:—Messina, Mountain, Etna. The CITRON:—Citrus Medica, Spadafara, Diamante, Peretone, Lemocella, Turk's Head, Lemuziana, Paradise, Etc. The fruit of the above-mentioned varieties is the one largely exported in boxes to the American markets from this island. We have made several successful shipments of plants to California, Florida and Louisiana. Special care in packing. Give us an order for one case containing 100 or 200 assorted trees. Remember that every dollar you lay out on Sicilian trees is a one hundred dollar bill you have gained in future. Apply:

G. SGROI & CO., Catania, Sicily.

OAK LAWN NURSERY.

90,000 First-Class Fruit Trees AT LOWEST PRICES.

MUST BE SOLD. PLEASE WRITE AT ONCE.

HARRY E. HULBERT,
211 THIRD STREET,
SANTA ROSA, - - SONOMA CO., CAL.

STOCKTON NURSERIES,

ESTABLISHED 1853.

FRUIT TREES. FRUIT TREES.

GRAPE VINES.

Also Fine Stock of Shade and Ornamental Trees, Shrubs, Palms, Roses and Carnations.

Correspondence Solicited.

PLANTS IN GREAT VARIETY.

E. C. CLOWES, STOCKTON, CAL.

McKEVITT'S EARLY.

The New Yellow Freestone Peach!

FIRST AND BEST OF EARLY YELLOW PEACHES.

RIPENS IMMEDIATELY AFTER THE ALEXANDER (White Cling), which is the earliest peach in market.

Fruit is round, of medium size, VERY HIGHLY COLORED, flesh firm and sweet. THIS PEACH HAS BEEN SUCCESSFULLY SHIPPED EAST FOR FIVE YEARS and is no new, untied variety.

Tree healthy, strong grower, and heavy bearer, never having missed a crop.

A limited number of yearling trees for sale this season. Apply early before stock is exhausted.

FRANK B. McKEVITT, : : : : : VACAVILLE, CAL.



1828. 55 YEARS. 300 ACRES. 1893.

NEW APPLES, PEARS AND NUTS

Start, the largest early apple. Paragon, and other valuable sorts. Lincoln Coreless, Seneca and Japan Golden Russet Pears in collections at reduced rates. NUTS—Parry's Giant, Pedigree Mammoth, Paragon and other chestnuts. Walnuts—French, Persian, Japan, English and American. Pecans, Almonds and Filberts. Elaeagnus Longipes, Hardy Oranges, Dwarf Rocky Mt. Cherries, free from insects, black knots or other diseases. Small Fruits, Grape Vines, Currants, Etc. SHADE TREES—Immense stock of Poplars and Maples, Ornamental Shrubs and Vines.

ILLUSTRATED DESCRIPTIVE CATALOGUE FREE.

POMONA NURSERIES, WILLIAM PARRY, Parry, New Jersey.

A SUBSTITUTE

Advantages of this Paper for a Drying Surface.

ABSOLUTELY ODORLESS.

WATER, ACID AND ALKALI PROOF.

WILL IMPART NO TASTE NOR ODOR TO FRUIT.

CHEAP AND DURABLE.

ITS BRILLIANT BLACK SURFACE, which absorbs the heat, drying both sides of fruit at the same time, and rendering the labor of turning unnecessary.

E. G. JUDAH, Agent, 221 South Broadway St., Los Angeles.

FOR TRAYS!

Unequaled for

DRYING GRAPES.

Write for

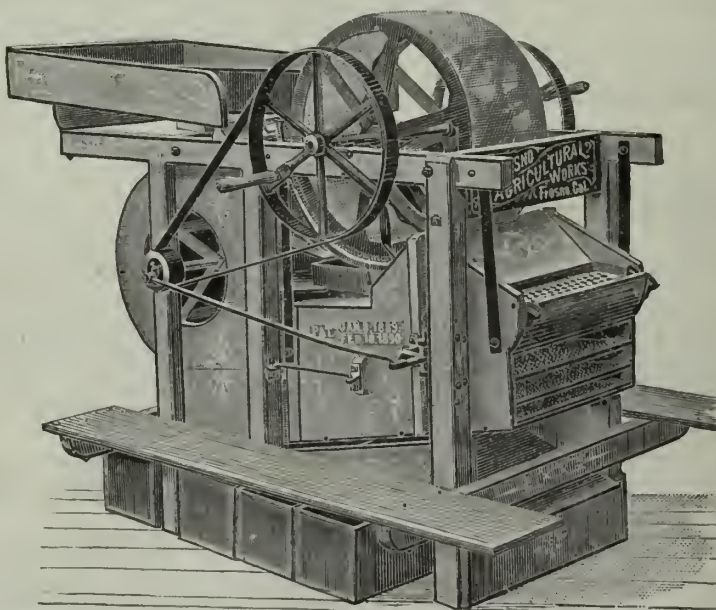
SAMPLES AND CIRCULAR.

Paraffine Paint Co.

116 Battery St.

SAN FRANCISCO.

Los Angeles.



SEND FOR CATALOGUE OF RAISIN MACHINERY TO FRESNO AGRICULTURAL W'K'S, FRESNO, CAL.

Send for Price Lists

OF GUNS

And all Articles used by Hunters and Anglers.



GUNS SENT ON TRIAL.

OLD GUNS TAKEN IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.

DEWEY & CO. { 220 MARKET ST., S. F. } PATENT AGENTS.
Elevator, 12 Front.

California Crops.

[Summary of Report of Observer James A. Barwick, for Week Ending October 2, 1893.]

A brief synopsis deduced from the numerous reports secured by the director of this service, goes to show that, if the present good weather continues a week or ten days longer the grapes will be in such a state of advancement that they will be practically safe from damage. Fruit drying will be nearly or quite finished in another week. The bean harvesting in Monterey, San Luis Obispo and Ventura counties is advancing as rapidly as possible. The yield will scarcely be an average one taken as a whole, while in some portions of Ventura and Santa Barbara counties a full crop will be gathered. The raisin grapes in the Fresno district are curing very slowly on account of the continued cool weather with damp dewey nights. The raisin crop in Yolo county is reported to be the best that has been cured in many years. In southern California the beet harvest is nearly over in some portions of Orange county. The sugar beet factory at Chino has already turned out over 9,000,000 pounds of sugar and the beet farmers are happy and contented with their pockets comparatively full of ready cash. Walnut gathering will soon be in full blast all over the State. The report comes from the fine orchard of soft shell almonds on the Rio Bonito ranch in Butte county will yield its owner 150,000 pounds of first-class merchantable almonds, and worth, delivered on the cars, not less than \$24,000. This is supposed to be one of the finest almond orchards in the State.

Sutter County (Yuba City)—Our farmers generally have commenced the harvesting of buckwheat, beans, potatoes, sweet corn, etc.

Placer County (Newcastle)—Our orchardists have disposed of all their fruit, except grapes, and they will all be gathered in a week or two more.

El Dorado County (Coon Hollow)—The last rain did some damage to both grapes and fruit. Fruit shipment is nearly at an end for this summer, and the farmers are getting ready to gather prunes.

Sacramento County (Galt)—The work of grape-picking and packing is rapidly progressing. (Folsom)—Fruit-shipping is lively. Thousands of pounds of peaches are going to waste in the orchards near town. Wild grapes are plentiful. Hundreds of tons of them ripen every year and go to waste. They make an excellent jelly.

Yolo County (Knights Landing)—Buckwheat-farmers across the river have commenced thrashing their crop. Many thousands of acres of land will be seeded to wheat and barley in this vicinity this season.

Solano County (Dixon)—The farmers are preparing their summer-fallow ready for seeding. The long-continued spell of pleasant weather has been very gratifying to the fruit men as well as to the farmers who have stock to pasture.

Napa County (Napa City)—Cellar men up the valley are this week pretty generally engaged in picking and crushing their grapes. Wine men who paid \$14 and \$15 last year say they will not be warranted in paying as much this season and prices will probably range from \$8 upward.

Sonoma County (Glen Ellen)—Mr. J. Chauvet has thus far purchased 6000 tons of wine grapes. (Petaluma)—The hop crop of this county for this season is estimated at from 10,000 to 11,000 bales. That of last season was 8400 bales. This puts Sonoma next in hop production to Sacramento county, whose production this year is placed at about 14,000 bales. Grape-picking has commenced in several of the vineyards of this county, but the work will not be under full headway before next week.

Santa Clara County (Mountain View)—Grapes are ripening rapidly and the wineries will soon be in full blast.

Fresno County (Selma)—The second crop of grapes is ripening and picking has commenced. The crop is turning out everywhere heavier than was expected.

Kings County—Some of the vineyardists have begun picking their second crop of grapes.

Tulare County (Porterville)—Raisin picking is now at its best. The crop is reported better, both in quality and quantity, than was supposed earlier in the season. (Grangeville)—The Lucerne vineyard has considerable more raisins than they expected, and will start to pack about the first of October.

San Benito County (San Juan)—The farmers are busy hauling their grain, the last of which was thrashed on Sunday and the yield has been exceptionally good.

Monterey County (Pajaro)—There is an active demand for beet tops for cattle feed.

WANTED—Thrashing Engine, Barley Roller and Irrigating Pump. Give full particulars. Address T. Butler, Box 45, Oronole Office, S. F.

Breeder's Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

JERSEYS AND HOLSTEINS, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. William Niles & Co., Los Angeles, Cal., Breeders and Exporters. Established in 1876.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER Saxe & Son, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS—The best A. J. C. C. Registered Prize Herd is owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

THOROUGHbred SPRING CHICKS, S. C. White & Buff Leghorns, Black Spanish, S. C. & White Wyandottes, Game Bantams, Mam. Bronze & White Hol. Turkeys. Theo. Cushing, Spokane, Washington.

WM. NILES & CO., Los Angeles, Cal., Breeders of nearly all varieties of Poultry, Dairy Cattle and Hogs.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

R. H. CRANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

SWINE.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, new Prices.

OHAS. A. STOWE, Stockton, Cal., (Box 283). Breeder of Berkshire and Poland-China Hogs; Milking Strain of Durham Cattle, and M. E. Turkeys. Write for Prices.

BERKSHIRES & POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. William Niles & Co., Los Angeles, Cal. Established 1876.

J. E. ALSFORD, Woodside, San Mateo Co. Breeder of Berkshire Hogs and Toulouse Geese.

P. H. MURPHY, Perkins, Sao. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.



OXFORD DOWN SHEEP FOR THE PACIFIC COAST.

W. A. SHAFOR, Middletown, Ohio, Largest American Importer of O. D. Sheep.

Is prepared to quote prices on the best stock of Oxford Down Sheep to be had in England. Parties wanting first-class stock should write for particulars and induce their neighbors to join them. Import will arrive about August 1st. Write at once.

FRANK A. BRUSH, SANTA ROSA, CAL. (Care Santa Rosa National Bank.)

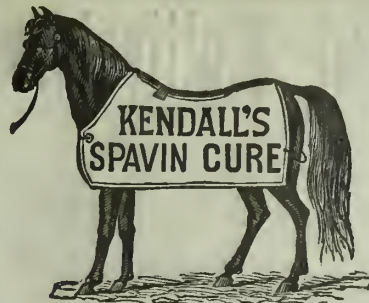
Wants you all to write to him for prices on Young Stock.

MINORCANS: White and Black.

LEGHORNS: White, Brown, Black, Buff.

B. F. ROCKS.

Mention the age desired and when shipped. Circular Free.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STAR, LANE CO., OREGON, Feb. 8th, 1892.

DR. B. J. KENDALL CO.

Dear Sirs:—I have used your KENDALL'S SPAVIN CURE for the last twelve years never being without it but a few weeks in that time and I have made several wonderful cures with it. I cured a Curb of long standing. Then I had a four year old colt badly spavined; tried every thing without any benefit, so I tried your liniment, and in a few weeks he was well and his shoulder filled up all right, and the other, a four year old that had a Thoroughpin and Blood Spavin on the same joint, and to-day no one can tell which leg it was on. These statements can be proven, if necessary; the four year olds are now seven and can be seen any day at Cottage Grove, Or.

—Prices \$1.00 per bottle.—

DR. B. J. KENDALL CO.

Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular.

E. FOUGERA & CO.

30 North William Street, New York.

STOCK SCALES

4 TON \$45.

U.S. STANDARD. FULLY WARRANTED.

Delivered at your R. R. Station and ample time for building and testing allowed before acceptance.

OSGOOD & THOMPSON, Binghamton, N. Y.

PORTABLE PLATFORM SCALES, TRUCKS, ETC.

Twenty-five per cent cheaper than any other on the market. Send for Catalogue.

C. H. LINDEMANN, Agent,

126 KEARNY STREET, SAN FRANCISCO.



In These Dull Times

You Can Largely Increase

Your income by buying an incubator and engaging in the chicken business. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember, the best is the cheapest. **PACIFIC INCUBATOR CO.** 1317 Castro St., Oakland, Cal.

ROOFING

GUM ELASTIC ROOFING FELT costs only \$2 per 100 square feet. Makes a good roof for years, and any one can put it on.

GUM ELASTIC PAINT costs only 60 cents per gal. in bbl. lots or \$4.50 for 5 gal. tubs. Color red. Will stop leaks in tin or iron roofs that will last for years. TRY IT.

Gum Elastic Roofing Co.,

39 & 41 West Broadway, NEW YORK.

Local Agents Wanted.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.



THE HALSTED INCUBATOR

COMPANY.

1312 Myrtle Street, Oakland, Cal.

Send Stamp for Circular.

BACK FILES of the PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes) \$4. Inserted in Dewey's patent binder 50 cents additional per volume.

Commission Merchants.

ALLISON, GRAY & CO.,

501, 503, 505, 507 & 509 Front St.,
And 300 Washington Street, SAN FRANCISCO.

—GENERAL—

Commission - Merchants,

GREEN and DRIED FRUITS,

Poultry, Eggs, Game, Grain, Produce and

Wool.

P. STEINHAGEN & CO.



404 & 406 DAVIS ST. S.F.

MOORE, FERGUSON & CO.

WOOL, GRAIN, FLOUR

—AND—

General Commission Merchants,

310 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

LINDSAY & CRAIG,

Crocker Building.....San Francisco.

Mortgages Bought, Loans Negotiated.

Several buyers on hand for desirable Fruit and Grain Ranches.

GRANGERS' BANK

OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874.



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 800,000
Dividends paid to Stockholders.... 720,000

OFFICERS.

A. D. LOGAN.....President
I. O. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK MCMULLEN.....Secretary

General Banking. Deposits received, Gold and Silver.
Bills of Exchange bought and sold.
Loans on wheat and country produce a specialty.
January 1, 1893. A. MONTPELLIER, Manager.

EVERY FARMER can now **DO HIS OWN THRESHING**, with less help and power than ever before. Send for free literature. Catalogue.

THE COLUMBIA something new.

A Small THRESHING MACHINE of great capacity for Light Power.

We make a full line of Horse Power.

BELLE CITY MFG. CO., Racine, Wis.

THE American Bee Journal,

(Established 1861.)
Is Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample.

\$1.00 BEE-BOOK FREE

W. W. YORK & CO. 14 Fifth Ave., Chicago Ill.

California Inventors

Should consult **DEWEY & CO.** AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists and large practice as Patent attorneys enables them to offer Pacific Coast Inventors far better service than they can obtain elsewhere. Send for free circulars of information. No 220 Market St., San Francisco Cal.

Gorham Seeders and Cultivators.



THE GORHAM SAVES ITS PRICE, IN SEED, IN ONE YEAR.
INSURES A CROP IN A DRY SEASON.

	Without Cultivator.	With Cultivator.
8-ft., 14 Shovels, will seed 15 acres per day.....	\$ 93.75	\$125 00
10 " 18 " " " 25 " "	105.00	140.00
12 " 22 " " " 34 " "	120.00	160.00
14 " 26 " " " 40 " "	131.25	175.00

THE GORHAM SEEDER sows perfectly all kinds of grain, Alfalfa, Flax and other small seeds from the same box. It has stood the most severe tests of time and use, and is now the standard Seeder of the Pacific Coast.

It may be seen by the cut that the Cultivator may be raised in sections, thus avoiding the necessity of a very heavy lift, as when all the Teeth are raised at once.

The Cultivators can almost instantly be detached if occasion requires.

Write for our No. 27 Latest Catalogue of Plows, Harrows and Seeders.

BAKER & HAMILTON,
SAN FRANCISCO AND SACRAMENTO.

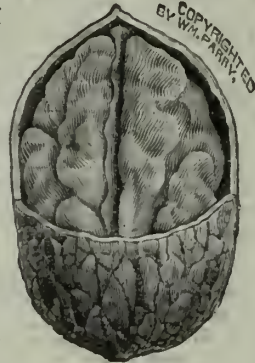
WE GIVE ESPECIAL ATTENTION TO

Fruit Trees! Deciduous Fruit Trees!

ALEXANDER & HAMMON'S
Rio Bonito Nurseries, Biggs, Butte Co., Cal.

KAGHAZI

:- SOFT SHELL :-



PERSIAN

:- WALNUT! :-

Our Stock of TREES and VINES is Most Complete
in EVERY CLASS of Fruits.

A LARGE STOCK OF THOMPSON'S SEEDLESS GRAPES.

SHIPPING, CANNING and DRYING Fruits of all Kinds.

Best Assortment of RAISIN and TABLE GRAPES in California.

Early Shipping Plums a Specialty.

SPECIAL PRICES FOR TREES IN LARGE QUANTITIES.

DURING the last three years, trees grown on the FEATHER RIVER BOTTOM LANDS, at RIO BONITO, BUTTE COUNTY, have been much sought after, and the demand for them is increasing all over the State where they have been planted. Owing to the peculiar adaptability of the soil and climate of this section for growing nursery stock, the trees making a very large and well-furnished system of root growth, and maintaining a correspondingly strong and vigorous top, maturing the wood thoroughly, we are enabled to supply our patrons with the best of trees, healthy in every respect, entirely free from insect pests, and in perfect condition for transplanting.

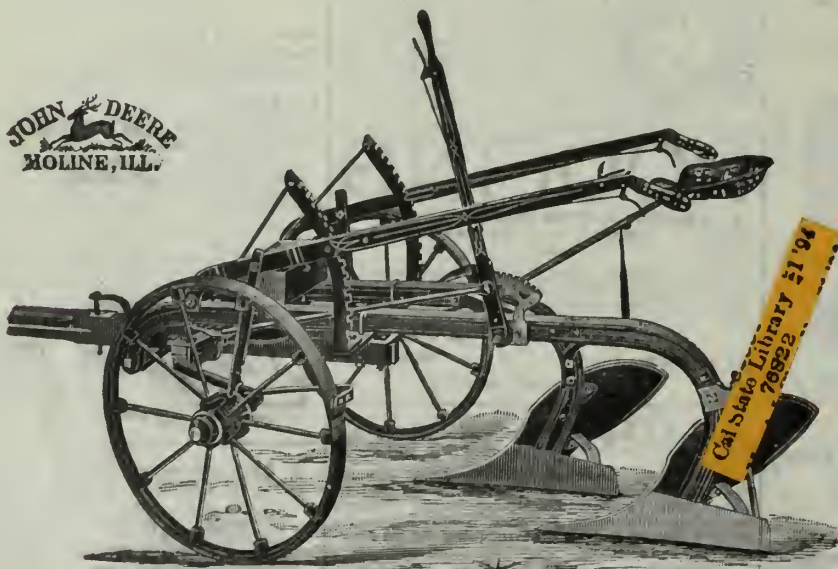
If You Are Going To Plant Trees, It Will Pay You To Correspond With Us Before Purchasing.

ALEXANDER & HAMMON,
BIGGS, BUTTE COUNTY, CALIFORNIA.

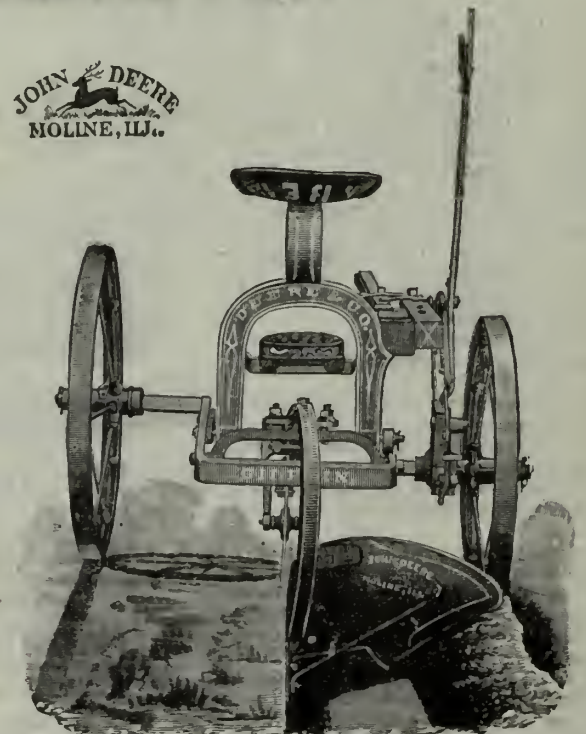
WE LEAD, OTHERS FOLLOW.

THE JOHN DEERE PLOW.

THE BEST ON EARTH!



THE FRISCO GANG PLOW.
(FOR EITHER HILL OR LEVEL LAND.)



THE GILPIN SULKY PLOW.

DEERE IMPLEMENT CO., 305 & 307 Market St., San Francisco.



Vol. XLVI. No. 16.

SAN FRANCISCO, SATURDAY, OCTOBER 14, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market Street.

Climbing Roses in California.

Climbing roses stand high among the added horticultural charms of California. The term high is also just as applicable to the growth as to its place in the list. The height of our climbing roses seems to be conditioned alone upon the attitude of their supports, for they mount to the roofs of tall houses or to the summits of tall trees and wave their arms on high as if in the hope of catching some loftier support. They manifest the fullest confidence in the California climate and throw out fresh growth after the autumn rains, having learned by experience that the softest rose shoot is safe in the lowest December and January temperatures, and that the California winter is the opening of their blooming season.

Climbing roses were among the floral argonauts. They came across the plains in '49 or the spring of '50, cuttings cherished and kept moist all the way that the pioneer might have a reminder of home in a new, strange land. And how they reveled in the warm, red soil of the foothills; how they embowered miners' cabins and strayed off

among the surrounding trees! With what affection they spread a mantle of beauty and fragrance over the forsaken ruins of deserted camps, and how they grow to this day in such solitary places until their stems look like the stocks of old grape vines, but are still full of sap to push out new wood and new bloom aloft!

The records of California floriculture are full of the measurements of old climbing roses. It did not take long to ascertain that choice varieties which could only survive an Eastern winter with glass above and steam below were at home in open air in California and reached a breadth and stature rivalling even that of the Sunny South of America or France. The result was that such roses were early distributed in this State, and each plant brought into a locality became mother and grandmother of a numerous progeny within a twelve-month, for every fragment broken for a friendly visitor took root and gave branches for new breaking and new rooting. Poor, indeed, to-day, and new as well, is any California home which has not its climbing roses high as a house and big as a barn—the constant joy of the resident and the wonder of the tourist.

The engraving on this page gives but a portion of a rose which has overspread trellis and house-roof and gone forth into space beyond. It is now growing thriftily in Santa

Clara county, where it first found soil 32 years ago. It has a stem which is said to be 44 inches in circumference, the measurement being made presumably around the thick base below the first fork, as shown in the engraving. The variety is La Marque, one of our most popular climbing roses, but not by any means the only one which reaches wonderful dimensions. In regions suited to it, the Cloth of Gold reaches quite as great a size and a wonderful perfection of bloom. The Banksians rest not so long as an open hand breadth of wall or shingles remain, and it is only by dint of constant cutting that windows and doors are retained for light and access. Marechal



LA MARQUE ROSE AT SANTA CLARA, 32 YEARS OLD; TRUNK NEARLY 15 INCHES IN DIAMETER.

Neil, Gloire de Dijon, Reve d'Or, the Cherokees, Wm. Allen Richardson and a host of others are found everywhere. On places where planting has kept pace with the advent of newer varieties, some of these old favorites are likely to give way before the superior charms of the later claimants. Even our grand La Marque finds a strong rival in climbing Devoniensis, and has already been supplanted by it. The climbing Niphotos, climbing Perle des Jardins, Elie Beauvillain and several others are pressing forward. But there is room enough for all, and, wherever it is possible, the old climbers of the first generation of Californians should be carried as far as possible into the heart of the new century which is just at hand.

THE Southern orange-growers propose to establish a minimum price again this year. Probably they will not err again as they did last year. The San Bernardino valley growers met last week, and the report says: "The foundation of a future agreement as to the minimum price was laid, and the meeting closed with perfect unanimity of opinion that the orange-growers must combine to fix a minimum price or face ruinous competition in the markets." This is true, and we hope the growers may succeed in getting general adherence to some adequate marketing arrangements. It is essential that this shall be done.

Honors to a Californian.

Prof. E. W. Hilgard of the State University has received a communication from the curators of the Liebig Trust Fund of the Royal Bavarian Academy of Sciences at Munich, notifying him that, on motion of Baron Herrmann von Liebig and Dr. Wollny, the Liebig medal has been unanimously awarded to him "for meritorious work in the investigation of the physical and chemical properties of soils."

The Liebig Medal Fund is derived from a legacy left by Baron Justus von Liebig, the father of agricultural chemistry, for the purpose of encouraging research in agricultural science by awarding a medal, from time to time, to specially meritorious investigations. Within the limits of Germany the medal may be either gold or silver, according to the distinction desired to be conferred; outside of Germany only a silver medal can, by the conditions of the legacy, be awarded. The fund is held in trust by the University of Munich, and is controlled by a board appointed by the Government from

the faculty, and includes the senior member of the Liebig family so long as it exists.

It is believed that the Liebig medal was conferred some time ago on Prof. S. W. Johnson of Yale, who was a pupil of Liebig; but it has not been awarded in this country since till now. The communication of the Board is accompanied by a personal letter of Baron Herrmann von Liebig, the present senior member of the family, to Prof. Hilgard.

This honorable award shows very clearly the European opinion of the value of the original investigations which have been pursued for many years by Prof. Hilgard at our State University.

THE Alvarado beet-sugar factory is well at work and is making a larger output than ever before. From 71,000 to 75,000 pounds of sugar are being refined daily. It is reported that a quarter of a million beets are being received each day and 125 men are employed in day and night shifts. This is, of course, small business as compared with Ohio, but it is good in its way. They seem also to be doing better in growing beets, for the report is that heretofore the average production of beets to the acre has been from 15 to 18 tons. This year the average has not fallen below 20 tons, and has gone as high as 23 tons.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$4 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half inch (1 square).....	1.00	2.50	6.50	22.00
One inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, October 14, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—La Maroue Rose at Santa Clara, 32 Years Old; Trunk Nearly 15 Inches in Diameter, 261. Angora Goats, Property of C. P. Bailey, San Jose, 264.
EDITORIALS.—Climbing Roses in California; Honors to a Californian; Miscellaneous, 261. The Week; Distribution of Our Fruit Products; The Irrigation Congress; Miscellaneous, 262. From an Independent Standpoint, 263.
CORRESPONDENCE.—The "Needle Machine" in Prune Curing, 263. The Department of Agriculture Withdraws Coquillet and Koebele, 264.
MISCELLANEOUS.—Increasing the Wheat Yield, 263. Fine Angora Goat Exhibit; A Fruit-Grower's Experience in Home Canning; California Crops, 264.
HORTICULTURE.—Early Days in Fruit, 265. A Fruit-Drying Plant in Yolo County, 266.
FLORIST AND GARDENER.—The Most Popular Roses, 266.
CEREAL CROPS.—Figures on Wheat Growing, 266.
THE FIELD.—The English Tenant Farmer, 266. The English Need of Brewing Barley, 267.
THE DAIRY.—Greeting from Wisconsin to Our Dairy Association; The Flat Pea as a Fodder Plant, 267.
POULTRY YARD.—Care of Sitting Hens; Roosters Ruled Out, 267.
THE HOME CIRCLE.—Miscellaneous, 268.
DOMESTIC ECONOMY.—Miscellaneous, 269.
PATRONS OF HUSAARDRY.—State Grange Session at Petaluma, 270. The State Grange, 271.
AGRICULTURAL NOTES.—272.
MARKET REPORTS.—273.

BUSINESS ANNOUNCEMENTS.

(NEW THIS ISSUE.)

	PAGE
Plows, Harrows, Seeders, Etc.—Baker & Hamilton.....	276
Olive Trees—John S. Calkins—Pomona, Cal.....	276
Force Pumps—The Stimmel & Hook Mfg. Co., Turner, Ill.....	269
International Dictionary—G. & C. Merriam Co., Springfield, Mass.....	269
Nursery Stock—B. F. Godfrey & Co., Davisville, Cal.....	276
Mohair Wanted—Cliley & Marshall, New York.....	273
Guns, Bicycles, Etc.—Powell & Clement Co., Cincinnati, O.....	275
Hogs—H. J. Philpott, Niles, Cal.....	274

See Advertising Columns.

The Week.

Another installment of fall rains was paid on Sunday night in this part of the State and there have been light showers at other times during the week in other parts of the State. So far no rain has been heavy enough to do any harm. At the north the storm assumed more serious features. It is telegraphed that about 3,000,000 bushels of wheat have been totally destroyed in Eastern Washington and that at least as much more will have to be graded down to about half price. The heavy rain in many sections has knocked down the crops that remain uncut, and before the grain can be harvested it will sprout and be destroyed. In the northern part of the Big Bend country quite a heavy snow fell, destroying all crops not harvested. Grain-buyers say the damage to crops from the rain and snow will reach \$2,500,000. This is another item in our heavy account against 1893.

Fall work in California is being pushed along well. Dry sowing of grain has covered a considerable acreage. Even hardship does not suppress the grain farmer. He certainly deserves a thoroughly good year in field and market. It cannot come any too soon to please him and us.

ENGLAND is reaching as far west as Colorado for hay, which certainly shows the home need. It is telegraphed from Denver that a local house has contracted to ship 5000 tons of Colorado hay to Liverpool, via Galveston, Tex. This is the first shipment of the kind ever made from the West. The firm claims it can lay the product down in Liverpool for \$12.75 per ton, and as hay in England is now worth \$8 per ton above the usual figure, the profit to the Colorado shipper is very respectable. But at \$12.75 in Liverpool how much can the grower in Colorado get for it? Surely there doesn't seem to be much in for him.

AND NOW it is announced that the Democratic majority of the Ways and Means Committee has definitely determined that the sugar bounty bill shall be repealed. A proposition has been made to place half a cent a pound on raw sugars or take off the same rate on refined sugars.

THE Indiana State Fair's chief exhibit this year was a \$10,000 deficit. Too much World's Fair.

Distribution of Our Fruit Products.

There are some old propositions which seem endowed with perpetual youth; some aims, the attainment of which is never complete; some necessities which are never supplied because they grow with each new effort to meet them. Perhaps our readers may think these truisms are a fit beginning for a ponderous moral essay, but we have at present no higher use for them than to serve as an incentive to renewed activity in pursuit of an important industrial undertaking.

For twenty years the wider and more intelligent distribution of California fruit products among the millions of possible consumers in distant regions has been urged as essential to the prosperity of our growing fruit interest. It is really a more important consideration now when our shipments of fruit and fruit products have reached 25,000 carloads than it was 20 years ago, when the whole traffic loaded hardly 100 cars. The bare fact of the vastly expanded traffic shows that wonders have been accomplished in the distribution, and yet still greater accomplishment and more intelligent direction were never more necessary than now. Without this, further extension of our fruit industries seems of doubtful wisdom; without it, indeed, it may be claimed that even what we have cannot be profitably maintained. Fruit-growers will be wise if they address themselves devotedly and resolutely to this question. That they can satisfactorily provide for its answer, if they put forth due effort, may be inferred from what has already been accomplished in the direction indicated.

The most successful and most enduring product of co-operation among fruit-growers thus far is the California Fruit Union. It was projected to meet all needs and great expectations were held of its mastery of the problems of distribution for all fruit products and for all time. In this respect it has not justified the anticipations of some of its projectors. It has done a wonderful amount of good in affording an outlet for our fruit. It has stimulated other shippers to undertakings they would otherwise in all probability have never dared. It has developed sales methods and secured shipping facilities which have been of the greatest value. It is probably not too much to say that if it had not been for the California Fruit-Growers' Union the fruit-growers would have been thrown into the direst straits years ago. All this can be gratefully acknowledged and still it is true that over and beyond anything the Fruit Union has done or is likely to do there is still the crying need of wider, more intelligent and more progressive distribution.

At a meeting of the State Horticultural Society, which we fully reported last week, the manager of the California Fruit Union was interrogated on this point. He admitted that the Fruit Union was doing its best to sell to advantage the fruit entrusted to it for shipment, and that it was not doing much in the way of experimenting in shipment to new centers of population where the success of the sale was a problem or where merely upon figures of population, etc., it might be conceived that fruit ought to sell. The fair conclusion from his remarks would be that the Fruit Union was endeavoring to do a safe and profitable business for profit and not for fun, and that it was not attempting much of anything in the exploitation of new markets. Thus it would seem that the Fruit Union has become a conservative business house, consigning its fruit to well-defined markets as other dealers do, on the principle of every man for himself and calamity overtake the hindmost.

If, then, we take the policy of the California Fruit Union as it is given us, it is clear that there is just as great need of another organization of producers now as there was in 1885, when the Fruit Union was organized. It is still essential that there should be persistent and acute exploitation of new markets. It is clear that there are many cities, with population reaching hundreds of thousands, which receive California fruits at second hand or not at all. While California fruits are being poured by trainload after trainload into say six great cities at the East, still more cities are unprospected and unprovided for. Here is a sin of omission which the fruit-growers as a body should no longer suffer for. They must, in their own interests and for the surety of their own futures, undertake the development of these new markets. This should be done over and above all efforts which the California Fruit Union and other shippers, individual and corporate, are now making. There need not be any conflict with existing means of shipment and sale; in fact, all these should probably be employed in the greater effort which the times demand.

How shall this new organization arise? The State Horticultural Society gave birth to the California Fruit Union in 1885. The new burden of motherhood should fall upon the same organization, and, in her case, time's greatest offspring should be her last. The meeting of the society, which will be held in San Jose on October 27th,

will be occupied with this subject. The sessions are arranged for one day, but may be prolonged if desirable. All in the fruit interest will be welcome at the meeting, either as individuals or as delegates from other societies. The annual convention of fruit-growers, under the auspices of the State Board of Horticulture, will be held this year in Los Angeles in November. In the nature of things, it will not be likely that a very large contingent from the upper part of the State will be present at that time, and it is therefore desirable that there should be a general assembly of northern growers this fall, either to act independently in their own behalf or to make commendations to the Los Angeles convention, or both. The coming meeting in San Jose affords opportunity for this, and we trust the announcement will be generally heeded. It will be quite feasible on that occasion at least to make beginning in a movement which may be beneficent and far-reaching in its results.

The Irrigation Congress.

As we go to press the congress of irrigationists is in progress in Los Angeles. According to telegrams there are about 250 accredited delegates in attendance, and we doubt not an interested public which probably well fills the hall of meeting. The congress is said to be strikingly different from the ordinary California convention, because of the noticeable preponderance of white in the hirsute adornment of the delegates, showing that the time-honored precept, "Old men for counsel," is embodied in the convention. There is representation from the uttermost parts of the earth, many foreign countries having instructed some of their representatives at Chicago to give attention to this meeting. It is undoubtedly the greatest convention ever held of those interested in bringing water upon dry land, thus entitling them to the epithet desert bloomers, and no doubt there is a share of desert boomers also.

The convention has provided ample rations of talk and this we shall have to give an outline in a future issue of the RURAL. The telegraphic reports of the first day indicate that, as was expected, the question of ceding arid lands to the States within whose boundaries they lie will prove one of the most prolific of debate and discord of the meetings. The public cannot easily rid itself of the belief that some of these sly old irrigation dogs who have hitherto figured most largely in political conventions and legislatures are not attending these conventions for their health. Some of these chaps with a life record of four fingers to an acher cannot so quickly change their standard to an inch to ten acres. Having mixed public and private affairs so long it is hard to motive them up with patriotism straight. However, we dislike suspicion and distrust, and it is somewhat inhospitable, too, so we bid them all welcome and god speed.

We believe it is fashionable to station a policeman along side the wedding presents in case any of the guests should be attacked by unconquerable kleptomania, and evidently the California delegates at Los Angeles thought it wise to employ similar precautions lest some of the venerables from the great American desert should be attacked with acute mania for land-grabbing. So, on the first day, before the address of welcome had got cold, the California delegation met and agreed to the following resolutions:

Resolved, That the California members on the committee on resolutions be and are hereby instructed to present to the congress a resolution protesting against the ceding by the general Government to the several States and Territories the arid lands of the United States.

Resolved further, That they be instructed to present to the congress a resolution urging the Congress of the United States to develop the said arid lands, at the public expense, by adequate irrigation systems, and to sell the same in tracts of not more than forty acres each to actual settlers, to form homes for American citizens only.

This, of course, only means that the Californians will work against this throwing of Uncle Sam's last acres into the hands of State legislatures. It does not yet appear how this congress will accept such rations from their hosts. It may be a colder collation than they had figured on.

We are glad that California made this point thus early. It seems to us that the chances of ill-doing are so great that Uncle Sam's land reserves should not be disposed of in that way. These lands should be the heritage of the next generation. Wise and economical methods for their amelioration, and to fit them for coming settlers, are properly the work of this generation, and would constitute one of its grandest gifts to its offspring. To cede them now to the style of legislatures we have in the West would be very likely to ultimately vest their titles in native or foreign land-sharks and give the country for the next century or longer a feudal system more oppressive and burdensome than ever retarded progress and humanitarianism in Europe. The Californians have taken the right stand in this matter, and they are wise to take it early.

From an Independent Standpoint.

The managers of the Midwinter Fair are making a mistake in demanding that the several counties of the State pay for space in which to make exhibits. It is a mistake because its inevitable consequence will be to shut out nine counties out of ten, thereby curtailing the Californian department of the fair and in a measure limiting its usefulness. It is waste of words to talk about what the counties "ought to do" in the face of the fact that will not do it. Most all are poor just now but they are willing to contribute to the extent of making exhibits; and that is all they will do. To insist upon their paying two dollars per square foot or any other sum for floor space is to keep them out altogether and to shut out much that is needed to make the exhibit distinctly Californian in character. And if the fair is not to be distinctively Californian it might as well not be at all. The managers ought at once to abrogate the space charge and to invite the several counties to send in their exhibits; and if this is to be done it should be done at once since the time for getting county exhibits together is passing.

By their repeated blundering it would seem that the managers of the fair have no knowledge of the conditions, temper and spirit of the interior. The proposition to call the legislature together for the purpose of appropriating half a million dollars; the subsequent arbitrary demand for money upon the several counties upon the basis of a pro rata assessment; and now this last scheme of charging the counties for space—each of these plans has been based upon presumptions which any body having even a slight knowledge of how the people look at things would instantly have rejected as impracticable. That the fair project has survived all these unwise efforts in its behalf and that it still commands public respect and good will, is proof of its merit and assurance of its success. The county is willing to help both in the way of providing attractions and in swelling the multitude of winter visitors but it will pay no assessments and it will pay no charges for floor space.

In his latest and fullest utterance on the financial issue (his letter to Governor Northern of Georgia, which we printed last week) President Cleveland has redeemed himself from the imputation of being a gold monometallist. His former expressions, not so much from what they said and from what they left unsaid, certainly gave ground for the assumption that he was no friend to bimetalism; and the RURAL has been among those who have felt that while honest enough, he was not sound in his financial reasonings, and that the great interests which depend upon the justice of our currency system would suffer if his guidance should rule. From the beginning of the special session we have thought Mr. Cleveland right in his insistence upon the repeal of the Sherman law, and in his resistance to any compromise involving the continued purchase of silver upon its gold valuation; but we have feared that with this point gained, the whole power of the Administration would be exerted against the bimetallic system which we heartily approve, and in favor of gold monometallism, which we hold to be unequal and therefore unfair, and especially unjust to the producing and debtor classes. But in this latest statement, the only one in fact in which the subject of legislation to follow repeal of the Sherman law is directly touched upon, Mr. Cleveland declares that he is "a friend of silver, that its proper place in our currency can only be fixed by a readjustment of our currency legislation and the inauguration of a consistent and comprehensive scheme;" and that such an inauguration "can only be entered upon profitably and hopefully after the repeal of the law which is charged with all our financial woes." He is opposed to any financial legislation which will cause a "shrinkage in the purchasing power of the dollar any man has received for a full dollar's worth of work or for a good dollar's worth of the product of his toil." In each of these expressions the RURAL—standing as it does for bimetalism, which it conceives to be the only practical justice between the creditor and the debtor, and the consumer and the producer—finds itself in full and hearty sympathy. Mr. Cleveland has now given his pledge of co-operation in the effort to make a consistent and comprehensive currency scheme on a bimetallic basis; there is no longer any reason to fear his influence against the restoration of silver to its money character; and in view of these facts it seems to us to be the duty of every bimetalist to uphold his hands in the fight now being waged in the Senate in behalf of the mining interests of Colorado, Nevada and Idaho.

This fight is being carried on in a most unfair and ungentlemanly way. It is admitted that the proposition for repeal has a heavy majority, but this majority finds it impossible to bring the Senate to a vote. The rules allow any member to prevent a vote by claiming the floor for "debate," under the assumption that no Senator will so

bemean himself as to hold the floor merely to obstruct the proceedings. But for fairness and civility the Senators who represent the mining interest care nothing, and they are taking advantage of the situation to postpone action, totally regardless of the fact that the financial conditions of the country are suffering by the delay and uncertainty, which their stubborn selfishness imposes. A little coterie, led by the Senators from Nevada, who represent barely 42,000 persons, are willfully and maliciously standing in the way of a free and direct expression of the will of the majority. How long will the country—prostrate and suffering as it is—sit patiently enduring this outrageous violation of our cardinal political idea—that of majority rule?

The President is now involved in a great fight; he is contending, as we profoundly believe, for principles essential to universal justice and popular welfare. There is a crisis in which every citizen who believes in the wisdom of Mr. Cleveland's purposes and aims ought to put aside partisan bias and help hold up his hands. It is time for us to forget our own partisanship to ignore Mr. Cleveland's politics and to stand by him as the leader in the great contest for right principles. There will be a proper time later on to discuss some of Mr. Cleveland's methods; but just now while we are in the mid-stream of critical times, the duty for those of us who believe his purposes right and his plans necessary, is to give hearty support. Mr. Cleveland is neither a perfect man or a perfect President—probably the country will never have a perfect President—but he has put himself on the right side, the side of those who want every dollar to be equal in value to every other dollar and who know that any other system will involve injustice and finally disaster; and who know that in such crises it is always the poor man who is the victim. When this fight is over there will be time enough to call Mr. Cleveland to account for a too ready use of arbitrary power and for his habit of forgetting that there are other departments of the Government co-ordinate with his own. But let us wait till the right time comes. Let us wait till the fire at the front ceases before we open fire at the rear.

Commissioner Blount's report has at last been given to the public. He finds that the revolution in Hawaii was brought about not by revolt on the part of the native population, but by the policy of foreign residents, chiefly Americans, whose idea was to promote the business interests of the islands and advance the values of property by annexation to the United States. Mr. Blount does not so declare, but it is clearly his belief that this revolution was connived at by the American minister at Honolulu, and possibly by the Administration at Washington. He does not, in so many words, oppose annexation, but he thinks that before anything looking to decisive action is done, the natives as well as foreigners should be allowed to vote on the question, and that the majority should rule. This last proposition seems fair, and nothing more than fair. However advantageous the possession of Hawaii would be, we cannot afford to take it against the will of its people, or before that will has had full opportunity to express itself. To do otherwise would be to disregard the principles upon which our Government is founded, and to shame ourselves in the eyes of the civilized world.

The more we reflect upon the annexation proposition the more real and practical seem the objections to it. If we owned the islands we would of course engross their commerce, but we do that already and must always do it, because we are near and other commercial countries are remote. If we owned the islands we should have to protect them, and that would require the doubling of our navy at prodigious cost, not only for construction, but for future maintenance. We question seriously if the whole annual commercial production of the islands would pay the annual bill which their protection would impose upon us. Then, the islanders are not fit for American citizenship, and cannot be made fit. They would always be an alien class, for whom we would have to make special regulations; and special regulations for alien classes have not been among the shining successes of our political history. We tried it with the negro, with what results we need not say. We tried it with the Indian, and the Indian is dying under the process. We have lately tried it with the Chinaman, and a pretty mess we have made of it. The truth is, there are some things which laws and ordinances cannot accomplish, and one of them is the successful and wholesome amalgamation of races radically and totally alien. If we take in the Hawaiian islands we shall soon have another race problem on our hands; and we seriously question the wisdom of the venture.

On the other hand, Hawaii is the storehouse and the fortress of the Pacific. She stands, practically, between us and the countries of South America; she stands between us and the continents of the south seas; she stands between us and the vast empire of China. Any or all of these

countries may become commercial allies, in which case the islands would be a most valuable outpost. Any or all of these countries may, on the other hand, become our enemies, in which case the islands would be invaluable for the purposes of national defense. A branch commercial house and a Gibraltar of military strength in the mid-Pacific are considerations of no light moment to a country situated like our own, and which must in the nature of things depend more and more upon commerce as a factor in its physical and political life. Since the matter is still open for consideration, it is just as well that both sides of the question should be kept in mind.

The "Needle Machine" in Prune Curing.

TO THE EDITOR:—Thinking that your prune readers are asking What of the "needle machine" this year? for one I am pleased to report that it has more than met my expectations and confirmed the good opinion I formed of it last year.

My prune crop of 100 tons has passed over the "needles" on to the trays and into the bins well cured and ready to go into consumption. The weight and good condition of my prunes will command the highest price in boxes.

The drying season this year has been long owing to cool foggy weather. While one week last year was quite sufficient in which to cure a tray of prunes, this year two weeks, and sometimes more, has been required at my place. I have the advantage, as a rule, of a warm, dry atmosphere, quite free from fog, being at an elevation of 1500 feet on the Santa Cruz mountains, 15 miles from the ocean.

This year has been a severe test of the ability of the "needle machine" to turn out a prune sufficiently punctured with holes to cure in a reasonable time, so as to keep well and present a merchantable and attractive appearance in the bin.

To say that it has done just that for me is the exact truth, and I am more than pleased, even delighted, with its year's work, and would not part with it under any consideration.

The fact that my prunes have dried evenly and well and my trays have gone into the bins without picking over speaks well for the method. A reward of \$5 for a single sour prune or "frog belly" on my trays or in my bins has not brought one to my attention.

My lye-dipping neighbors have all been actively engaged this year in picking over every tray taken up for "sour bellies" and undried prunes. I have no doubt that many large driers have spent the cost of a needle machine in picking over lye-dipped prune trays.

I have another point in its favor, and it is this: Very ripe fruit can be passed over the needle board and dried well that would mash up under lye treatment and be lost. Still another is that prunes do not stick to the trays like "black Republicans" to office under a Democratic administration and have to be knocked off with a club.

I would be pleased to learn of the experience of others who have used the machine this year. I notice that Editor Brainard of San Jose urges the necessity of lye-dipping to take the "varnish," as he calls it, off the prunes.

Now, if a chemical analysis will show that "prune varnish" is poison, I will admit the force of the objection. The fact is the "bloom" of the prune adds much to the dark, glossy appearance, and I should think that this natural condition would commend the purchase of such varnished prunes.

I have, as I said before, no interest in the sale of the needle machine, and only write of it as a good thing for prune-driers to have.

W. H. AIKEN.

Wrights, Oct. 8, 1893.

Increasing the Wheat Yield.

The statistics of yields of wheat in the United States are very incomplete; but, so far as obtainable, they point toward diminishing returns. Some of the older agricultural reports of Illinois and Ohio show this when compared with the later ones. Because of reduced yields and an increased tendency to disease, wheat in Wisconsin, Illinois and Iowa has been largely supplanted by other crops. Fifteen years ago, when the journals were full of articles on the bonanza farms of the Northwest, and the extinction of the small farmer was considered certain, the average yield for the Dakotas was reported much larger than now. Some of the Eastern States give larger yields of wheat to the acre than the Western States. The wheat area in the East is small, well tilled, and probably exceptionally fertile, because near the many large towns and cities there is a much larger supply of stable manure than there is on the prairies. It is estimated that a gradual advance of five per cent in the annual average price of wheat in Chicago would cause an increase of nearly one-fifth, or three bushels, in the yield of wheat per acre in the Mississippi valley. It is also judged that if the price of wheat were to advance permanently to \$1 per bushel, the present total annual production would be increased by more than one-half. That the soil could do this is shown by the experiments with seeds, soils and fertilizers which Sir John B. Lawes has been carrying on for 60 years at Rothamsted. One of his experiment fields, which has borne wheat every year for 50 years without fertilizing and without interruption, is now yielding more wheat per acre than the average for the United States, or the average for the whole world. Better culture is what is needed.

J. F. Aitken of Reno has shipped 50,000 pounds of Nevada alfalfa honey to St. Louis. The shipment was valued at \$10,000.

Fine Angora-Goat Exhibit.

President C. P. Bailey of the Angora-Goat Breeders' Association of California made a decided hit in his fine exhibition of Angora-goat products at the World's Fair at Chicago; for, though the display was necessarily limited, it was viewed with interest by many who realized the energy and perseverance that was building up so important an industry in this State. The Chicago press devoted considerable space to noticing the display. Mr. Bailey is this month exhibiting 25 fine Angora goats in the Live-Stock Pavilion of the Chicago Exhibition Buildings.

Mr. Bailey, sometimes known as the Angora King, has devoted 25 years of his life to the acclimation, rearing and profitable utilization of Angora goats in this State. Born in Wisconsin in 1841, and educated at the university of that State, he in early life pushed westward to California, where for four years he was principal of the Santa Cruz public school. Attracted to pastoral pursuits, he determined to go in for the production of mohair; and, using sheep as a temporary means of making both ends meet on the ranch he took up, imported a number of choice Angora goats from Asiatic Turkey, the original home of the animal. He imported altogether about 20 head, being just in time to secure good stock, as for many years past the export of Angora goats has been rigidly prohibited by the Turkish Government. To show Mr. Bailey's calculation and confidence in his venture, it may be mentioned that he paid \$1000 for his first pair of goats, delivered in California. He at once commenced crossing the thoroughbred bucks with the ordinary native does of Spanish descent, keeping also a pure-bred flock. The crosses he then bred back to the thoroughbred, with the result that he found the fourth cross to be practically undistinguishable from the pure-bred Angora. In this way Mr. Bailey has got together flocks aggregating 10,000, of which 1000 are pure bred. While retaining these, he has also disposed of nearly \$125,000 worth of goats for breeding purposes to other goat-raisers in the United States.

The value of the Angora goat chiefly lies in its long lustrous fleece, which, as a textile fabric, is second as regards price only to silk. England is the world's great depot for the goat's wool, or mohair, as it is generally termed. For 20 years prior to the recent depression, fair average mohair sold in England for from 75 cents to \$1 per pound. There are at present factories enough in operation in the United States to consume ten times as much mohair as is produced, and several of these, it is said, have expressed their preference for Cape Colony and American mohair over the Turkish. A noted spinner in one of the New England factories says of the American mohair: "It is better than any brought from Turkey; it is smoother, makes a smoother thread, and runs the spindles faster. It is silkier and softer, and I can pick out the cloth made of it without looking." As a whole, the outlook was never more encouraging for American goat-breeders, and those who have persevered and kept improving their flocks will be well paid for their pains. At 40 cents a pound, Mr. Bailey estimates that mohair will pay all expenses of flock and a fair interest on money invested, the increase being clear profit. It has to be remembered, however, that fashion largely rules the mohair market. If soft, lustrous goods for dress material are in demand, up goes the price of the staple with a bound, as was the case in England a few months ago, when mohair advanced 50 per cent in value. The growing use of mohair, however, for plushes for railway drawing-room cars in America will help to steady the market.

Mr. Bailey, whose residence is in San Jose, Cal., has just received two pure-bred Angora bucks from South Africa, considered to be equal in every way to any Angora bucks in the world.

The accompanying illustration gives a good idea of these animals. They will do well wherever sheep can thrive, and are a profitable source of revenue to any one with sufficient pasturage for them.

The average fleece of pure-bred Angoras is from four to six pounds, but frequently eight and ten pounds have been obtained from choice, well-kept animals. These goats do not interfere with the pasture of cattle, horses, sheep, etc. About 1000 to 1500 head is the best number for a herd. Only pure-bred bucks should be used, and one is sufficient for from 50 to 75 does.

A Fruit-Grower's Experience in Home Canning.

A city reader hands in the following note, which we publish for whatever interest or value it may possess:

During the fruit season of 1893 a fruit-grower, who lives within a thousand miles of the city of San Francisco, found that the best offer he could get for his crop of pears was \$10 per ton. He concluded that this would not pay, and that he would can them himself. The following is the result of his experience:

Labor in preparing 11 tons of fruit.....	\$137 28
Wood used in cooking.....	12 50
Ten thousand cans.....	329 15
Freight on cans.....	10 00
Sugar.....	125 00
Eleven tons of fruit.....	110 00
Incidentals.....	5 00
Total.....	\$728 93

The fruit-grower has on hand 825 dozen standard pears, for which he has been offered—

\$1.40 per dozen.....	\$1,155 00
Less commission, five per cent.....	59 75

Balance..... \$1,135 25
This shows a profit to the fruit-raiser of \$406.32. His

fruit is all choice and in 24 per cent syrup. It cost him \$0.8837 per dozen to pack the fruit. In view of this it is plain that the poor canners deserve the sympathy of the people who grow fruit.

The Department of Agriculture Withdraws Coquillett and Koebele.

TO THE EDITOR.—You will see by the accompanying letter that the Secretary of Agriculture at Washington has decided to withdraw both Mr. Koebele and myself from this State for reasons given in that letter. Prof. Riley writes me that he fully concurs in this action of the Secretary, and adds:

"While the action of the Department thus forced upon it by the State Board of Horticulture may appear to be an injustice to the fruit-growers who have had no part in the abuse of the Department and the Division, yet I hope and believe that no harm or injustice to the fruit interests will ultimately result. I shall never individually lose my interest in the subject of the injurious insects of the Pacific Coast and when emergency calls for action will carry on special investigations by sending some one temporarily in the field."

While fully agreeing with my superiors in this matter, yet I regret very much the necessity that bids me leave this interesting field of labor where the principal work of my life thus far has been wrought, and where many pleasant friendships have been formed. My relations with the honest soil-tillers have been of the most agreeable kind, and I need hardly assure them that in whatever field I may be called upon to labor in the future, I carry with me the most pleasant remembrances of them and of the good people of this peerless State—California. D. W. COQUILLETT.

Los Angeles.

Secretary Morton's Letter.

WASHINGTON, D. C., September 22, 1893.

Hon. Elwood Cooper, President of the State Board of Horticulture,

responsibility between the State and the National Government, he nevertheless entered upon the task with an honest determination to make it, if possible, a beneficent success.

Prof. Riley charged Mr. Koebele to collect and get together certain insects which it was desired to send over to Australia and New Zealand. He impressed upon him the necessity of extraordinary care in making the selections, so that no undesirable species, and particularly that no predaceous insects should be sent over with any of their parasites. Professor Riley especially instructed Mr. Coquillett to leave no endeavor unmade which would result in successfully colonizing the insects sent over to Mr. Koebele. This Department has striven to bring about good results by getting at the exact facts in relation to these imported ladybugs from Australia.

Personally I have only the slightest entomological knowledge, but I am confident that the opinions of Prof. Riley, Chief of the Entomological Division of this Department, who has been long identified with work in applied entomology, are entitled to great weight. Standing as he does confessedly at the head of entomologists of this continent, and perhaps of the world, Professor Riley needs no defense at my hands. His long service, his high character and reputation among scientists, together vindicate him against all assaults.

The present delicate condition of Prof. Riley's health, due, his physicians say, to overwork and persistent efforts and endeavors to accomplish a great good to the fruit-growing world, is my only reason for taking up this matter with you at the present time. Professor Riley has been much annoyed, and his health so undermined, that the Government may be compelled to accept his resignation, though I believe the farmers and fruit-growers of the United States would very generally and sincerely regret such a result.

After a thorough survey of the facts, I have determined to recall the two agents who have hitherto been stationed in California. The Department of Agriculture, thus having withdrawn from your State all cause of irritation to the State Board of Horticulture, you will be able to do effective work for the fruit-growers of that Commonwealth. And, as Secretary of Agriculture, I shall be pleased whenever opportunity offers, to co-operate with your society for the furtherance of the vast fruit interests of California.

Declaring, with all respect, that this must close the correspondence between the Department of Agriculture and yourself and other members of the California Board of Horticulture, relative to the lady-bug business and the entomological wrangles which have grown out of the same, I remain, for the fruit interests of your State and all the other States,

Your most obedient servant,

J. STERLING MORTON, Secretary.

[We regret that we have not been furnished with a copy of Prof. Riley's letter to which Secretary Morton refers. It would add much to the record of this peculiar and gloomy affair. We are not ready to hazard comment on the new turn of things which robs us of valuable connection with the entomological branch of the general Government. It may, however, be said that the whole thing is as unnecessary as it is unfortunate. It is the outgrowth of personal jealousy, envy, malice, pusillanimity and everything that is detestable in human nature and behavior. In what proportions these qualities were possessed by the different parties to the conflict an interested public will judge for itself.—EDS. PRESS.]

California Crops.

[Summary of Report of Observer James A. Barwick, for Week Ending October 9, 1893.]

The national weekly crop bulletin, published by the United States Weather Bureau at Washington, D. C., closed for the season with the issue of October 3d, and this bulletin ending October 9th will be the last one for this season of the California Weather Service.

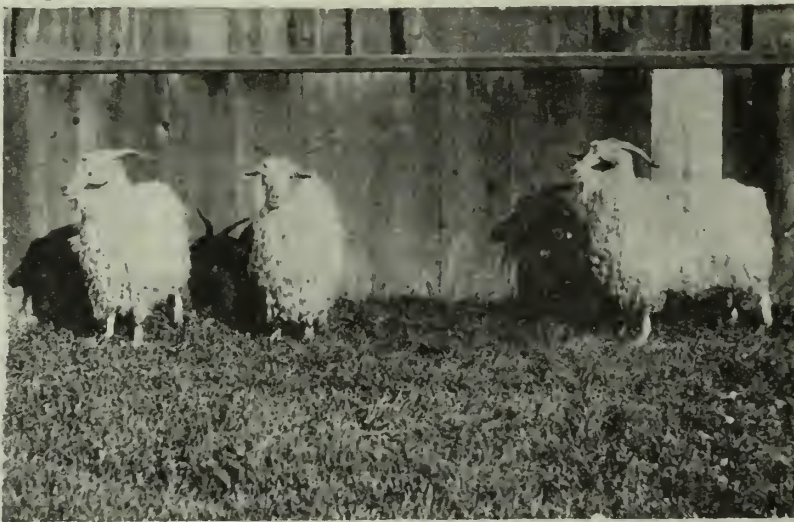
Secretary Edwin F. Smith of the State Agricultural Society along with the director of this service heartily and sincerely thank the various crop correspondents for their promptness in rendering their weekly reports and to the numerous newspaper editors throughout the entire State for their valuable aid in contributing data through their papers, of the crop conditions each week. This bulletin will again be resumed in April, 1894. The monthly weather bulletin will be continued. The weather for the week ending October 9th has been all that could be desired. Raisin grapes have cured nicely; fruit drying is about closed as well as fresh fruit shipments to the East. All preparations are rapidly being made for the seeding of a large acreage to grain. Walnut and bean picking is fast drawing to a close. Thousands of acres have already been sown to grain.

Taking the season through from April to October, it will be found to have been a much cooler season than usual. The deficiency in temperature ranging from the first of March to the 9th of October over 400 degrees, being an average daily deficiency of nearly two degrees during the planting, growing, harvesting and drying seasons which vastly increased the grain output and kept fruits and berries from ripening too rapidly, thereby preventing the glutting of home and foreign markets and benefiting both the grower and the seller.

The highest temperature for the season was 106° at Gridley, Butte county, during the weeks ending July 17th and 31st and August 21st, also 106° at Red Bluff, Tehama county, during the week ending July 31st. The lowest temperature for the season was 24° at Yreka, Siskiyou county, situated in the Siskiyou range of the coast mountains at an elevation of 2635 feet above the level of the sea and occurred during the week ending April 17th. During the beet-sugar season up to the 9th of October there has been over 10,000,000 pounds of sugar turned out at the Chino factory in southern California.

The overseer of a Fresno winery, while playing the spy on top of a 5000-gallon tank of wine, to detect employees who might sample the ruby goods, missed his footing and took a header into the tank. The men who pulled him out laughed at his mishap and were promptly discharged.

RETURNS from the various viticultural societies of France show that the wine crop of the country for the year amounted to 36,000,000 hectolitres.



ANGORA GOATS, PROPERTY OF C. P. BAILEY, SAN JOSE.

San Francisco, Cal.—SIR:—Had it been possible, your letter of the 2d of August would have been sooner answered. It contains statements and charges relative to the entomologist of the Department of Agriculture. The charges were serious and demanded personal attention and investigation. And after that attention, and such investigation as I could bestow amid other duties, I conclude that you are laboring under misapprehensions, and that your reflections upon the officers connected with the Entomological Division of the department are not warranted by the facts.

To Professor Riley I handed your communication. He read it, and I inclose herewith his letter relative thereto. His reply seems justified fully by the bulletins of this department and by voluminous correspondence. It is also substantiated by a vast amount of printed matter in various California journals, which matter is on record here as part of the archives of the Entomological Division. Neither the department nor the public can be benefited, educationally or otherwise, by stirring up ancient controversies which were evolved by Mr. Koebele's first mission.

The microbes and bacilli of this somewhat malignant attack were spawned under a former administration with which I had nothing to do, and I have determined that no personal feeling shall taint the action of any of the heads or chiefs of divisions, or any other employee of the Department of Agriculture, so far as I can prevent it, during my management of the same, either in regard to the second mission of Mr. Koebele or any other matter.

It is plain that the State Board of Horticulture of California has assailed the attitude of the Entomological Division, relative to Mr. Koebele's second mission and other positions. And yet the Board of Horticulture, and you yourself personally, petitioned the Honorable Secretary Rusk, my predecessor, to allow Mr. Koebele, as the paid agent of the United States Department of Agriculture, to be "sent to Australia and adjacent countries to search for parasites that may be found there, that prey upon scales and other insects, for introduction into the State of California," his expenses to be paid out of the appropriation which had been made out of the State Treasury to the board for such mission.

Mr. Willits, Acting Secretary of Agriculture at that time, declined to comply with this request, and gave good reasons for his declination. But General Rusk, being in California at the time, was induced, by importunities, to overrule the action of Acting Secretary Willits, and from that day to this the Department of Agriculture has done all possible things within the limits of its functions to make Mr. Koebele's mission a complete success.

The original proposition in Secretary Lelong's letter to Secretary Rusk, and the action of your Executive Board during its meeting on March 25, 1891, was that the insects collected by Mr. Koebele should be sent to Mr. Coquillett, the other California agent of the Division of Entomology. Mr. Coquillett was to propagate and distribute the ladybugs thus furnished him. The State Board of Horticulture for California placed the amount appropriated by the State Legislature at the disposal of the Secretary of Agriculture.

The State Board of Horticulture, by its own volition, confided the matter entirely to the Secretary of Agriculture, and expected from him only a brief report as to the progress and success of the imported ladybugs. Subsequent correspondence shows that while Professor Riley had some misgivings as to the final outcome, not only from the scientific point of view but because of the division of

HORTICULTURE.

Early Days in Fruit.

An Interesting Chapter in California Horticultural History.

[By W. B. WEST.]

[Mr. W. B. West, one of the best-known of our early horticulturists and nurserymen, was commissioned some time ago by the State Horticultural Society to prepare a series of sketches of the early horticultural history of the State. Some of these sketches have already been published in the RURAL. The one which we present below is of the deepest interest and presents historic data which it is very important to place upon record.—ED. PRESS.]

SAN JOAQUIN COUNTY.

This has been exclusively a wheat district; but little interest in fruit-growing was developed before 1865, and the same may be said of the 20 years following. Since 1885 large orchards have been planted and more interest is shown. The early orchards were small and few in number; several productive vineyards were planted and large areas in vegetables.

Early Condition of the Country.—As late as the spring of 1853 there was only one farm fully fenced in the county. A few little enclosures had been made and a few trees had been planted. Vegetables were raised in limited quantities for home market and San Francisco. Cattle, horses and mules roamed where they liked, and the settler who thought he had a right to fence the land which he had bought was considered a nuisance. These conditions were not favorable to horticulture.

Early Importations of Trees.—In December of 1852 Madison Walthal received a consignment of fruit trees from a nurseryman in the Middle States. They came by Adams' Express, and were found to be in bad order. On arrival at Stockton, they were sold at auction and the venture resulted in a loss to the consignor. Some of them lived and were useful to propagate from. Trees from Oregon were for sale at high prices, considering the quality of the stock.

In the fall of 1853 ex-Governor Edwards of Missouri, then living in Stockton, received a choice selection of roses, which arrived in good condition and nearly all lived. As he turned them over to West Bros., they were propagated extensively.

Several lots of trees from Eastern nurseries were landed in Stockton during the winter of 1853-54, but were forwarded to the mountain counties.

Mission grape cuttings from San Jose and Los Angeles could be bought at \$12.50 per hundred. Notwithstanding the high prices paid for trees, the dealers found it impossible to make much money.

Early Planters.—Capt. Nelson Taylor had a few fruit trees which were planted in 1852, consisting of seedling peach and grafted apple trees from Oregon. There were about 30 of them altogether and the place was not worthy of mention except as a pioneer orchard.

Orchards, vineyards and vegetable gardens were started on the Calaveras river and in the suburbs of Stockton by Italian and Swiss gardeners as early as 1854. They were always successful, not from any particular knowledge of the business or intelligence in management, but by perseverance and economy. Some of our wealthiest citizens are of this class.

Early Horticulturists.—At the head of this list I must place Capt. C. M. Weber. His home place on the peninsula at Stockton was, when in its best, a marvel of beauty. Nothing in the line of ornamental trees or plants that could be obtained was wanting. The soil, naturally rich, was abundantly fertilized. Water from underground pipes was used freely. The garden was protected from winds by high trellises, which were covered with grape vines and flowering plants; the inside was filled with the choicest roses, flowering shrubs and plants. An experienced gardener, with an ample force of workmen, was employed. Nothing was wanting to make it a success, and such it was in every respect. Such roses were rarely seen, no mildew, blight, insect pests, everything was in its glory. The place was commenced in 1849 but was in its prime in 1858. The flood of 1862 so injured it that Capt. Webber became disgusted and let it run down. This was one of the few attempts to build up a place from a pure love of horticulture, in which mercenary motives had no place.

THE FAMOUS PLACE OF DR. MARSH.

The following statement is made by James Marsh of Stockton: My uncle, John Marsh, M. D., came to California in 1836. He practiced his profession among the cattle ranchers of the valleys, receiving his pay in cattle. In time they became numerous and required more range than they had where he was located, so he secured possession of the Noriega ranch, situated where now is the town of Brentwood. He settled here in 1840, and a few years after he planted a vineyard with cuttings from the mission of San Jose. His house was located near a little stream, which ran from the Coast Range. On a flat which bordered on this stream was the vineyard and a few pear and other trees. This was the earliest horticulture that I have been able to trace in San Joaquin county.

The grapes were made into wine at first, which was not profitable. In 1852 Dr. Marsh told me to see if I could find a market for them in San Francisco. The difficulty in shipping at that time was the packages; boxes were not to be had, so I bought all the champagne baskets that could be procured in San Francisco. We made up a shipment of 1800 pounds. They were sent to Marsh's Landing and from there to San Francisco by the Stockton boat. It is unnecessary to state that I, having charge of the shipment, did not sleep much on the way down. On arriving I proceeded to look up a purchaser. The first fruit dealer I applied to was anxious to buy. Not knowing anything about the market value of grapes I told him 87 cents per

pound. He took up my offer immediately, and in less than an hour the grapes were delivered, and I had my money.

NURSERY AND VINEYARD OF WEST BROS.

In the spring of 1853 this firm received a consignment of fruit and ornamental trees and vines, also seed of apple, pear, peach, cherry and quince. The trees came by the Panama route in charge of Adams & Co.'s express. They arrived in good condition, and, having good subsequent care, nearly all lived. They were from Hovey & Co., Boston, experienced nurserymen; were well packed, and all proved true to label. They were selected with the view of using the buds and scions for nursery purposes. To illustrate what was then considered important in a collection, we had 32 varieties of pears, 30 of apples, 20 of plums, and only 10 of peaches. There were also almonds, apricots, figs, and grape vines; the figs and grape vines were pot-grown plants.

The fruit-tree seed was not so satisfactory, as it had suffered from heat. Most of the kinds did not grow the first year, so that a year was lost in a very important time. Some of the quince and apple came up the second year, but the balance was a total loss and one of the many disappointments attending our early efforts to establish our nursery. The chief difficulty in getting seed and plants from the East by way of the Isthmus was the long exposure to the hot climate and the carelessness of the transportation companies in handling this class of freight, on which they charged nearly double rates and took no more care of than if it had been pig iron. This rendered it a very expensive and uncertain business. There was, however, at that time a demand for trees and we tried to meet it. A few seedling peach trees planted in 1850 and 1851 on the place of Capt. Taylor, furnished some seed. Chile peaches dried on the pit were to be had; some of them came up readily, while others were a failure. In April of 1853 we received several barrels of peach stones from Boston via Cape Horn. They were quite dry and somewhat heated, still some of them grew, and as trees were high and in good demand, the venture proved remunerative. In those early days, every peach pit was carefully collected, and still, with all our efforts, we were unable to increase our stock of trees as fast as was desirable. In 1855 a neighbor's orchard came into bearing. He was a persistent believer in seedling fruit and planted an orchard of Chile peach pits. The fruit was so thoroughly useless that it could not be sold, so we got peach stock in abundance after that time.

Among our cherry trees were some of the Mazzard variety. They soon grew large and furnished seed for nursery stock.

The Peach Almond.—Among the first almond seedlings which were grown on our place was one which, by its extraordinary vigor, attracted my attention. It was planted in orchard. It bore fruit the second year from seed. It had a fleshy outside covering much like a peach, but was of no value, either as a peach or almond; the tree, however, grew, and bore fruit immensely, and I used the pits for stocks for peach and almond. I found it to be valuable for the peach especially. One tree on this stock, an Early Tillotson, remained ten years in orchard, when I was obliged to remove it, as its vigor injured a vineyard near by. It was then one foot in diameter.

In May, 1853, we received an invoice of three-year-old fruit trees via Cape Horn. They were nearly a duplicate of the order by Isthmus. Although not in as good order, some of them lived, and there are now living and in healthy condition pear trees which were seven months on the voyage around Cape Horn.

In the spring of 1854 we were so unfortunate as to have an invoice of nursery trees and stocks lost on board the steamship Tennessee, which was wrecked coming up from Panama, but we were lucky enough to get through by another boat a choice lot of apple and pear seed, which arrived in good condition. I mention these experiences to show that although the price of fruit trees was high the many obstacles and losses rendered it a very uncertain business. I may also mention that the express charges to Stockton were 70 cents per pound.

Insect Pests and Fungi.—The first and only attack of grasshoppers on our place was in the fall of 1855. The whole area devastated was about an acre of apple and peach trees near our house. I can only say that there was not a leaf or even a piece of bark left on most of my trees. Even the oak trees suffered. They, however, did not reach the whole of our orchard, but only did thorough work where they were. The majority of them soon left for the tules and we never saw them again. The next invasion was in 1862 from what was then called the army worm. They came up from some overflowed land and caused serious damage. Our nursery had then grown to number 75,000 grafts and buds, of which 70,000 were destroyed in a few weeks.

The worms of the sphynx moth when grown were about three inches in length and very voracious.

The mite or red spider was numerous even in early days. I find, by referring to my journal, that in 1859 my plum stocks were seriously injured so that budding had to be delayed until October.

The vine hopper was known in the early days, but did not become so numerous as to cause trouble in the vineyard until 1862, when they were about as prevalent as they are at present.

We were practically free from blights and mildew. We could grow the most delicate kinds of fruit to perfection.

Peaches.—In looking back to the varieties of peaches grown in early days about Stockton, I find the Royal George, George the Fourth, Old Mixon—cling and free,—and the Heath Cling. They were then delicious white, thin-skinned varieties in perfection; now they cannot be produced at all. The time was when upon my own place the Heath Cling was equal in size and flavor to any now produced in the most favored parts of Fresno or Kern counties, all owing to the increase of mildews and fungi.

The English gooseberry was grown for ten years without

any trouble, then the mildew appeared, and soon the cultivation had to be abandoned.

The rose mildew was entirely unknown on our place until 1870; the roses grew without care and were perfect. The greenhouses were full of blooming plants in the spring without a sick specimen.

As the advent of the codlin moth, scale and phylloxera was later than 1865, they do not properly belong here. I will only say that when they did appear they did not forget us.

Prices at Stockton.—I have kept a journal of my experience in nursery, garden and vineyard, from the date of my settlement in Stockton, 1852, to the present time, 1892. It is interesting to refer to. I find that in the fall of 1853 small yearling apples three to four feet high, from Oregon, were sold at one dollar each. They were poor stock and could not be sold at any price to-day. Cherry, plum and pear trees were hardly to be obtained; our imported trees, grown one year and sold in 1854, brought two and a half dollars each, but they were good trees. Yearling peach trees sold at one and one and a half dollars each.

These prices were not long sustained; the little local market was soon supplied. In 1859 peach trees were sold at a loss by speculators, who filled the market with little scrubby trees at five dollars per hundred. There was at that day no one who thought of planting orchards of any extent. One hundred trees was a large plantation. The farmers who had settled around Stockton were slow to begin improvements in this line. They had other more pressing needs. Fortunately for us, the mining counties were populous and thrifty and consumed most of our nursery products.

Wages.—The amount paid in early days for wages was not so great as is generally supposed. Having kept my books I am able to give an exact statement. October 1st, 1852, we employed a competent gardener, a man who thoroughly understood the management of plants and nursery, at \$75 per month with board. We contracted for one year. As our place at that time was in the state of nature, unfenced and unimproved, our work was not strictly gardening. The wages paid woodchoppers and teamsters was from \$2.50 to \$3 per day. In 1856 we employed men at \$40 per month by the year, of course board included. They were good men, not afraid of work.

Vicissitudes of the Nursery Business.—Our trade remained fairly prosperous until 1862-3, when the whole country around us was overflowed, the roads rendered impassable, and the soil too wet to plant trees, even if they could be obtained. There were no railroads in those days, nothing but muddy roads. So that year passed with hardly business enough to meet expenses. The next season, 1863-4, was a dry one—the driest ever seen here, except 1850-1. Very few trees were sold; then the demand for trees in the mountains began to diminish. The San Joaquin valley was only partially settled and the settlements were very far apart; it was a very poor place to sell trees then. The copper excitement broke out and took all the spare money in the country. The civil war also had its influence in depressing trade, so that the years between 1863 and 1867 were exceedingly dull ones for our business. When the railroad was built through Stockton in 1869 and through the San Joaquin valley two years later, business revived, farmers began to make permanent homes, began to find out that an orchard was a necessity; towns sprung up along the railroad, requiring embellishment, and our business assumed a better aspect.

Prices of Fruit.—The first fruit obtained on our place was strawberries. In 1854 the price was \$1 per pound. In 1855 peaches sold at 75 cents per dozen, cherries \$1 per pound, apricots 75 cents per pound, pears, large, \$1.25 per dozen, plums 35 to 40 cents per pound.

We raised vegetables on about five acres, which we sold at the following prices: In 1853 Stockton potatoes were lower than they were the next year, 2 cents per pound; onions, 12 cents per pound; tomatoes sold at retail from 50 cents down to 25 cents; onion seed in 1854, \$10 per pound. In 1853 barley closed out at \$3 25 per hundred and hay was from \$16 to \$20 per ton.

West Bros' Vineyard.—The planting of our vineyard commenced in 1853. It was increased gradually until 1865, when we had all our available land in grapes or orchard. As most of our vines were planted before 1860, there was little to be learned from the experience of others. We planted Missions largely. Some of them we have grafted into other kinds and some still remain. In our early importation (1853) we received a stock of what was then called foreign varieties, such as Muscat of Alexandria, Black Prince, Black Hamburg, Chasselas, and the like. They had been grown two years in pots and cost us \$75 per hundred in Boston. We propagated them as fast as possible, but were not sure that they would succeed, and only planted specimen rows in our vineyard. We did not like to venture too much upon what we thought uncertainties. Had we then known what every one interested in vineyards here now knows, our fortune would have been assured. For instance, we had in stock a vine known as the Black Prince. It is a thrifty growing kind that will make larger plants at the age of one year than most others. As they were the largest plants that we had for sale, a customer, whose only knowledge of the matter consisted in getting the most wood for his money, bought the whole lot and planted them on an adjoining place. In a few years they showed that they were the most desirable variety to plant in our neighborhood for table grapes. No other locality has produced this variety in such perfection, and very few kinds, except this, are planted to-day in our vicinity. Thus it was that we blundered upon the variety most profitable to cultivate.

THE GEO. WEBSTER PLACE.

In 1856, Mr. Geo. Webster, an enthusiast on the subject of fruit-growing, but with no practical experience, planted an orchard on land now owned by Mr. Alonzo McCloud, adjoining the city of Stockton. He succeeded in getting a fine growth of trees by an ingenious system of irrigation—pumping water and distributing it through hose. The

trees were peach and apricot, but, unfortunately for him, the peach trees were all early varieties, which have never been profitable to grow in San Joaquin county, as it is not an early locality; consequently, the investment was not profitable, and, after a few years, the orchard was abandoned.

In the hands of a practical fruit-grower, the early kinds could have been budded into more profitable late ones and something made from the venture. The demand for fruit was not so great in 1858 and 1859 as it has been in later years, the population being smaller and no canneries to take off the surplus, so the chances for a glut in the San Francisco market were greater than they are to-day.

SAN JOAQUIN RIVER.

Before the Rough and Ready and Roberts islands were wholly reclaimed by levees (which was in 1870), there were settlements along the banks, which were high enough to allow a small margin to be cultivated in vegetables and even trees in the highest places. This land was much higher than that farther away from the river. Overflows soon ran off. On this strip, settlements were made at a very early day.

Messrs. Crozier and Wright settled the Rough and Ready ranch at the mouth of Stockton slough in the spring of 1853. Much work was done in 1854, when some trees were planted. Finding the land was too low, they concluded to raise it. They raised alternate blocks of land by throwing the dirt from channels between them. The winter's overflow would fill these channels with debris so that a continual supply of soil was always at hand. This work was pushed until several acres were above high water and reclaimed from the surrounding tule. This was done at an immense expense, costing more than one thousand dollars per acre. One of the proprietors—Mr. Wright—died in 1854, and Mr. T. Crozier sold to his brother—Mr. James Crozier—who continued to raise fruit and vegetables until his death in 1882.

These lands were very fertile, producing fruit and vegetables in great quantities, which, at the high prices and good demand, paid very well. As time progressed, the whole island was leveed, and many fine orchards and vegetable gardens have been made. These river gardens and orchards have been profitable, as their products could be shipped to the San Francisco market by steamboats promptly and at little expense.

Below the Crozier ranch was the Napoleon Garden, owned by Mr. Darque. It was only a little strip of land, but on it the old Frenchman made a handsome living, and saved a little fortune on which he returned to his native land in 1870.

On the San Joaquin river, above the mouth of Stockton slough, were many fine fruit and vegetable gardens which were improved at a very early date. As most of the old settlers are not living, it is hard to get any correct data about them.

W. B. WEST.

A Fruit-Drying Plant in Yolo County.

There is always something instructive and suggestive in the arrangements which are made by different producers to handle fruit rapidly and economically. We like to publish such accounts so that each worker can have the chance to get a hint from his neighbors. The following is the Woodland Democrat's account of the drying plant of the Yolo Orchard Co., on Cache creek, near the town of Yolo:

The plan of the orchard was arranged with much care, and evidently with a view of making extensive improvements in the future. The different varieties of trees are planted in blocks and plotted on a map so that at a glance even a stranger will know to what part of the orchard to go for any kind of fruit that may be desired. The drying-grounds, seven acres in extent and almost in the form of a square, fronts on the creek, and in order to keep it clean has been set to clover. A grade for a spur track has been constructed from its western limit to the railroad, and next year the railroad company will lay the track. A shipping platform and possibly a warehouse will be constructed on this spur.

From east to west there runs the full length of the drying-ground, on both the north and south sides, two narrow-gauge railroads for push cars. On the eastern limits there is located the sulphuring, cutting and the sweating-houses. There also runs from north to south a broad-gauge railroad equipped with a car of such peculiar construction that a push car can be transferred to it from the narrow-gauge roads, and again transferred to the sulphur-house. Another broad-gauge road similarly equipped with a transfer car also connects the two narrow-gauge roads in the center of the drying-ground.

The fruit for drying is cut and spread upon trays 3x8½ feet. Fifteen of these trays are then loaded on a truck which runs from the transfer car into the house where the sulphuring process takes place. Suppose we take peaches for an example. After bleaching in the sulphur-house for two or three hours, the car is run out on the drying-ground and the trays spread out in the sun. If the weather is favorable, three days are sufficient for the curing process and the fruit is then taken to the sweating-house and culled. There it remains for ten days, but is turned over every two or three days. The culls are sacked and the smaller fruit put in boxes. It is then ready for market.

This season about one-third of the peach crop was peeled before drying. It is calculated that the peeled fruit will sell for about five cents a pound more than the fruit dried with the skin on. There are two methods employed in peeling the peaches. The first is to use a paring machine before the fruit is cut, and the next is to pinch the skin off after the sulphuring process. This is the most expeditious and there is not so much waste, but the fruit does not look so well as that pared by a machine.

FLORIST AND GARDENER.

The Most Popular Roses.

John L. Howard, president of the Floral Society of Alameda county, writes as follows to the Oakland Enquirer: As a subscriber to the *Gardener's Magazine* of London, I have received and greatly prize the information contained in the inclosed article on the "Election of Exhibition Roses," because it arranges them in the order of the regard in which they are held by the best opinion in England.

Of course we in California have many that are named, but some doubt exists as to the genuineness of some that we have, and to remove this doubt, the writer intends to import some small plants, and after developing them he will use and distribute the buds so that these prize-takers may be multiplied in our midst.

I thought that the information in this article might be interesting and instructive to many of your readers, and I send it to you for such use as you may wish to make of it.

The lists will undoubtedly be of much interest to the amateur rose growers of Oakland, who will also be glad to know that Mr. Howard proposes to introduce plants from England, which will at least have the effect of verifying the names of the most popular roses in this country. The substance of the article in the *Gardener's Magazine* is as follows:

THE VOTE ON MOST POPULAR ROSES.

The vote was taken by sending out printed forms to the principal professional and amateur growers in England, and 50 of them responded.

The vote for the 72 best hybrid perpetual roses resulted in the choice of the following, the number of votes for each ranging from 37 to 16:

A. K. Williams, Earl of Dufferin, Gustave Piganeau, Countess de Oxford, Duke of Edinburgh, Etienne Levat, Mme. Gabriel Luizet, Her Majesty, Marie Baumann, Susanne Marie Bodocanachi, Alfred Colcomb, Charles Lefebvre, Dr. Andre, Dupuy Jamain, Horace Vernet, Louis Van Houtte, Mrs. John Laing, Merveille de Lyon, Ulrich Brunner, Baroness Rothschild, Duke of Wellington, Heinrich Schulthesis, La France, Marie Rady, Xavier Olibo, Duchess of Bedford, Francois Michelin, Mme. Victor Verdier, Camille Bernardin, Countess of Rosebery, Duke of Teck, Fisher Holmes, Marie Verdier, Marquise de Castellane, Prince Arthur, Senateur Vaisse, Victor Hugo, Captain Christy, General Jacqueminot, La Duchesse de Morny, Beauty of Waltham, Comte de Raimband, Jeannie Dickson, Pride of Waltham, Charles Darwin, E. Y. Teas, Lady Mary Fitzwilliam, Margaret Dickson, La Havre, Prince Camille de Rohan, Reynolds Hole, Sir Rowland Hill, Star of Waltham, Violette Bowyer, Abel Carriere, Duchesse de Vallambrosa, M. Norman, Viscountess Folkestone, Marie Finger, Mme. Eugene Verdier, Annie Wood, Victor Verdier, Alphonse Soupert, Lady Heen Stewart, Maurice Bernardine, Auguste Rigotarde, John Stuart Mill, Marguerite de St. Armande, Pierre Notting, Lady Sheffield, Thomas Mills, Marchioness of Dufferin.

When the choice was restricted to 12 hybrid perpetuals, the following were declared the best:

A. K. Williams, Mrs. John Laing, Marie Baumann, Alfred Colcomb, Charles Lefebvre, La France, Gabriel Luizet, Ulrich Brunner, Her Majesty, Gustave Piganeau, Merveille de Lyon, Horace Vernet.

The following were declared to be the best 24 teas and noisettes, the number of votes received by each running from 46 to 31:

The Bride, Comtesse de Nadaillac, Marechal Niel, Marie Van Houtte, Souvenir d'Elise Vardon, Catherine Mermet, Souvenir de S. A. Prince, Souvenir d'un Ami, Anna Ollivier, Hon. Edith Gifford, Ernest Metz, Madame de Watteville, Innocente Pirola, Madame Cusin, Rubens, Madame Hoste, Francisque Kruger, Princess of Wales, Niphetos, Jean Ducher, Madame Lambard, Caroline Kuster, Ethel Brownlow, Cleopatra.

The choice being restricted to the best nine teas and noisettes, the following were declared the victors:

Catherine Mermet, Comtesse de Nadaillac, Souvenir d'Elise Vardon, The Bride, Marechal Niel, Innocente Pirola, Marie Van Houtte, Anna Ollivier, Madame de Watteville.

CEREAL CROPS.

Figures on Wheat Growing.

It is not often that wheat farmers keep a strict account of their business, so that the results of their operations can be put into figures. J. J. Cairns, one of the largest grain growers of this valley, has given his figures to the *Tulare Register*, and we herewith reproduce them:

"Mr. Cairns is the most extensive grain grower in the county, as well as one of the most methodical and, consequently, most successful, also. He keeps accounts and knows whether he is making or losing money and how much, knowing also where he makes it and where he fails to make it.

"Before entering upon a consideration of results obtained, it should be clearly understood that Mr. Cairns' operations have been carried on upon two essentially different kinds of soil. One is the red land of the foothill country, and the other the sediment land of the lower valley. There was no irrigation upon either class of land, further than a small accidental area irrigated by overflow, and this was not sufficient to materially change comparative results.

"The past season Mr. Cairns has farmed 17,650 acres of grain land, of which 7650 acres were of the lower or sedimentary soil, yielding 26,735 sacks or 66,837 bushels, an average of a little less than 8¾ bushels per acre.

"The red lands did better. The 10,000 acres yielded

56,272 sacks or a trifle more than 14 bushels to the acre. Most of this grain was wheat, but there was some barley and a few hundred sacks of oats, and altogether there was 83,007 sacks or 207,500 bushels of grain as the crop of one Tulare county grain farmer. As it takes the product of a trifle less than half an acre in wheat to keep one person through the year, one who, like Mr. Cairns, produces breadstuffs enough to sustain a city of 35,000 people, cannot be said to live in vain.

"As to the profits of it, Mr. Cairns says that to hire the work done he can put in a crop for \$1.50 per acre and harvest it for the same. The sacks will cost 8 cents each. Allowing that one-fourth of the crop goes to the owner of the land for interest, Mr. Cairns' account ought to stand about thus:

Returns from sediment land—7650 acres, yielding 66,837 bushels, at 50 cents.....	\$33,418
Less cost of growing.....	\$22,950
Less sacks for his share.....	1,604
Less renter's one-fourth of crop.....	8,355
Net returns on sediment land.....	\$3,909

"It will be seen that on the sediment land Mr. Cairns barely gets out with a whole skin, but as he did much of the work of planting and harvesting with his own outfits, it is probable that a somewhat larger net margin stands to his favor than our figures give credit for. The trouble with the sediment land for dry farming is, that it is quite rich and always starts out with the intent of yielding a great big crop, but there is so much vegetation on the ground and the demand for moisture is so great that, if rains fail when they are needed, the crop is quickly burnt up and the yield is small; but, on the other hand, a sufficiency of rain, or one irrigation a year, will make this sediment soil yield very heavy crops indeed—heavier, perhaps, than the red lands under the most favorable circumstances.

"The 10,000 acres of red lands will show something better in the way of results:

140,680 bushels, at 50 cents.....	\$70,340
Less cost of growing.....	\$30,000
Less sacks for his share.....	3,376
Less rent of land.....	17,585
Net returns on red lands.....	\$19,379

Net returns on sediment land.....	509
Total net returns.....	\$19,888

"It should be borne in mind that Mr. Cairns' books may not, and probably do not, show just the results here given, for we have treated the entire crop as though it were wheat, whereas there were several thousand sacks of barley and a few hundred sacks of oats; but what is here given is a fair estimate of the results of dry farming in an ordinary year, with extraordinarily low prices. With only \$1 an acre margin of profit, a man has either got to have a good many acres, or a very small family, if he comes out ahead. But with land that can be irrigated once in a year or two, a very different story is told and the small grain farmer has some sort of a chance."

THE FIELD.

The English Tenant Farmer.

Prof. John Wrightson writes for the *Agricultural Gazette* the following sketch of a day's work of an English farmer:

The farmer is not the sluggard which some persons wish to depict him. He is out betimes and often has visited every field by nine o'clock in the morning. His breakfast hour is seven o'clock, and his home is in the saddle. He is out at five, or at least at six o'clock, and does his farming while merchants and shopkeepers are in bed. We know him well, and that he is pretty wide awake. He is out and about, and sees the teams leave the stable on or before the stroke of seven, and in some earlier counties at six. He sees the milk cooled and the pigs fed, and is first in one place and then in another, so as to keep all going. Now discussing the next move with the shepherd, and now taking counsel with his dairymen; now finding fault with the hoers, and again visiting outlying stock to see that they have pasturage and water. A day's farming is unquestionably a pleasant day. There are always the sheep to visit, and the cattle to overlook. It is curious to find that no walk or ride around a large farm is ever fruitless. Never does a farmer go around his holding without feeling pleased that he went. Some sheep laid "awkward," some animal in distress, some man or boy doing what he ought not, some stray remark from responsible lips worth attention. He goes on his way, visiting, perhaps, the steam cultivator at work, and from thence to his teams, and on to his sheepfolds. He returns to see the milking of his cows and the storing of his apples. The extensive farmer has but little need to take part in manual labor. He superintends, exhorts, finds fault when necessary, selects animals for sale or for breeding purposes, inspects watercourses, comes to conclusions as to cropping and stocking, and thinks over ways and means. The good farmer is not a stay-at-home man. He frequents markets, where he exchanges opinions with his neighbors. He attends sales and fairs, and picks up bargains. In many cases a day from home means a quick ride round before he leaves, and a walk or ride round when he returns. His head man furnishes all particulars as to what has been doing, and his carter, his dairymen and his shepherd are all men worth listening to. A shrewd man, able to discuss all questions concerning stock and crop, horse and steam-power, well up in prices and work. No man combines more knowledge of animals and crops, implements and manures, foods and feeding, men and land, than a good farmer, such as we are proud to know very many even in these bad times. He struggles hard to pay his rent, and, if possible, make a profit, in spite of circumstances most adverse. He is accused of trying to force down rents, but those who know all the ins-and-outs of the business, as we do, know that it

requires all his knowledge and resource to keep out of losses, let alone profits. We do not say that he is always a scientific or literary person, but he obtains the sort of information he requires by contact with his fellows and a fair amount of reading. What men have we known during the past thirty years among the good farmers of England and Scotland!

The English Need of Brewing Barley.

As so much California brewing barley is being shipped to Great Britain this year, the following account of the shortage of the home crop is interesting. The *Mark Lane Express* says:

Wheat has one purpose and one use. Barley has three, for when unfitted for human food in the shape of beer, it is converted into other forms of food through the agency of the miller and the pig. How much of this season's crop will be brewed and how much will be ground, is not yet quite clear. Of some things we can be quite certain. We have less barley, and in the scant crop garnered we have a greater diversity of quality than any living man has seen. While on the one hand, some samples are so nearly perfect that they are nearer perfection than any sample grown since 1868, the great breadth of the crop is most defective. The seed time was considered good by many experienced farmers, although not generally satisfactory. Then followed one of the most remarkable periods of dry sunshine ever known, succeeded by a spell of soaking rains and a subsequent dry harvest that left little to be desired.

Yet, in summing up the position, we are now certain that less really good prime malting barley can come to market this year than in any recent year, and that the surplus for feeding purposes is abnormally small. Of the malting corn, some will be superb, but the bulk will be defective. It will be cold and irregular, or uneven to a degree never seen before. The good samples will possess full vitality and be able to gladden the malster's heart, for the swell or increase will exceed anything known for a quarter of a century. The great bulk has two distinct growths, and has been ripened during two periods. This is a serious defect, for which the chief remedy is to give a good sweating in stack for as long a period as possible. For feeding purposes it is immaterial, but for malsters' use the cardinal virtue next to vitality is uniformity. Consequently, all samples of uniform growth should this year command good prices. When malsters' demands are satisfied, the rest will possess exceptional feeding value, and for seed purposes the improvement caused by the brilliant summer will for years to come exert an influence for good. It is strange that such a summer, conspicuously marked by unexampled sunshine, should have produced so defective and short a crop.

When the year's balance sheets are struck they will be worse for the farmer than for either the malster or brewer. The only possible remedy now can come from satisfactory prices. In this connection it is well for farmers to bear in mind the fact, hitherto so little considered, that British barley cannot be beaten for quality, and, small as is the area of our arable land, Britain is still, with two exceptions, the largest barley-growing country in the world.

THE DAIRY.

Greeting from Wisconsin for Our Dairy Association.

TO THE EDITOR:—I read that the dairymen of California are about to organize into a State Dairymen's Association. Having seen the great good coming from such organization in this State, I feel impelled to write a few words of encouragement at this time, hoping that what is said may be in some measure helpful.

Many years ago stalwart men like Hiram Smith, Chas. R. Beach, Chester W. Hazen, C. V. White, R. S. Houston, W. D. Hoard and others, banded themselves together and worked patiently and most unselfishly for the upbuilding of Wisconsin's dairy interests. To-day, as a monument to their effort, we have about 1600 creameries and cheese factories, the output of which I estimate at not less than half a million dollars per week at this season of the year. In time, their work was recognized by the State, which published the annual report of the association, without charge, and later added to this a gift which from time to time has been increased until for several years past it has been \$2000 per year. Nearly all of this \$2000 is now expended in sending out traveling instructors who visit factories, mostly cheese factories, on request, rendering valuable assistance in time of need. Each factory pays \$5.00 for a visit from the instructor, the association making up the remainder of the expense.

Not only has the association worked toward the upbuilding of factories and dairying generally, but not content with what it had accomplished a few years since, it began to push for a dairy school, the leader of the effort being Hiram Smith. As a result of these efforts, there is now on the university grounds a dairy school building worthy, I trust, of the great interests it represents. Hiram Smith hall, as this building is called, has a frontage of 95 feet, and is three full stories in height, with creamery and cheese room on the first floor, room for farm dairying, bath rooms and lockers for the student's work clothes on the second floor, and laboratories and lecture room on the third floor. The building has cost \$40,000, which sum I believe has already been paid back to the State through the students sent out from it. The school accommodates 100. Each winter for two years past more have applied than we have been able to accommodate, and at this writing 83 applicants have registered from ten different States for the term opening January 3, 1894. It now looks as if we should have to turn away fully as many as we can accommodate.

While this is true for the dairy school proper, which edu-

cates young men for work in cheese factories and creameries, we have accommodations for all who wish in our short course in agriculture, in which we give excellent drill in farm dairying, including cream separation by means of all the modern hand separators, deep setting, etc. Our short course students are thoroughly drilled in the use of the Babcock milk test and receive an excellent course of lectures by Dr. Babcock himself. Then we have lectures on the breeding and feeding of dairy cattle, the judging of horses, cattle and sheep; shop work, including blacksmithing, wood-turning, etc.; instruction in farm bookkeeping and business accounts. This is just the course of instruction needed by any young man who wishes to operate a dairy farm. Last year we had 68 students in the short course of agriculture, and 175 in all in the College of Agriculture.

From my knowledge of your State I believe the dairy possibilities are very great indeed. The coast region of course offers special advantages, but I believe there are other sections, not only in the northwest part of the State, but clear down to San Diego, where dairy cows can be profitably kept. The fact that you can have green feed for stock the year round, much of which can be raised or secured at very small cost, is a feature of great importance. Dairy interests in California should be greatly enlarged, not only along present lines of butter and cheese-making, but there are excellent opportunities, I think, for making a higher grade of cheddar cheese than is now generally produced, and also some of the finer kinds of cheese, either of brands similar to some of the old world, or varieties new and distinct to California. No agricultural industry profits more through organization than does dairying and I hope to soon know that there is a California State Dairymen's Association, thoroughly organized and working harmoniously for the interest represented in its name.

W. A. HENRY,

Dean College of Agriculture and Director of the Wisconsin Agricultural Experiment Station.
Madison, Wis., September 29, 1893.

[We are very glad to hear from Prof. Henry on this pertinent question. No one is better fitted than he to write of dairy progress in the United States.—ED.]

The Flat Pea as a Fodder Plant.

We have already published the favorable report from the Agricultural Experiment Station at Berkeley of the growth and probable forage value of the flat pea (*Lathyrus sylvestris*), which has been on trial on the University grounds for two years past. Many roots were sent out to California stockmen last winter, and another distribution will begin in December next. The plant here makes a wonderful growth without irrigation.

Those who are experimenting with it in this State will read with interest the following account which Director Clute of the Michigan Station prepared for the *American Agriculturist*:

The plants of the flat pea in the Michigan Station experiment field went through the severe cold of last winter without injury. Not a plant was killed, although the mercury went down to 20° below zero Fahr. In some slight depressions in the field, ice formed over the plants, and as spring came on I found that the crowns of these plants were killed. But in every case the killing seemed to extend down only about an inch, and the roots sent out from the live part sprouts which grew luxuriantly. By March 31st the shoots were well started. In some parts of the field, where there had been a good covering of snow, and the lower sprouts had been further protected by a mass of sprouts above them, I found these lower sprouts of last fall's growth still green when the snow disappeared. From the last of March until the middle of May, we had much cold weather, and all vegetation started slowly; but by May 20th the plants of flat pea nearly covered the ground with a fresh, crisp mass of forage, having much the taste of ordinary pea-pods. The field received no cultivation last spring. It would have been easy, of course, to have run the cultivator between the rows early in the spring, but, as the ground was loose by the action of frosts, this was not necessary. It was not necessary to cultivate to keep the weeds down, for the plant itself started so vigorously, and soon covered the ground so completely, that nothing else had any chance. The two-year-old plants were in rows 15 inches apart, and the plants were four inches apart in the row. The one-year-old plants were in rows 30 inches apart and as thick in the row as they grew the previous year, generally much closer than four inches apart, so that there were fully as many plants to a square rod on this part of the field as on the older part. But as the rows were twice as far apart, the growth did not cover the ground quite as early in the season as did that of the two-year-old plants. Through June there was good weather, with enough rain. The flat pea grew with great luxuriance. It covered the ground with a dense, tangled growth. At present, July 20th, the plant has crowded itself into billows of verdure. It stands fully three feet high, but if it were possible to disentangle a single shoot from the mass, it would be much longer than three feet—probably not less than six feet. It began blooming about July 1st, and kept sending out blooms in profusion, until now there is a great quantity of flowers and partly-grown pods. On the 10th of July one square rod of the two-year-old plant was cut, which yielded at the rate of 16 8-10 tons of green forage per acre. This was carefully cured, and gave at the rate of four tons of cured hay per acre. The hay is very bright in color, and has a most agreeable odor. Cattle in the stalls and horses eat it with avidity.

Its luxuriant growth, combined with the habit of the pea family to send out numerous tendrils that twine around everything that they reach, threatens to be a serious obstacle in making hay from the plant. The sprouts are so intertwined that they cover the whole surface as with a

felted garment. A team of horses can walk through the field with difficulty. If a mower were put in at the edge to cut the forage, having gone once across, the cut portion would be closely joined to the adjacent uncut part by the numerous intertwining sprouts and tendrils. It is difficult to mow it with a scythe, for the cut part will not roll over into a swath, but hangs attached to the uncut part. Some kind of a cutter will have to be attached to the mower, which will sever the mown strip from the adjacent part. Of course this trouble would not appear if the fields were pastured.

The difficulty of making hay of the plant can be forgiven in this State if it will only resist drouth and give good pasturage on dry lands. This it promises to do.

POULTRY YARD.

Care of Sitting Hens.

I am a firm believer, says Fanny Field, in having a separate place for the sitting of hens where they can do their work undisturbed by the layers. It does not pay to fix up a nice nest especially for a sitter and then have your work all upset by some perverse layer which, no matter how many other nests there may be handy, will insist upon crowding in with the sitter. If you have no separate building or separate room that you can use for the sitters, you can surely fix up a place somewhere. A temporary partition either of boards or lath across one end of your poultry-house will furnish the needed room. If you can keep this part of the poultry "kind o' dark"—in a sort of twilight, by keeping a thick curtain over the window except at feeding time—so much the better, for hens when sitting like a place where it is not very light.

Feed and water your sitters regularly once a day, and have a supply of gravel and a dust bath in the room. Whole corn is the best food for sitting hens. If you feed your sitters regularly about the same time each day, they will come off at that time, and while they are off you can take a glance at the nests and see that everything is all right. After the hens are all back on their nests, which will be in from 10 to 15 minutes, usually, you can put things to rights, put down the curtain and depart in peace. Beyond this feeding and general watchful oversight of your sitting hens, let them alone. A good many beginners fuss altogether too much with their sitting hens.

When the chicks are hatched let them alone. I know that it is hard, especially for the beginner in poultry-raising, to resist the temptation to poke about under the old hen to see "how many eggs have been hatched," and how many are going to hatch, remove the empty shells, etc., but it is not necessary; in fact, the hen will get along much better without any of your meddling. The danger that the hen will tramp any chicks to death, or that any of the pipped eggs will be "capped" by empty shells, is really very small.

After the chicks are out let the hen alone until she gets ready to leave the nest of her own free will. If you don't bother her she will usually stay on the nest until the next day after hatching. Don't be afraid that the chicks will starve or even get "stunted" in that first 24 hours after hatching. Early forcing chicks to eat before the egg yolk, which was absorbed the last thing before the chick came out of the shell, has had time to digest, is one cause of mortality among young chicks.

Roosters Ruled Out.

Perhaps it is safe to say, writes an exchange, that a large majority of those who keep poultry are of the opinion that, in order to have the hens under the best condition for laying, a male must be in the yard with them. If eggs are desired with the object of hatching chicks, it is necessary to have a male with the hens; but as hens will lay just as many eggs when no males are present as when with them, the feeding of a lot of useless males may be discarded. Recent experiments by Mr. W. P. Wheeler, at the New York Experiment Station, Geneva, in which he selected four yards of pullets in order to test the values of the males, demonstrated that males are entirely unnecessary. In fact, the pullets in yards containing no males not only laid more eggs than did the pullets that were with males, but also produced eggs at less cost.

The demonstration of this fact by an actual test will effect a revolution in the keeping of laying hens. It means a saving of food, less disposition to quarrel, and cheapening of the cost of producing eggs as well as a saving of space occupied by males which should be given to hens or pullets. Those desiring to hatch chicks can select a dozen of the best females and confine them in a yard with a pure-bred male. As one male can sire a thousand chicks a year, it is plain but few males are necessary. The usual practice is to allow one male to ten hens, which compels the feeding of a hundred males if as many as a thousand hens are retained.

The greatest advantage derived, in addition to the increase of eggs and the saving of food, labor and space, is that eggs from hens not with males keep three or four times as long as will eggs from hens that are with males. If eggs are to be preserved, it is detrimental to keep males in the flock. When it is considered that a large number of males become expensive, and that hens will produce more eggs when the males are not present, and also that the problem of preserving eggs is solved by keeping no males, the farmer will do well to hereafter make it a rule to do away with males entirely unless chickens are to be hatched. With the non-sitting breeds, where eggs only are desired and not chicks, the male is a useless member of the flock.

THE HOME CIRCLE.

Father's Lickings.

Come, Harvey, let us sit awhile and talk about the times
Before you went to selling clothes and I to peddling rhymes—
The days when we were little boys, as naughty little boys
As ever worried home folks with their everlasting noise!
Egad! and were we so disposed, I'll venture we could show
The scars of wallpings we got some forty years ago;
What wallpings I mean I think I need not specify—
Mother's whippings didn't hurt, but father's—oh, my!

The way that we played hookey those many years ago—
We'd rather give 'most anything than have our children know
The thousand naughty things we did, the thousand fibs we told—
Why, thinking of them makes my Presbyterian blood run cold!
How often Deacon Sabine Morse remarked if we were his
He'd tan our "pesky little hides until the blisters riz!"
It's many a hearty thrashing to that Deacon Morse we owe—
Mother's whippings didn't count—father's did, though!

We used to sneak off swimmin' in those careless, boyish days,
And come back home of evenings with our necks and backs ablaze;
How mother used to wonder why our clothes were full of sand,
But father, having been a boy, appeared to understand.
And after tea he'd beckon us to join him in the shed,
Where he'd proceed to tinge our backs a deeper, darker red;
Say what we will of mothers, there is none will controvert
The proposition that our father's lickings always hurt.

For mother was by nature so forgiving and so mild,
That she inclined to spare the rod although she spoiled the child;
And when at last, in self-defense she had to whip us, she
Appeared to feel those whippings a great deal more than we!
But how we bellowed and took on, as if we'd like to die—
Poor mother really thought she hurt, and that's what made her cry!
Then how we youngsters snickered as out the door we slid,
For mother's whippings never hurt, though father's always did.

In after years poor father shriveled down to five feet four,
But in our youth he seemed to us in height eight feet or more!
Oh, how we shivered when he quoth in cold, suggestive tone:
"I'll see you in the woodshed after supper all alone!"
Oh, how legs and arms and dust and trouser-buttons flew—
What florid vocalisms marked that vesper interview!
Yes, after all this lapse of years, I feelingly assert,
With all respect to mother, it was father's whippings hurt!

The little boy experiencing that tingling 'neath his vest
Is often loath to realize that all is for the best;
Yet, when the boy gets older, he pictures with delight
The bufftings of childhood—as we do here to-night.
The years, the gracious years, have smoothed and beautified the ways
That to our little feet seemed all too rugged in the days
Before you went to selling clothes and I to peddling rhymes—
So, Harvey, let us sit awhile and think upon those times.

—Eugene Field.

A Clever Ruse.



At the breakfast table, one fine morning in June, Mr. Allerton turned to his son and said:
"John, if you will hoe the weeds out of the little garden this morning, you may go fishing as soon as the job is done."

Nothing could have pleased John better than this. He was a sturdy lad, 13 years of age, and a faithful worker, but fishing possessed attractions for him that were almost irresistible.

The creek in which sported the perch, drubs and bullheads, that haunted his dreams almost nightly, flowed through a grove three miles distant from his house, and beneath the shadows of great elms and sycamores lay the "lake," an offshoot from the creek, that was both wide and deep, where fishing was always prime.

Immediately after breakfast John set to work with a will, and in less than three

hours the last weed fell beneath his vigorous cuts. Half an hour before the task was finished he called to his mother, and, informing her of his progress, asked her to prepare a lunch for him, so that he might start without delay.

His only sister, little six-year-old Mabel, overheard this, and, going out to where he was at work, began begging him to let her go with him.

"Oh, it's too far for you to walk," he replied. "You are too small to travel so far. And, besides, you'd make so much noise that I wouldn't get a fish all day. And don't you know the big mosquitos and gnats would just chew you right up?"

"Please let me go with you, Don," pleaded Mabel. "I won't make any noise, and I will walk fast, and I won't get lost, and you won't let the gnats and things eat me. Mamma will let me go if you say I may. Please let me go, won't you, Don?"

This was said in such a plaintive, coaxing way, that John had to surrender. "Oh, you can go, I suppose; but you'll be lots of bother!"

"Oh, no, I won't, Don!" she exclaimed, her eyes sparkling with delight. "I'll be still, and walk fast, and won't fall in the creek, and—"

"Well, I'm nearly done here. Run into the house and get ready."

"All right. I'll be weady in a minute!" and away she scampered.

"Now you must be real good and do just as John tells you," said Mrs. Allerton, as she fastened a broad-brimmed straw hat on the curly head. "I will place this piece of mosquito netting in the lunch basket, and if you get sleepy John will spread it over you while you take a nap."

"Oh, I won't get sleepy, mamma. I'll help Don fish and pick flowers for you. I won't have any time to go to sleep!"

A few minutes later John entered, carrying in his hand a small pailful of bait, which he had gathered while hoeing the garden, and he was delighted to find that lunch, fishhooks and lines, and everything needed, were packed in the basket and ready.

After kissing mamma good-bye, they set out, John carrying the basket and Mabel trudging along by his side, and chattering away as fast as she could.

When they reached the shady banks of the creek both were quite ready to heartily

enjoy their lunch. Mabel spread a newspaper that was in the basket on the grass, and set out the sandwiches, doughnuts, tin cups and flask of milk, while John cut a pole and attached his line to it. Then they sat down, and Mabel presided over the very enjoyable meal in the regular picnic fashion. After disposing of the lunch, John lost no time in getting his hook into the water, and in less than five minutes drew out a fine perch. For over three hours Mabel sat by his side, sharing his excitement and enjoying the sport quite as much as he. Finally she began to yawn, and in a few moments was sound asleep.

John pulled a quantity of grass, and, making her a soft bed in a clean, shady spot, carried her to it, covered her with the mosquito netting, and then returned to his fishing. Time slipped away so fast that it seemed but a few minutes, until the lengthening shadows and increasing coolness of the breeze warned him that it was time to start homeward.

He roused Mabel, packed his long string of fish in the lunch basket, with grass about them, and they started.

On the way Mabel would stop to pick almost every flower she saw for a "bouquet for mamma," and this delayed them so much that they made slow progress. Finally John's patience became exhausted, and he called to her:

"Now, Mabel, if you don't hurry along I shall run off and leave you!"

"I ain't afraid!" replied the little midget, confidently.

"Well, you'd better be 'afraid,' because I'm in a hurry. We must get home before sunset, or we'll get into trouble!"

"I'm coming as fast as I can. I can't run all the time."

"Well, if you didn't stop to pick every weed you saw, you'd get along lots faster."

"Ain't weeds; they's flowers for mamma."

It was nearly sunset when they reached a turn in the road which led them around a large pasture belonging to a neighbor. By crossing this pasture a walk of nearly three-quarters of a mile, over a sandy road, would be avoided. In the pasture was a herd of dairy cows, all quiet, gentle animals, and it was perfectly safe for any one to cross when the bull was not at large. John climbed upon the fence and carefully surveyed the herd, which was quite a distance from the

path they would take, and, as he could not see the bull anywhere, he concluded that he was safe in the strong pen where he was kept most of the time. Feeling quite satisfied on this point they started across.

When something over half way, John was terrified to see the bull rise up out of the grass a short distance from the herd.

His first thought was to lie down, but he saw that the animal had observed them the moment he arose. Instantly dropping the basket of fish he grasped Mabel by the hand, saying, in a low, earnest tone, "Don't speak a word, Mabel, but do just as I tell you—run!"

Mabel glanced up in surprise, but the look on John's face frightened her into silence. They hurried along as fast as they could go, John intently listening for the first sound that would indicate the bull was in pursuit.

It came before they had gone 100 feet—a sullen, defiant bellow, that brought an earnest prayer from John's white lips.

Mabel knew of the dangerous character of the bull, and, young as she was, instantly realized the danger they were in. "Oh, Don!" she cried, in terror. "Don't speak!" replied John, as he dragged her along as fast as her little legs could carry her.

Another hundred yards and they would be safe. John glanced backward and saw at once that the case was hopeless. With Mabel he would be utterly unable to reach the fence. The infuriated beast was coming at a gallop and in a very few seconds would be upon them. Just before them was a shallow ditch, about 12 inches deep, and, quick as thought, John thrust Mabel flat down into it. "Lie there!" he said, almost fiercely. "Lie there, and don't stir till I tell you!"

Then, bounding over her, he darted aside about 50 feet, then away for the fence like a deer, with the bull in hot pursuit.

It was a close call. John threw himself under the fence just as the animal made a desperate lunge at him. The strong barbed wires saved him, throwing the bull back on his haunches, and for a few moments he lay gasping for breath.

Rising to his feet he saw, to his great dismay, that the whole herd of cows was coming toward him. "What if they scent Mabel?" thought he. "She will surely be killed!"

Taking off his jacket, he began flaunting

Royal Baking Powder

is Highest of all in

Leavening Strength.

"From actual analysis made by me, I pronounce the Royal Baking Powder to be the strongest and purest baking powder before the public."

W. J. Henzlee M. D.

Prof. Chemistry, Cal. College of Pharmacy of the University of California,
Chemist State Board of Horticulture, etc.

—U. S. Gov't Food Report.

it in the face of the now doubly enraged animal and running along the fence toward the upper end of the pasture. The bull rushed along with him, bellowing so loud and fiercely that all the cows came galloping after them. In this way John led them a full quarter of a mile from where Mabel lay. Then, climbing to the top of another fence, which here joined that surrounding the pasture, he called to Mabel at the top of his voice. It was a calm evening, and she heard him. Slowly and cautiously rose the curly head above the grass, higher and higher, until she stood upright.

"Run to the fence as fast as you can!" shouted John.

That was enough. There was a pattering of little feet and a wild tossing of curly locks, and in a few moments a little, frightened, white-faced girl rolled under the fence and into her father's arms.

Mrs. Allerton had heard the bellowing of the bull, and almost instantly divining the cause, had sent her husband and the hired man across the field to the pasture. They had come straight to the path which all who crossed the pasture took, and had just reached the fence when they heard John's call. When they saw the little thing coming flying through the grass, they were too much amazed to move or utter a word.

That night Mrs. Allerton gently brushed back the brown curls and kissed the white forehead of her little sleeping girl, then, going into John's room, she drew his head upon her bosom and told him, as only a mother can, how proud she was of her brave boy.—American Agriculturist.

Hints on Dress.

A late caprice brings in the use of a yoke of velvet at the top of blouse waists for boys from five to ten years, says the Philadelphia Record. This yoke is made so deep as to cover the top of the chest as well as the shoulders. A very full sleeve is pleated at the top and a cuff effect obtained by long stitched-down pleats running almost to the elbow. The yoke fastens on the side of the right armhole and there are loops and hooks for the purpose. It is sewn down on the left side and must be brought over to the right side after the blouse is buttoned. The top of the blouse appears straight on the shoulders from the stitching down to the pleats and the yoke is a separate piece sewn as above stated on one side only. The Knickers are roomy and reach but a little below the knee. A very wide sash of striped crepon is frayed out on its lower edge and loosely tied on the left side.

For making such a suit, cheviot, cashmere, lightweight cloth, foulard and wash silk are used. A very neat effect is obtained by using pistache colored crepon with the yoke in dark red velvet. The Knickers are in cloth and match the blouse. The sash should show red, pistache, black and light yellow in the stripes. A round collar of white or ecru guipure with cuffs of the same over velvet cuffs complete the effectiveness of a very stylish suit made as described.

A very pretty kilt skirt has the jacket with square turned-over collar above straight fronts with a central buttoning. The sleeves are roomy and the edge of the jacket hangs low enough to hide the waist line. A full kilt of the same material in regular pleats extends below the knees. A broad silk tie such as is now fashionable for boys, both large and small, finishes the effect of the top. Cheviot, crepon, cashmere and foulard are all made use of for such suits for boys from five to seven. The only trimming necessary on a suit like the above described is narrow silk, woolen or linen braid or galloon, and a row of close set pearl buttons.

Some of the frocks worn by very little boys of three to four have a yoke in lengthwise puffs, below which a wider puff crosses the figure at the belt line. The sleeves are large and full to the wrist with a narrow band and ruffle. Below the puff the frock hangs somewhat lower than the knees.

A full blouse with deep straight cuffs and a full sleeve, neatly belted in by a thong belt of the material, has below it a skirt made slightly full all around and widening at the hem, which is three inches deep. There is a band collar above two rows of shirring and two lengthwise bands of insertion running to the waist.

A very stylish blouse suit for a boy from five to eight has square fronts with moderately wide revers and sleeves which without being loose are easy. It has a yachting collar. The Knickers are short and terminate at the knee and are close-fitting about the hips. The suit may be in cheviot or in tweed, or if preferred, flannel. Navy blue is very fashionable, also gray, with black braid and black silk buttons as a decoration on the sides of the Knickers and beyond the revers on each side.

Burns Knew Better.

It was the fate of a practical and patriotic Scotchman of Rochester to assist at a meeting of a certain improvement society, the while a Shakespearian scholar dilated upon the virtues of his favorite writer. At the close of the meeting the stranger approached the lecturer, and the following dialogue ensued:

"Ye think a fine lot o' Shakespeare, doctor?"

"I do, sir," was the emphatic reply.

"An' ye think he was mair clever than Robby Burns?"

"Why, there's no comparison between them."

"Maybe no, but ye tell us the nicht it was Shakespeare who wrote 'Uneasy lies the head that wears the crown.' Now, Robby would never hae written sic nonsense as that."

"Nonsense, sir?" thundered the indignant doctor.

"Aye, just nonsense. Robby would hae kent fine that a king, or a queen either, disna gang to bed wi' the croon on their heads. They hang it ower the back o' a chair."—Exchange.

Retribution Sure and Swift.

"Father," said Rollo, affirmatively, "Tom Ochiltree and I broke a window in the schoolhouse to-day." "Well?" said Mr. Holiday, inquiringly. "Well, Tom said he didn't know anything about it and the teacher licked him for lying, and I owned up and said I did it, and then he licked me for breaking the window." "That seems hard," said Rollo's father; "but Tom's punishment was greater than yours, for his conscience upbraided him." "I don't think he has any," said Rollo, sadly, "and, besides, I got the worst of it anyhow, for Tom licked me after school for owning up." "I know, my son, but remember the wicked are exalted for a little while, but are gone out and brought low." "I guess that's so," said Rollo, greatly comforted, "for just as he was climbing over the fence, I caught him on the head with a brick that sent his left ear about two inches ahead."—Burdette in Brooklyn Eagle.

Interested In Beards.

Captain H. Bower, of the Seventeenth Bengal Cavalry, is one of the most recent travelers in that secluded country of Tibet, which, in all its barrenness, is gradually being made known to the West by the explorations of modern travelers. From an account which the gallant captain gave of his experiences in the country, at the Royal Geographical Society lately, it would seem that if ever Tibet should be opened up to trade, remedies for promoting the growth of the beard are likely to find a good sale there, for, according to Captain Bower, "anything like a decent beard is almost unknown in Tibet, and the natives expressed great admiration for the beards of the travelers, and wanted to know if they could supply them with any medicine that would make theirs grow."—American Druggist.

How He Lived.

"Time I was out in Colorado," said the man with the ginger beard, "I was chased by the Injuns into a cave, and had to stay there three months without anything to eat." Here the man with the ginger beard looked around defiantly, expecting some one to doubt his assertion; but, as no one spoke, he continued: "I s'pose I would ha' starved if it hadn't been for my wife and family back East. Whenever I would git to thinkin' of them, a big lump would rise in my throat, and, by swallerin' that, I kep' myself from starvin'."

An Expert Outdone.

"Say, mister," said the stranger who was inspecting the pre-historic animal department of the museum, "who drew them pictures?"

"Prof. Slimson."

"Did he 'magine he saw 'em?"

"In a certain sense, I suppose so."

After a silence, he resumed reluctantly:

"Well, I must confess that he's seen some that's bran' new to me. An' I've been to a 'nebricate asylum three times."

Lew Wallace's Royalties.

The presence of Gen. Lew Wallace in the city has revived gossip in literary circles about the royalties he received from "Ben Hur." One of those connected with the Harpers' house said recently that at the last settlement Wallace was shown to have re-

ceived nearly \$140,000 in royalties for that book. If that is so, it is the largest sum ever earned by a romancer, at least by an American.—Philadelphia Press.

Woman Suffrage in New York.

In reply to a New York inquiry about suffrage for women in that State, we give the law as it passed the last Legislature. Women have a vote for school commissioner under the following conditions: They must be 21 years old, a resident one year in the State, four months in the county, 35 days in the election district, and be citizens of the United States. They must be registered on the second or third registry days, which is done on a separate book. They vote only the ticket headed "School Commissioners," and will not be given any other ticket than this.

It is not much temptation to women to come out to vote only for school commissioners when a large proportion of the male population can only be got to the polls when a President is to be chosen. Yet if women do not rally in full force for this little bit of electoral right the fact will be proclaimed as evidence that women do not care for the right of suffrage. Really the election of school commissioners is an important matter, though this vote was given to New York women in evident belief that it involved no matter of moment, because no patronage or money depended on the elections whose result woman's vote might influence.

DOMESTIC ECONOMY.

BROOKLYN COOKIES.—Three even cups of powdered sugar and one full cup of butter mixed to a cream; add four eggs well beaten, one level teaspoonful of soda dissolved in a third of a cup of milk, and flour enough for a stiff batter. Roll out thin, cut in rounds, sprinkle with granulated sugar and bake. Caraway seeds can be added if liked.

SPICE CAKE PUDDING.—Two cups of sugar, one cup of butter, one cup of sour cream, four cups of flour, four eggs, one teaspoonful of soda, seven tablespoonfuls of brandy or wine, one nutmeg, one tablespoonful of cloves, two tablespoonfuls of cinnamon and three-quarters of a pound of seeded raisins. Bake in a scalloped cake pan, and serve with a liquid sauce.

A PLAIN BEEF STEW.—Take four or five pounds of the round of beef and put it into water enough to cover it. When the water has been thoroughly skimmed, add two turnips, two carrots and two onions, chopped small, half a dozen cloves, and salt and pepper to taste. Cover close and boil very gently four or five hours. A short time before dinner add a teaspoonful of sweet majorum, half a cup of tomato ketchup and a tablespoonful of flour wet smooth in cold water. This is a very economical dish. The beef is very good cold and the soup is excellent.

QUINCE JELLY.—Take the parings and hard parts round the cores, of half a peck of orange quinces, after canning the best portions, cover them with cold water, and boil slowly several hours; add more water, if needed to keep them covered. Turn into a flannel bag, and let them drip all night. In the morning, boil the juice twenty minutes, and skim well, then strain it again through a very fine flannel. Measure the juice, and add to it three-fourths as much granulated sugar; put it on to boil again, and boil until it jellies on the edge, or when turned on to a cold plate. Then skim again and turn into glasses.

CREAM SAUCE.—This is one of the things one rarely finds perfectly made. Those who have tried to make it good and failed, I beg to try the following method of making it: Take an ounce and a half of butter and a scant tablespoonful of flour; mix together to a paste; when smooth, add half a pint of warm milk, a small teaspoonful of salt, and a little white pepper, or a dash of cayenne. Set it on the fire, and let it boil till it is thick enough to mask the bottom of a spoon transparently; then add a squeeze of lemon juice, and another ounce and a half of fresh butter; stir until quite blended. This sauce is the foundation for many others, and for some purposes the beaten yolk of an egg is added, when first on the boil. Capers, chopped mushrooms, chopped celery or oysters may be added, according to the use for which it is intended. The object of adding the second butter is because boiling takes away the flavor of the butter, and by stirring half of it in without boiling it, you retain the flavor.

Nerve Tonic

DR. WILLIAMS' PINK PILLS FOR PALE PEOPLE

50c. per box.
6 for \$2.50.

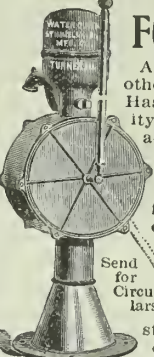
Blood Builder

Send for descriptive pamphlet.

Dr. WILLIAMS' MEDICINE CO.,
Schenectady, N.Y.
and Brockville, Ont.

Water Queen

FORCE PUMP.



Send for Circulars.

(Our AERATOR Pump, pumps water and air at the same time.)

The Stimmel & Hook Mfg. Co.,
Turner, Illinois.

An improvement on all other methods of pumping. Has four times the capacity of the so-called double-acting pumps. Costs less, weighs less, wears longer. Is easily operated and will not freeze. All attachments of the best material. Adapted to hand, windmill or steam power. Every pump guaranteed for strength, durability and capacity. No charge if not as represented.

WEBSTER'S INTERNATIONAL DICTIONARY

Successor of the "Unabridged."

Ten years spent in revising, 100 editors employed, more than \$300,000 expended.

A Grand Educator
Abreast of the Times
A Library in Itself

Invaluable in the household, and to the teacher, professional man, self-educator.

Ask your Bookseller to show it to you.

Published by
G. & C. MERRIAM CO., SPRINGFIELD, MASS., U.S.A.

Send for free prospectus containing specimen pages, illustrations, testimonials, etc.

Do not buy reprints of ancient editions.

CHOPPERS

ATTENTION!

ASK FOR THIS AXE.
USE NO OTHER.

Wood-choppers, try the Kelly Perfect Axe.

It will cut more wood than any other axe.

The scoop in the blade keeps it from sticking in the wood, and makes it cut deeper than any other axe. Ask your dealer for it. Send us his name if he don't keep it. It is the Anti-Trust Axe.

Kelly Axe Mfg. Co.
LOUISVILLE, KY.

WE GUARANTEE

That one tablespoonful of

GOMBALD'S CAUSTIC BALSAM

will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made. It is therefore the cheapest (as well as safest and best) external applicant known for man or beast.

THE LAWRENCE WILLIAMS CO., CLEVELAND, OHIO.

Will \$500 Help You Out? If so, you can have it! We offer you the Sole Agency for an article that is Wanted in Every Home and Indispensable in Every Office, something that SELLS AT NIGHT. Other articles sell rapidly at Double the Price, though not answering the purpose half so well. You can make from \$500 to \$700 in three months, introducing it, after which it will bring A Steady, Liberal Income, if properly attended to. Ladies do as well as men, in town or country. Don't Miss this Chance. Write at once to J.W. JONES, Manager, Springfield, Ohio.

WANTED—Thrashing Engine, Barley Roller and Irrigating Pump. Give full particulars. Address T. Butler, Box 45, Chronicle Office, S. F.

PATRONS OF HUSBANDRY.

State Grange Session at Petaluma.

Steward's Report.

Worthy Master, Officers and Members California State Grange: The time is again at hand for the convening of the California State Grange. May this session at Petaluma, which will make another page in our Grange history, be one productive of great good to the Order. May we not only enjoy ourselves in meeting and renewing old acquaintances and forming new ones, but may the ties which bind us together—Faith, Hope and Charity—be more firmly united, and the spirit of brotherly love prevail, and may the work which we will accomplish be not only for the good of our fraternity but for the good of mankind.

In accordance with the usual custom and in order to comply with the usages of the Order, I herewith present my annual report as Steward.

I have been somewhat at a loss to know what the Steward was expected to report upon as there is nothing in the Constitution or By-Laws of the State Grange specifying the nature of his report. The duties of the Steward are prescribed by the Manual, and pertain to the ritualistic work and work during the State Grange session. No duties are prescribed for the Steward during the interim of the State Grange sessions. The duties, as prescribed by the ritual, have been faithfully performed; no one has been admitted to the deliberations of this body but duly qualified Husbandmen and Matrons. The laborers have been assigned their proper places and set to work, and when the labors of the day were closed the implements were all carefully secured for the night. Outside of these prescribed duties your humble servant has endeavored to do his individual duty as a member of our glorious fraternity, and to carry out the teachings of the ritual and the lessons of the Grange. All of which is respectfully submitted.

W. WALTER GREER,
Steward California State Grange.

Report of Assistant Steward.

Worthy Master, Officers and Members of California S. G.:—Another Grange year has passed. Again duty demands of us, as officers, to give an account of our stewardship. With the aid of a faithful lady Assistant Steward, I believe that the duties of this office have been performed without fear or favor, in the interest of our Order. No intruders were permitted to remain in the Patrons' Vineyard from early morn until late at night. All was done that could be for the best interest of the Grange.

The Order is gaining in the confidence of nearly all classes, and if we, as Patrons, remain true to our obligations, we may see the Grange banner carried into new fields in this State. Let us stand firm to our cause, and uphold those higher principles of educational and agricultural morality which no kindred associations have ever obtained.

Fraternally,
E. C. SHOEMAKER,
Assist. S. Cal. S. G.

Treasurer's Report.

To the Officers and Members of the California State Grange: The following statement of deposits and withdrawals of cash from the Treasury from Sept. 30, 1892, to Aug. 31, 1893, accompanied by the detailed statement of the Granger's Bank, is respectfully submitted.

THE CALIFORNIA STATE GRANGE IN ACCOUNT WITH TREASURER I. C. STEELE.

General Fund.

DR.

Sept. 30, 1892—To checks from Sept. 30, 1892, to Aug. 31, 1893.....	\$1,679 54
Aug. 31, 1893—To balance.....	558 70
Total.....	\$2,238 24

CR.

By balance as per last statement.....	850 61
By deposits Sept. 30, 1892, to Aug. 31, 1893.....	1,367 13
Interest to Aug. 31, 1893.....	20 50
Total.....	\$2,238 24
Aug. 31, 1893—By balance.....	558 70

Lecturers' Fund.

DR.

To check paid from Sept. 30, 1892, to Aug. 31, 1893.....	\$ 368 65
Aug. 31, 1893—To balance.....	2,086 83
Total.....	\$2,455 48

CR.

Sept. 30, 1892—By balance as per last statement.....	\$1,858 78
By deposits from Sept. 30, 1892, to Aug. 31, 1893.....	523 45
Interest to Aug. 31, 1893.....	73 25
Total.....	\$2,455 48
Aug. 31, 1893—By balance.....	2,086 83
On deposit in the Granger's Bank to the credit of the State Grange, Aug. 31, 1893. General Fund.....	558 70
Lecturers' Fund.....	2,086 83
Total.....	\$2,645 53

I. C. STEELE, Treasurer.

Secretary's Report.

Worthy Master and Patrons of California: On the 15th of July, twenty years ago, our State Grange was organized at Napa, within a day's drive from this thriving city of Petaluma. The first annual meeting was held at San Jose in the following October, making this the twenty-first glad gathering of our united band of Husbandmen and Matrons.

Having had the satisfaction of attending every session of this noble body, it is with no ordinary pleasure that I again greet my fellow Patrons in Council with earnest desire to unite my best efforts with all for a pleasant and profitable meeting for the permanent welfare and uplifting of our worthy and far reaching cause.

As we again touch heart and hand in fraternal circle may it be with increased determination to stand unflinchingly to the end of our lives by the principles inspired by

the founders, ablest defenders and truest supporters of the Order of Patrons of Husbandry.

FINANCIAL STATEMENT—GENERAL FUND.

RECEIPTS from Sept. 1, 1892, to Sept. 1, 1893.

Balance in Treasury Sept. 1, 1892.....	\$ 660 89
Balance in hands of Secretary, Sept. 1, 1892.....	13 65
Interest from Grangers' Bank to October 1, 1892.....	23 85
To cash, Sixth Degree.....	40 00
To cash, Fifth Degree.....	31 00
To cash, Trade Card Houses.....	86 35
Subordinate Grange dues.....	1,196 70
Subordinate Grange fees.....	145 50
Supplies.....	70 90
Potter Valley Grange on deposit.....	4 45
Watsonville Grange on deposit.....	3 45
Sacramento Grange on deposit.....	6 00

Total receipts.....	\$2,282 74
Total disbursements.....	1,744 54

Balance in treasury Sept. 1, 1893.....\$ 538 20

DISBURSEMENTS from Sept. 1, 1892 to Sept. 1, 1893.

Sept. 1—By Dewey Publishing Co., rent of office.....	\$ 15 00
1—A. T. Dewey, salary.....	50 00
Oct. 8—A. T. Dewey, cash advanced as per bill.....	1 55
8—California Co., printing.....	3 45
8—Hattie S. Jones, bill from W. W. Committee.....	46 00
8—A. T. Dewey, printing.....	10 10
8—H. S. Crocker Co., grange supplies.....	2 45
8—A. T. Dewey, salary.....	50 00
8—A. T. Dewey, rent.....	15 00
31—National Grange, quarterly dues to Sept. 30th.....	55 90
31—San Jose Grange, hall rent for State Grange.....	100 00
31—A. T. Dewey, stamps for Secretary's use.....	20 00
31—A. T. Dewey, sundry cash advanced as per bill.....	1 55
31—A. T. Dewey, sundry cash advanced as per bill.....	8 70
31—St. James Hotel, board Secretary's two Assistants.....	15 00
31—Roxie Dennis, services at State Grange.....	10 00
31—A. T. Dewey, printing Officers' Addresses.....	25 60
Nov. 2—National Grange, for sixth degree certificates.....	20 00
2—A. T. Dewey, salary.....	50 00
2—A. T. Dewey, rent.....	15 00
Dec. 8—A. T. Dewey, sundry cash advanced as per bill.....	50 00
8—A. T. Dewey, sundry cash advanced as per bill.....	2 11
8—A. T. Dewey, rent.....	15 00
23—Herald of Trade Publishing Co., printing.....	6 50
26—A. T. Dewey, sundry cash advanced as per bill.....	1 10
26—H. Lick, printing 600 copies of Annual Proceedings.....	100 00
26—Jos. Winterburn, printing Const'n and By-Laws.....	52 50
26—Brunt & Co., printing.....	5 00
Jan. 4—A. T. Dewey, salary.....	50 00
4—A. T. Dewey, rent.....	15 00
12—National Grange, quarterly dues to Dec. 31st.....	20 00
13—Elk Grove Grange, quarterly dues (refunded on account of fire).....	6 55
Feb. 3—A. T. Dewey, salary.....	50 00
3—A. T. Dewey, rent.....	15 00
6—A. T. Dewey, sundry cash advanced as per bill.....	2 90
7—Jos. Winterburn, printing.....	2 25
7—Herald of Trade, printing.....	5 25
7—A. T. Dewey, stamps for Secretary's use.....	20 00
7—E. W. Davis, sundry expenses, including attending Ex. Com. meetings.....	41 50
7—Cyrus Jones, expenses attending Ex. Com. meetings.....	21 20
7—G. P. Loucks, expenses attending Ex. Com. meetings.....	21 20
7—B. F. Walton, expenses attending Ex. Com. meetings.....	29 70
7—A. T. Dewey, expense Ex. Com. meeting at Sac.....	7 00
Mar. 6—A. T. Dewey, salary.....	50 00
6—A. T. Dewey, rent.....	15 00
17—Blake, Moffit & Towne, envelopes.....	2 30
17—Bancroft & Co., printing envelopes.....	3 25
17—A. T. Dewey, sundry cash advanced as per bill.....	4 95
Apr. 4—A. T. Dewey, salary.....	50 00
4—A. T. Dewey, rent.....	15 00
5—H. G. Parsons, printing.....	22 25
6—A. T. Dewey, sundry cash advanced as per bill.....	1 50
11—National Grange, quarterly dues to March 31st.....	53 15
17—Thos. McConnell, expense at Legislature.....	32 00
May 8—A. T. Dewey, rent.....	15 00
9—A. T. Dewey, salary.....	50 00
9—H. G. Parsons, printing.....	10 00
9—G. C. Wikison, letter book.....	2 60
18—Elk Grove Grange, quarterly dues refunded.....	14 40
June 1—A. T. Dewey, salary.....	50 00
1—A. T. Dewey, rent.....	15 00
6—A. T. Dewey, sundry cash advanced as per bill.....	1 50
12—Geo. Ohleyer, sundry cash expenses advanced to C. P. Berry, as per bill.....	50 00
July 1—A. T. Dewey, salary.....	50 00
1—A. T. Dewey, rent.....	15 00
8—National Grange, quarterly dues to June 30th.....	46 25
4—Elk Grove Grange, quarterly dues refunded.....	7 80
7—National Grange, for Manuals.....	10 08
7—A. T. Dewey, salary.....	50 00
7—A. T. Dewey, rent.....	15 00
11—Dewey Publishing Co., printing.....	7 20
11—Pacific Printing Co., printing.....	5 00
30—A. T. Dewey, stamps for Secretary's use.....	20 00

Total Disbursements.....\$1,744 54

LECTURERS' FUND.

RECEIPTS from Sept. 1, 1892, to Sept. 1, 1893.

Sept. 1, 1892—Balance (as per last statement).....	\$1,695 63
Sept. 1, 1892—Balance in hands of Secretary.....	6 45
Interest from Grangers' Bank to Oct. 1, 1892.....	78 30
Subordinate Grange dues.....	601 85

Total receipts.....	\$2,382 23
Total disbursements.....	418 65

Balance in treasury Sept. 1, 1893.....\$1,963 58

DISBURSEMENTS from Sept. 1, 1892, to Sept. 1, 1893.

1892. Oct. 8—By W. L. Overhiser, for services (Ind. Grange).....	\$ 25 00
31—J. D. Huffman, expense as W. L. Overhiser.....	22 30
31—B. F. Frisbie, expense as deputy.....	17 50
1893. Jan. 13—Elk Grove Grange, Dec. quarterly dues refunded.....	3 65
13—W. L. Overhiser, expense as deputy.....	25 00
Feb. 7—S. T. Coulter, expense as deputy.....	18 00
Apr. 5—J. D. Huffman, expense as deputy.....	10 15
May 14—Elk Grove Grange, quarterly dues to Mch. 31.....	7 20
23—J. D. Huffman, expenses as deputy.....	10 15
June 1—B. F. Frisbie, expense as deputy.....	12 15
1—E. W. Davis, expense as Master.....	48 50
12—Amos Adams, expense as deputy.....	6 55
12—Geo. Ohleyer, expense as deputy.....	10 90
July 1—B. F. Frisbie, expense as deputy.....	13 60
17—Frank S. Chapin, expenses and services canvassing.....	50 00
Aug. 4—Elk Grove Grange, quarterly dues to June 30th.....	3 65
7—E. W. Davis, expense as Master.....	28 20

Total disbursements.....\$ 418 65

Total balance in treasury and in hands of Sec'y Sept 1, 1892, 2,356 58

1893, 2,501 78

Increase.....145 26

The above shows receipts from Sept. 1, 1892, to Sept. 1, 1893, of \$145.26 over those of the preceding twelve months. A portion of the receipts for the preceding year come under the former rate of twenty cents per annum per capita tax, while all received the past year were at the prevailing rate of fifteen cents per capita. A decrease of credit of \$122.69 is shown in the General Fund, and an increase of \$267.95 in the Lecturers' Fund, making a total gain of \$145.26 the past year.

The following Granges have been dropped from the roll for non-payment of dues: Arroyo Grande, Eureka, and San Lucas. Santa Cruz and Dixon have surrendered their charters.

While there has been a slight gain of membership all told, there have been no Granges instituted or re-organized during the year.

During the past year—which has been a trying period

financially for all classes and especially farmers—nearly all fraternal organizations in California have decreased in membership, or decidedly lowered the record of their annual increase; so, compared with other orders and agricultural fraternities, the Grange has held its position well during the worst period of agricultural and financial depression known to our Coast. It is also in possession of ample funds for an aggressive campaign at the coming of propitious times for extended cultivation of our Gaange field.

I would recommend hereafter the appointment of a standing committee on order of exercises and special business for the State Grange, that the special features and attractions of each annual session may be better known in advance. Also, the appointment of a standing committee on transportation, who may inform themselves between sessions and recommend subjects for consideration of the Grange.

Of all other enterprises I would urge the expenditure of more means and energy for an extended circulation of aggressive Grange literature and the thorough establishment of co-operative buying and selling facilities, both local and State. To accomplish a full measure of success in Grange co-operation will require far greater provision and more persistent work than has lately been given to this most important feature of our declaration of purposes, and at least a moderate outlay for its promotion.

The appointment of an able and determined committee, or board of co-operative business commissioners, and a reasonable appropriation allowed them for thoroughly testing the trade card system and a Grange purchasing agency combined, as carried on by the New York State Grange, I believe would prove of great power in making the Grange profitable to its members and increase the number of new Granges and membership of old ones.

I make these recommendations from a sense of duty from my point of observation, and the sincere desire I have ever felt to be as helpful as possible in the cause I have so long endeavored consistently and faithfully to serve.

The proposed amendments to the Constitution and By-Laws, duly submitted in my letter in August to each Subordinate Grange, and published in the Master's annual reports, are herewith submitted for your consideration.

After six years of official service, and in all twenty years of newspaper and other labors for the good of the Order, I shall return the emblem of my station with gratitude for innumerable kindnesses and forbearances shown me by dear Brothers and Sisters, some of whom, now in the "bright beyond," we greatly miss in our Council of to-day. Remembering happy hours enjoyed in touch with hearts inspired with purposes for truer living and the uplifting of all, I am,

Yours fraternally,
A. T. DEWEY,
Sec'y State Grange of Cal.

Report of the Executive Committee.

As required by the laws of the order, the Executive Committee submit the following partial report to this 22d annual session of the California State Grange. Much of the result of the work of your Executive Committee has been placed before you in the reports of the officers just preceding. We have dealt as usual with the business problems of the order as the circumstances in our judgment warranted.

The proposition made by Alfred Holman of the PACIFIC RURAL PRESS, and accepted by this State Grange at its annual session in the city of San Jose, took the ever-recurring matter of an official organ out of the hands of the Executive Committee, and the faithful manner in which that proposition has been carried out has been a great satisfaction not alone to your committee, but to all progressive members of the order. The editorial columns of the RURAL PRESS for the past year have convinced us that all that is required to make it one of the leading, if not the best, grange paper in the United States is for the membership to do their part. If the 16 officers of this State Grange will make as much of an effort to supply its columns with current grange literature as a few have done, and the membership throughout the State will provide each locality with a live, progressive grange correspondent who will work through its columns to build up the order on this coast and disseminate among the masses correct ideas in regard to all important matters touching our interests, we have set in motion all the machinery that is needed for a very superior grange organ.

The total amount of money in the treasury on Sept. 30, 1892, was \$2991.88.

The total amount on Aug. 31, 1893, was \$2645.53, the date of the annual report of the officers; since which time, up to Sept. 30, 1893, there has been paid into the treasury \$269.10, making a total of \$2914.63, or a gain during the year of \$122.75.

The books of the secretary and treasurer, together with their vouchers, have been carefully examined and compared. Settlements with these faithful officers have been made and books balanced.

In examining the reports of the master, secretary and treasurer, the apparent discrepancy between the treasurer's report and the other two is found to be in the item of \$20.50 interest on general fund and \$73.25 interest on lecture fund, not placed to the credit of the grange at the time of making the reports of the master and secretary, and warrant No. 557 drawn on lecture fund in favor of F. S. Chapin, July 17, 1893, and not paid until some time in September, makes up the difference of \$143.75 which seems to exist.

The amount expended from the lecture fund in an effort to make a canvass of the State during the past year, while not large, is, in the judgment of your committee, all that it was practicable to expend judiciously owing to the depressing conditions which surrounded all enterprises at the time for active work.

The accessions to the grange during the past year have been principally among the stronger societies. In some localities we find a large membership that seems to be gaining strength and influence. While in many other localities seemingly as favorably situated, with equally as much general intelligence and enterprise, there is apparently no growth or development in the grange.

In looking for an explanation for this condition, we find in some way connected with the growing societies a few strong characters, thoroughly abreast of the times, full of the spirit of co-operative thought and effort among the masses, firmly believing that the only practical way to improve our condition is to think and act for ourselves and correct the evils so many complain of; who seem to act as centers of attraction and influence in building up their local grange into a permanent existence, strong in social benefits, co-operating in many ways, and constantly improving in educational opportunities, while so many other localities do not furnish such magnets. This to some extent explains why the growth during the past two years is greater among the stronger granges.

This condition of affairs in the judgment of your committee can best be improved upon by extending the influence and efficiency of our grange organ and by establishing and maintaining a live Pomona grange in each senatorial district in this State.

We would recommend that this State Grange remit the State Grange dues of Plumas Grange for reasons explained in a communication from said grange. All of which is respectfully submitted.

B. F. WALTON, CYRUS JONES, GEO. P. LOUCKS,
Executive Committee.

SEE page 275 for detailed report of the proceedings of the State Grange.

E. VAN EVERY, Manager.

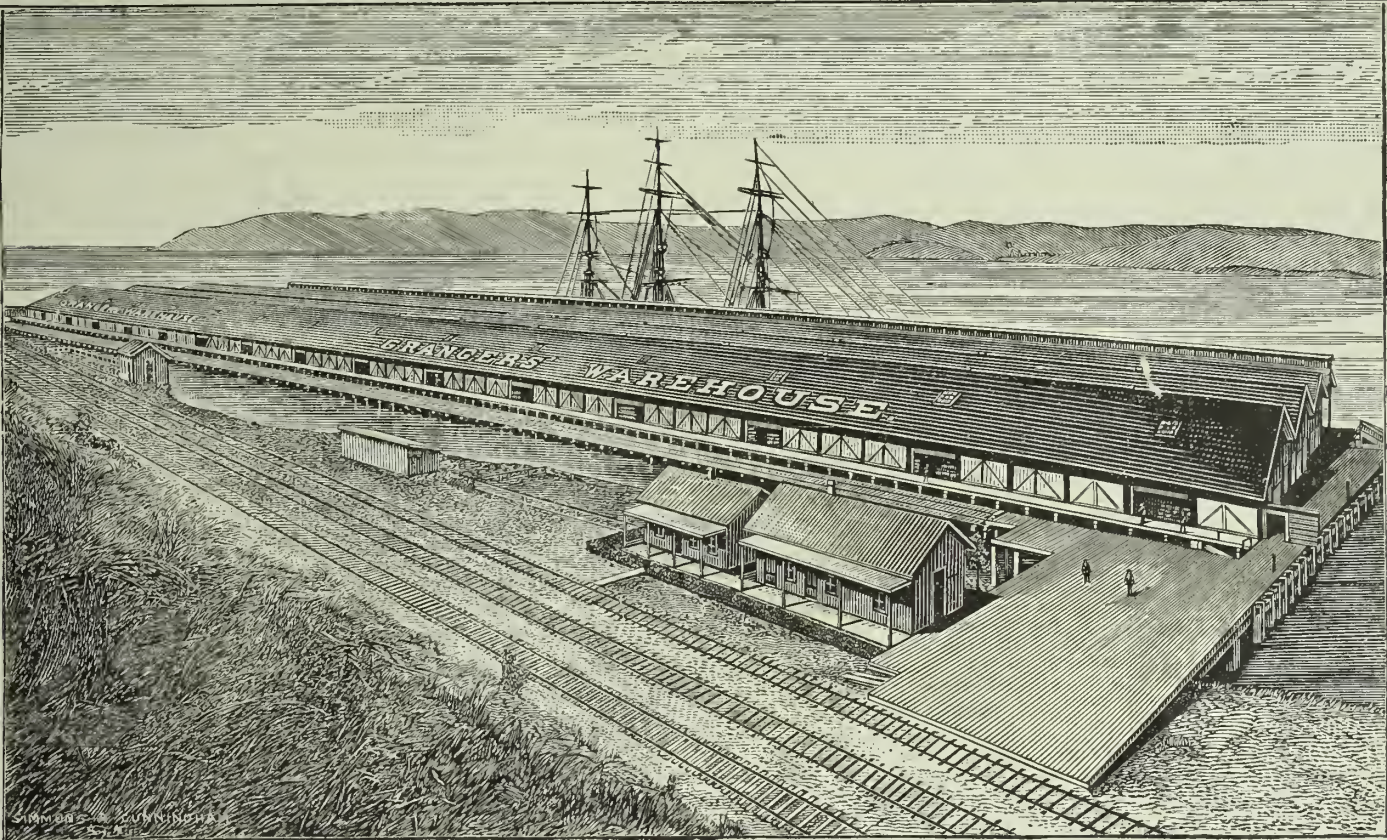
T. R. BALLINGER, Grain Salesman.

Great Reduction in Storage

SEASON OF 1893

50 CENTS TO JANUARY

1st, 1894.



75 CENTS FOR SEASON
TO JUNE 1st, 1894.

AT THE GRANGERS' WAREHOUSE, PORT COSTA.

Capacity of Warehouses, 50,000 Tons; Wharf Accommodations for the Largest Vessels Afloat.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT, AND FOR SALE ON CONSIGNMENT.

For Particulars and Rates, address all communications to our San Francisco office and they will be promptly attended to.
PARTIES DESIRING STORAGE WILL PLEASE APPLY EARLY.

GRANGERS' BUSINESS ASSOCIATION, 108 DAVIS STREET, SAN FRANCISCO, CAL.

A SUBSTITUTE

Advantages of this Paper for
a Drying Surface.

ABSOLUTELY ODORLESS.

WATER, ACID AND
ALKALI PROOF.

WILL IMPART NO TASTE
NOR ODOR TO FRUIT.

CHEAP AND DURABLE.

ITS BRILLIANT BLACK
SURFACE, which absorbs
the heat, drying both sides
of fruit at the same time,
and rendering the labor of
turning unnecessary.

E. G. JUDAH, Agent, 221 South Broadway St., Los Angeles.



FOR TRAYS!

Unequaled for
DRYING GRAPES.

Write for
SAMPLES AND CIRCULAR.

Paraffine
Paint Co.

116 Battery St.
SAN FRANCISCO.



ONLY 25 YEARS OLD
AND A GIANT!

THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS'
USE AND TO-DAY IS BETTER KNOWN AND MORE
EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.

Send for Price Lists
OF GUNS
And all Articles used
by Hunters and
Anglers.



GUNS SENT ON
TRIAL,

OLD GUNS TAKEN
IN EXCHANGE,

DEWEY & CO. { 220 MARKET ST., S. F. } PATENT AGENTS.

GEO. W. SHRIVE, 525 KEARNY STREET, SAN FRANCISCO.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

Livermore Journal: Mr. C. Carpy, one of Napa county's largest wine-makers and dealers, informs us that he has concluded to purchase all the grapes he can get in the valley and ship them to San Jose, where he has a large cellar, and will make them into wine. We asked him what he would pay. "The same as they are paying elsewhere, from \$6 to \$10 per ton." He said he understood that we would have a large crop of very fine grapes, and that he was in the market to purchase all he could get.

Butte.

Oroville Register: The day is fast coming when men owning small tracts of land must use this land to the best advantage. Those in the foothills labor at some disadvantage over others in the valley or near the markets, and in consequence they must grow such productions as can be handled to the best advantage. Often the owner of an orchard is where he cannot get extra labor and thus he is prevented from increasing his orchard beyond the ability of his family to handle the fruit. In prune growing less labor is required than in the drying of any other fruit, and in consequence this fruit is one of the most profitable that can be planted. The success of the prune in the foothills of this county is assured. The very best prunes are grown at Paradise, altitude nearly 2000 feet, where John Hedge and others have some very fine trees well loaded with excellent fruit; at Big Bend, where Wm. Mullen has for several years raised large and luscious prunes; at Mountain House, where E. J. Rutherford and others have heavily-laden prune trees, although the altitude is 3000 feet, and on Berry creek, where Flynn, Zink and others have splendid prunes. It is thus assured that prunes will thrive from the valley up to an altitude of 3000 feet. The fruit does not require much labor, dries heavily compared to the number of pounds of green fruit, and keeps well when dried.

Fresno.

The Fresno raisin-growers have raised necessary funds, and sent a representative to Washington to present their case to Congressmen.

Fresno Exporter: J. H. Baird of the County Horticultural Board advocates so pruning grape vines that there will be little second crop. He believes this can be done by leaving on the canes at pruning time a greater number of buds. If the vines put out ten fruit-bearing canes there will be fruitage on the first eight to twelve inches of each cane, and the crop thus borne will be heavy enough to very much lighten the second crop. This seems good reasoning, and may result in a substantial improvement in the output of first-crop raisins; and the full development of this plan, as experience may dictate, may result in finally having a second crop so light that there will be no question about the disposal of it.

Glenn.

Corning Observer: The Stony Creek irrigation ditch has been leased to a company of competent men, who will proceed at once to put the water down into the town. The land in and about Orland is gravelly, but with water it can be made to grow everything luxuriantly. Some parties irrigate their garden trees with well water, and many fine orange trees, loaded with fine fruit, can be seen there. We congratulate our many Orland friends in the prospect before them.

Kern.

Californian: Local sheep men who are in the habit of driving their herds to the meadows in the eastern part of the county, will save themselves much expense and possibly a term in jail by keeping their sheep out of the Sierra Forest Reserve. They are liable to arrest for trespass on a Government reservation.

Los Angeles.

Los Angeles Herald: The people of Los Angeles will be delighted to learn that the red scale seems to be a thing of the past. For some time our horticulturists have adopted the idea that this pest was decreasing in numbers and energy. Yesterday a formal examination was made under scientific methods. Prof. Coquillett's microscope being employed, it was found that fully 90 per cent of the red scale are dead, and that what is left of the pest is in a dying and languid state. Those who have given a great deal of attention to this gratifying fact are at a loss to account for the mortality among this class of scale bugs. No one is acquainted with any parasite that preys specially on the red scale. With some persons the phenomenon is ascribed to the presence of some fungoid growth fatal to the scale. But whatever may be the cause, the pleasing fact remains that this most hardy of the tribe will soon be *non est inventus* hereabouts. It is not at all unlikely that the nuisance has run its course, like the locust and grasshopper visitations, and may not appear for 20 years or so.

Orange.

Blade: The Hoyle ranch at El Toro has about 100 acres set to prunes, now in bearing. This season the crop will be about 70 tons. The school in that district adjourned for ten days to give the pupils a chance to earn a few dollars picking the crop.

Riverside.

The Perris *New Era* reports that the raisin crop of Riverside is about half picked, and another two weeks will finish the work. The crop is not as heavy as in former years.

Riverside Press: Should not our ranchers turn their attention more to raising wheat? It has been demonstrated that with good seed

some of the finest wheat grown anywhere can be produced on the broad grain fields in this country. H. K. Small of the Olive Flouring Mills, who recently traveled over the whole grain section of the southern portion of the State, says that the wheat raised in Perris valley and around Menifee is superior to any he has seen. With proper attention given to seed and then flouring mills with capacity to manufacture the wheat into flour, many thousands of dollars would yearly be kept within the borders of the county.

San Bernardino.

Ontario Record: The season's run at the cannery is practically completed. About 5000 cases have been packed—more than double the pack of last year.

Santa Ana Blade: The entire output of the Chino beet-sugar factory is now shipped in the straw-board barrels, made on the grounds. About 800 of these barrels are being made daily, in the construction of which eight men are employed.

Santa Ana Blade: The San Bernardino supervisors have been asked to contribute something toward fighting the firm which claims to be the patentee of the hydro-cyanic gas treatment for destroying the scale upon citrus fruit trees. The board will probably pay San Bernardino's share of the expense.

Chino Champion: During the month of September there were 14,404 tons of beets delivered from the Chino fields, which will pay the farmers \$57,649.12. Up to the 1st of October the beets delivered will put into circulation direct about \$109,000 in Chino. It is cold cash that talks, and on that theory the sugar-beet business is a genuine "blarney stone" for the farmers. The total delivery of beets to date for the season is 10,165 tons gross, or 29,154 tons after deducting the factory tare. There are probably 11,000 to 12,000 tons yet in the fields. The output of sugar to date is 10,067,072 pounds.

Chino Champion: Baron Von Berg, a distinguished Austrian land proprietor and extensive farmer, was in Chino, the guest of Mr. Gird recently. He owns some 20,000 acres of land, and raises sugar beets extensively. During his visit here, he was enthusiastic over this country, its people and its possibilities. Especially in the sugar-beet industry, he says we ought to be happy that we have such ideal conditions for the work. In Austria, he says, they often have two or three weeks of nice weather during the first part of the harvest, and then rains, storms, slush and mud prevail, making the farmer's lot a hard one.

Santa Barbara.

Lompoc Record: Mustard thrashing is about at an end and the thrashing of beans is about to begin. It will take all of six weeks to get the bean crop secure, owing to the lateness in ripening of many fields.

Pomona Progress: Prof. Alexander Craw, Entomologist of the State Board of Horticulture, is now at Santa Barbara gathering colonies of the *rhizobius ventralis*, or black ladybird, that feeds upon black scale. The beetle, since its arrival from Australia, has been propagated in the olive orchards of Elwood Cooper at Santa Barbara, and has multiplied to such an extent that it is now announced that at least 300 colonies of two dozen each can be distributed among the orchards of the State where black scale exists. There had been applications from several orchardists of this valley for colonies of the insect, some of which have arrived this week and been placed on trees. So little has been accomplished by one or two kinds of beetles that have been brought from Australia to feed upon the various kinds of scale pests, that many have little faith in the efficiency of beetle remedy. But Mr. Craw and others say that the beetle which has been colonized at Mr. Cooper's orchard is a voracious devourer of black scale and increases in numbers rapidly, and will do as effective work in destroying that pest as the *vedalia cardinalis* did with the cottony cushion scale.

Santa Cruz.

Pajaronian: The sugar-beet has dethroned the orange in the estimation of many of our neighbors of the southern part of the State, and if Congress does not repeal the bounty provision of the McKinley tariff it is probable that the beet-sugar business will have quite a development in that part of the State.

Pajaronian: A band of "regulators" visited on the Beach road one evening last week and called on Thos. Mitchell with the demand that he stop the employment of Chinese in his bean field. The demands of the "regulators" have not been acceded to and the officers say that there shall be no such crusading in this valley.

Sonoma.

A Sonoma fruit-buyer asserts that not a single pound of dried fruit was sent this year to commission men in San Francisco on consignment from here, and that whatever was bought was paid for spot cash. This is unprecedented in Sonoma county.

Sonoma Times: The grape crop has been far worse damaged by the rain than was supposed a couple of weeks ago. On the lowlands especially is this the case, and a close estimate of the loss of the Zinfandels is two-thirds of the crop. Other varieties have been so badly damaged that even the distilleries cannot utilize them. The Missions were damaged to less extent than any other kind of wine grapes and they constitute a large part of the grape product of Dry Creek and Alexander valleys.

Sonoma Farmer: The raisers of early broilers for spring market should set the hens as quickly as possible now, as this month and next are the best of the whole twelve; they bring in the profit even if eggs are high. You will get fifty cents apiece for the chicks as soon as they are well feathered, especially while the

"crowd" is in our metropolis. Profit means more money than you invest, you know. Incubators should be busy for at least nine weeks, then idle, according to my theory, as no one should hatch more chicks than can be easily handled. Don't let the price of eggs deter you a minute, as the sum of fifty cents does not balance 600 of them. Get Plymouth Rock eggs if possible, choosing the medium sized, never the large ones; then they are nearly all found to be fertile and better results obtained than in the use of "extras."

Sonoma Democrat: Speaking of the profit in prunes, Chas. F. Raymond of Healdsburg cited a case Friday where a man of his acquaintance had paid himself "out of a hole" by prune-growing. Four years ago this man bought a 20-acre orchard. The trees were young and the number to the acre was limited. He had to increase the trees and wait for their growth. He was in debt when he bought the land, and had to place a mortgage of \$5000 on the orchard. Two years ago he paid off his indebtedness and cleaned up enough besides to enable him to smoke good cigars in moderate number. This year he took his family of five persons and visited the World's Fair and the far East.

Tulare.

Times: Over 1200 pounds of prunes were gathered from a three-year-old tree on the Eppinger ranch, three or four miles southeast of town. J. R. Holdridge, the manager, says the product of that one little tree made a wagon-load.

Visalia Delta: Charley Newman, living near Cottage, is reported to have dug and sacked 50 sacks of potatoes in one day lately. The number of sacks filled per day by one man averages generally about 20, though now and then a man digs and fills 30 sacks. The price usually paid for digging and sacking potatoes is 12½ cents per sack. The sacks cost 5 cents each and are supposed to hold 100 pounds.

Tipton letter to the Delta: Robert Clark's piece of club wheat, which he planted last spring as an experiment, resulted in a yield of 116½ sacks. The piece of land was measured and found to contain only seven acres. Several spots in the piece had been drowned out, and the header teams had fed on it during the heading, and a small strip had been cut around it with a mower in haying time. So it is safe to say the average yield was 17 sacks to the acre.

The Visalia Times, writing of "hogging grapes," says: Henry Hansberger, who lives near Wildflower, has experimented on the subject on a rather large scale, and his experiments have extended back some time. He finds that hogs fatten well on grapes, and that it requires no large quantity to make them ready for the market. Last year he fattened 100 hogs on the second crop of grapes growing on 50 acres. This is an average of two hogs to the acre. The time required to fatten them was about 60 days, and they gained on an average 100 pounds each in that time. Mr. Hansberger does not pick the grapes for the swine, but lets them do their own picking, which they do without any injury to the vines. He fences off a few acres till the swine have picked the grapes, then moves his fence, inclosing another field. By the 1st of December, as a rule, the hogs will be ready for market. It can be figured out very easily that Mr. Hansberger's profit was between \$5 and \$10 an acre, which is a good deal better than nothing.

Ventura.

Chas. J. Beckwith, of Ventura county, harvested 35,000 pounds of beans from a tract of land containing a little over 12 acres. Beans are better than banks this year in southern California.

Democrat: As a rule, the walnut crop in every section of the county in which the nuts are produced is unusually good. Judge J. C. Daly, who has one of the largest orchards in the valley, informs us that his crop is the heaviest he has had yet, and the nuts are large and of extra quality.

Yolo.

Davisville letter in Woodland Democrat: John Anderson cleared this season something over \$1000 from five acres of prunes, while the almond crop, regarded as almost a failure, paid a clear profit of \$15 per acre. The truth is, that while the present is regarded as an "off year" in every sense, the returns show a fair margin on all kinds of fruit. Let those who distrust the fruit industry dismiss their fears. We have the climate and soil to produce the choicest fruits, and the people of less favored regions will buy them. Men have failed in this as in other enterprises, for the very natural reason that folly, extravagance and ignorance must fail in any calling.

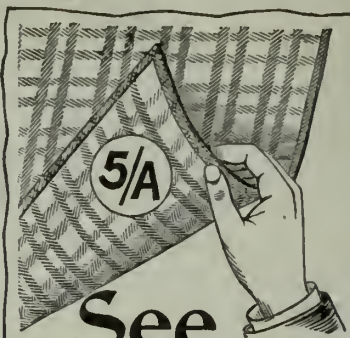
Winters Express: M. Kahn, a prominent fruit-grower of this vicinity, has settled to his own satisfaction the question of which is the better, the open or closed auctions. During this month he has shipped to Chicago about 1400 boxes of Pickett's late peaches, sending an equal number of boxes to the Earl Fruit Company and to the Porter Bros. Company. As is well known, the latter company sells through the closed auction and the former the open auction. Now for the results: Mr. Kahn has received returns from both houses, and informs the Express that the fruit sold at the open auction brought from 12 to 25 cents a box more than that sold at the closed auction.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California street San Francisco.

Hay Pressing.

If you are interested in pressing hay write Truman, Hooker & Co., San Francisco. They will save you money.



See That?

That's the mark by which you can always distinguish the good from the bad in Horse Blankets. It's a guarantee of quality, durability—absolute perfection. The 5/A Blankets are made with a view to good looks as well as good service. They make a horse feel better, look better and do better. Ask the dealer for the 5/A Blankets, and don't accept any of the so-called "just as good" kind. 5/A Blankets are made in 250 styles and you can easily get one to suit you. Always look for this trade mark.



Made only by
WM. AYRES & SONS, Philadelphia.

THE Porteous Improved Scraper

Patented April 2, 1883. Patented April 17, 1883.



Manufactured by G. LISSENDEN.

The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making, etc.

This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

This Scraper is all steel—the only one manufactured in the State.

Price, all Steel, four-horse, \$400; Steel two-horse, \$251. Address all orders to G. LISSENDEN, Stockton, California.

WANTED!

\$7500 FOR A TERM OF YEARS ON IMPROVED land, town of Belmont, San Mateo County.

JOHN F. BYXBE,

22 Market St., San Francisco.

Almond Hullers FOR SALE!

—BY—

A. O. RIX, Irvington, Alameda Co., Cal.

TREE WASH.

"Greenbank" Powdered Caustic Soda and Insecticide.

T. W. JACKSON & CO.

Sole Agents,

No. 5 Market Street, San Francisco, Cal.

MAKE YOUR OWN GAS! BADLAM BROS.

519 Market St., San Francisco, SOLE MANUFACTURERS OF THE CELEBRATED PEERLESS GAS WORKS. New process, safe and inexpensive, from \$100 upward. Light cheaper than coal oil. Send for catalogue and prices.

BACK FILES OF THE PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes) \$4. Inserted in Dewey's patent binder 50 cents additional per volume.

S. H. MARKET REPORT

Market Review.

WEDNESDAY MORNING, Oct. 11, 1893.

Business in wheat moves along in a quiet way at weak figures. In the past two days there has been a slight decline. The top quotation in this market for No. 1 shipping wheat is \$1.02½ per cental, with \$1.03½ for a choice offering. For milling grades the figures are \$1.05 to \$1.07½. The tonnage situation continues to the disadvantage of shippers, and therefore of sellers, there being only 17,900 tons disengaged, as against 120,000 tons last year at this date. However, there is indisposition to make engagements, and exporters are now demanding concessions on rates lately current. The following tables record the course of the speculative markets during the past week:

LIVERPOOL.		Oct.	Nov.	Dec.	Jan.	March.
Thursday.....	560½d	560½d	560½d	560½d	560½d	560½d
Friday.....	560½d	560½d	560½d	560½d	560½d	560½d
Saturday.....	560½d	560½d	560½d	560½d	560½d	560½d
Monday.....	560½d	560½d	560½d	560½d	560½d	560½d
Tuesday.....	560½d	560½d	560½d	560½d	560½d	560½d

To-day's cablegram is as follows:
LIVERPOOL, Oct. 11.—Wheat—Firm, but not active. California spot lots, 8s 8d; off coast, 28s; just shipped, 29s; nearly due, 28s; cargoes off coast, quiet; Mark Lane wheat, very quiet; French country markets, mostly turn cheaper; wheat and flour in Paris, quiet; weather in England, wet.

NEW YORK.		Oct.	Nov.	Dec.	May.
Thursday.....	70½	70½	70½	70½	70½
Friday.....	70½	70½	70½	70½	70½
Saturday.....	70½	70½	70½	70½	70½
Monday.....	70½	70½	70½	70½	70½
Tuesday.....	70½	70½	70½	70½	70½

The following is to-day's telegram—per bushel:
NEW YORK, Oct. 11.—October, 69½; December, 71½; May, 79.

CHICAGO.		Oct.	Nov.	Dec.	May.
Thursday.....	64½	64½	64½	64½	64½
Friday.....	64½	64½	64½	64½	64½
Saturday.....	64½	64½	64½	64½	64½
Monday.....	64½	64½	64½	64½	64½
Tuesday.....	64½	64½	64½	64½	64½

The following is to-day's telegram—per bushel:
CHICAGO, Oct. 11.—October, 63½; December, 63½; May, 73½.

SAN FRANCISCO.		Oct.	Nov.	Dec.	May.
Thursday.....	108½	108½	108½	108½	108½
Friday.....	108½	108½	108½	108½	108½
Saturday.....	108½	108½	108½	108½	108½
Monday.....	108½	108½	108½	108½	108½
Tuesday.....	108½	108½	108½	108½	108½

*Season's storage paid.
The following are to-day's recorded sales on Call:
Morning—Informal Session—December, 200 tons, \$1.10; 200, \$1.10; 100, \$1.10.
May—200 tons, \$1.22½ per cbl.
Regular Session—December, 1000 tons, \$1.10; 100, \$1.10; 300, \$1.09; 200, \$1.09; 100, \$1.09; 300, \$1.09.
May—200 tons, \$1.22; 200, \$1.21; 1400, \$1.21; 300, \$1.21; 600, \$1.21.
Seller 3 days, season's storage paid—100 tons, \$1.08½ per cbl.
Afternoon Session—December—700 tons, \$1.09; 600, \$1.09; 200, \$1.09; 200, \$1.09.
May—700 tons, \$1.21; 300, \$1.21; 200, \$1.21.
Seller 1893—100 tons, \$1.05 per cbl.

Barley.

Common feed is being offered with freedom, and concessions will be made to effect sales. Strictly choice bright feed is not plentiful, and prices for such stock are somewhat steady. Brewing descriptions are not quite so firm as they were, but dealers look for improvement, as considerable Brewing Barley is being shipped East from interior points. We quote: Feed, 62½ to 67½ c per cbl for fair to good quality, and 68½ to 70 c for choice; brewing, 80 c; Chevalier, \$1.10 to \$1.15 for standard quality and 75 c for lower grades.

The following are to-day's recorded sales on Call:
Informal Session—May, 200 tons, 83 c.
December—100 tons, 73 c per cbl.
Regular Session—December, 100 tons, 72½; 400, 72½; 400, 72½.
Seller 1893—100 tons, 67½; 100, 67½ per cbl.
Afternoon Session—December, 200 tons, 72½; 100, 72½ per cbl.

Other Cereals, Etc.

The deliveries of Oats recently have been large and prices have generally ruled weak, the demand not being active. Corn has been dull and prices were lower yesterday. Beans have been rather quiet and weak. Limas, however, are now quoted higher here, though unchanged at producing points. Hay was firm. Rye continues dull and weak. Hops are without any feature of special interest. The receipts yesterday included 7684 cbls Oats, 3128 do Beans and 542 tons Hay.

OATS—Common to fair white feed, 85 c; 95 c; good to choice, \$1.05 to \$1.10; fancy, \$1.15 to \$1.17½; Surprise, \$1.20 to \$1.25; milling, \$1.10 to \$1.20; black, 90 c to \$1.30; red, 95 c to \$1.05; gray, 95 c to \$1.05.

CORN—Large yellow, 90 c to 92½ c; small do, 92½ c to 93½ c; white, 90 c to 93½ c.
BEANS—Pea, \$2.00 to \$2.10; Pink, \$2.00 to \$2.10; Bayo, \$1.50 to \$1.55; Small White, \$2.00 to \$2.10; large do, \$1.75 to \$1.90; Butter, \$2.25 to \$2.40; Red, \$2.10 to \$2.25; Lima, \$2.25 to \$2.30.

SEEDS—Rape, 2 to 2½ c; Hemp, 3½ to 4½ c; Canary, 4½ to 4¾ c for imported; do California, nominal; Flaxseed, 2 to 2½ c; Alfalfa, 8½ to 9½ c; Caraway, 7½ c; Mustard, 2½ to 3½ c for yellow; brown do, 2 to 2½ c.

HAY—Wild Oat, \$8.50 to \$10 ton; Wheat and Oat, \$10.00 to \$11.50; Barley, \$7 to \$9.50; Wheat, \$10 to \$13.00; Clover, \$7 to \$9.50; Alfalfa, \$8 to \$10.00; Compressed, \$8 to \$11.00.

STRAW—Quotable at 35 to 42½ c per bale.
HOPS—Quotable from 17 to 19 c per lb for new.
RYE—Quotable at 87½ to 90 c per cbl.
DRIED PEAS—Largely nominal.
BUCKWHEAT—Nominal.

Vegetables.

River Potatoes are slow sale. Poor stocks of River Burbanks were sold to peddlers at 25 to 35 c per sack. Onions continue stiff under a good demand. Yesterday's arrivals were 296 sacks Potatoes and 325 sacks Onions.

The market for fresh Vegetables was without any noticeable features yesterday. The supplies of Tomatoes from the River districts are near an end.

ONIONS—From \$1 to \$1.10 per cbl.
POTATOES—Early Rose, 30 to 35 c per sack; Burbanks, 35 to 40 c for river; do Salinas, 75 to 80 c; Garnet Chile, 40 to 45 c; Sweet, 75 to \$1.
VARIOUS—Green Peas, 2 to 2½ c; String Beans, 1½ to 2 c; Lima do, 2½ to 3 c; Cucumbers, 40 to 50 c; Summer Squash, 25 to 50 c; Green Peppers, 25 to 40 c for Bell and 40 to 50 c for Chile; Green Corn, 65 to 85 c for small crates and \$1.25 to \$1.50 for large; do sks, 50 to 65 c; Tomatoes, 20 to 40 c per box; Garlic, 1½ to 2 c per lb; Green Okra, 50 to 75 c per box; Eggplant, 25 to 40 c.

Fruits and Nuts.

This week will, it is reported, wind up the receipts of watermelons from Lodi. Raspberries and strawberries firm, owing to small consignments. Table grapes, excepting for a very choice article, were dull and weak. Peddlers bought poor stock at 15 c per box. Choice vine grapes were firmer. New crop of chestnuts from Los Angeles and walnuts from Santa Ana are now offering.

FRESH FRUITS—Strawberries, \$3.50 to \$6 per chest for Sharpless; Raspberries, \$5 to \$6; Huckleberries, 5 to 6 c per lb.

Apples, 25 to 75 c per box; Plums, 25 to 50 c per box as to kind; Pears, 50 to 75 c for Winter Nelis, and 25 to 50 c for other kinds; Peaches, 25 to 75 c.

Watermelons, \$4 to \$8 per 100; Canaloupes, 40 to 75 c per crate; Nutmeg Melons, 25 to 40 c per box; Crabapples, 30 to 40 c; Black Figs, 25 to 50 c and 60 to 75 c for fancy; Quinces, 25 to 50 c; Pomegranates, 40 to 65 c.

Grapes—From 20 to 40 c per box for table varieties; fancy Isabella, 50 to 65 c per crate; wine, \$10 to \$14 per ton.

Citrus—Common to good California Lemons, \$1.50 to \$2.50 per box; fancy, Santa Barbara, \$3.50 to \$4.00; Santa Paula, \$3.50 to \$4.00. Limes, Mexican, \$3.50 to \$4; California Oranges, \$1.50 to \$2.50.

Various—Bananas, \$1.50 to \$2.50 per bunch. Pineapples—Mexican, \$3 to \$4 per doz; Honolulu, \$2 to \$3.

DRIED FRUITS—New crop: Bleached Apricots, Royal, 10 to 11 c per lb and 6 to 7 c for sun-dried; bleached Moorpark do, 11 to 12 c; Apples, 3 to 4 c for qrs and 4 to 5 c for sliced; do evaporated, 7 to 7½ c; Peaches, bleached, 7 to 8 c; do sun-dried, 5 to 6 c; Pears, 4½ to 5 c for bleached halves; pitted Plums, 5 to 6 c and 3 to 4 c for unpitted; Nectarines, 6 to 7 c for white and 5 to 6 c for red; Figs, pressed, 4 to 5 c; do unpressed, 2 to 2½ c; do sks, 2 to 3 c; Prunes, 5 c for the four sizes; Dates, Persian, 6 to 7 c; Figs, Smyrna, 14 to 15 c.

RAISINS—Cluster, \$2 per box; 4-crown London layer, \$1.60; 3-crown do, \$1.50; 4-crown, faced loose, \$1.50; unfaced do, \$1.35; 3-crown, stemmed loose, \$1.50. Bags—Three-crown, 4 c to 4½ c; 2-crown, 3½ c; third grade, 3 c; dried grapes, 2½ c; seedless Muscatel, 3½ c; Sultana, 5 c. For 50-lb hxs, ½ c additional on sack prices. A discount is allowed on the above prices.

Butter, Cheese and Honey.

The butter market was rather easy for all descriptions, arrivals being fairly liberal. Pickled and packed grades are moving slowly.

The market for cheese continues to improve, with stocks of new limited.

BUTTER—Creamery, 32½ to 33½ c per lb and occasionally higher; fancy dairy, 29 to 30 c; other grades of fresh, 24 to 26 c; pickled roll, 20 to 22 c; firkin, 18 to 20 c; creamery, in tubs, 26 to 28 c.

CHEESE—California, 9 to 11½ c per lb; Young America, 10 to 11½ c; New York cream, 13½ to 14 c; western, 12 to 13 c.

HONEY—New: Comb, water white, 8 to 10 c per lb in 1-lb frames; 2-lb do, nominal; extracted, 5½ c for water white and 5 to 5½ c for amber.

BEESWAX—From 22 to 23½ c per lb.

Poultry, Game and Eggs.

Buyers of poultry have the market nearly their own way as possible, as arrivals are free and stocks accumulating with the exception of broilers. Consignments of Eastern are due to-day.

The condition of the game received has greatly to do in shaping prices at present. The arrivals of late have been in anything but good order.

Holders of strictly fancy ranch eggs are firm in their asking prices. The supplies of Eastern have been liberal lately, but this has had no tendency to affect the market. Yesterday's receipts were 34,800 dozen.

POULTRY—We quote California: Hens, \$5 to \$6.50 per doz; Broilers, \$2.50 to \$3 for small and \$3.00 to \$3.50 for large; Roosters, \$4.00 to \$5.00 for young and \$5.00 to \$6.00 for old; Geese, pair, \$1.25 to \$1.75; Ducks, \$3.00 to \$5.00 per doz; Goslings, \$1.50 to \$1.75; Turkeys, live, 16 to 17 c per lb for Hens and 17 to 19 c for Gobblers; Pigeons, old, \$1.25 to \$1.50 per doz; do young, \$1.50 to \$1.75.

GAME—Quail, \$1.00 per doz; Mallard Ducks, \$2.50 to \$3.50; Teal, \$1.00 to \$1.25; Sprig, \$1.00 to \$1.25; Widgeon, \$1.25 to \$1.50; Small Ducks, \$1.00 to \$1.25; Gray Geese, \$2.00 to \$2.50; Brant, \$1.50 to \$2.00; Snipe, English, \$1.00 to \$1.50; do common, 50 to 75 c; Hare, \$1.25 to \$1.50; Rabbits, \$1.00 to \$1.50.

EGGS—California, 25 to 30 c per doz for store and 35 to 38½ c for ranch, occasional sales of selected higher; Eastern, 24 to 26 c; extra, 27 to 28 c.

Provisions.

CURED MEATS—Hams—Eastern, sugar-cured, 14 to 14½ c per lb; A—1—C, 14½ c; California, 13½ c.

Bacon—Eastern, extra light, sugar-cured, 19 to 20 c per lb; medium, 15 c; light do, 15½ c; light, 17 c; light clear, 17½ c; light medium, boneless, 16½ c.

Pork—Extra prime, \$16.00 to \$16.50 per bbl; prime mess, \$17.00 to \$18.00; mess, \$23.00 to \$24.00; extra clear, \$26.00 to \$27.00; clear, \$25.00 to \$26.00; pigs' feet, \$12.50; hf bbls, \$6.50.

Beef—Mess, \$7.50 to \$8.00 per bbl; extra mess, \$8.50 to \$9.00; family, \$11.00 to \$12.00; extra do, \$12.50 to \$13.00; California smoked, 10 to 10½ c.

Lard—California, 10-lb tins, 11 c per lb; 5-lb, 11½ c; kegs, 11½ to 12 c; 20-lb buckets, 12½ c; California compound, 8½ c for tierces; do hf bbls, 9½ c; Eastern compound, 9½ to 10½ c for tierces; do prime steam, 12 c; Eastern pure, 10-lb pails, 12½ c; 5-lb, 12½ c; 3-lb, 12½ c.

Wool, Hides, Etc.

There have been no changes in prices of Wool for the better since our last report, and no change in the situation worthy of special mention. There is, however, a rather confident feeling in the future of the market.

The Hide market is greatly depressed; in fact,

prices are now lower than ever before known. The demand is exceedingly light for Salted and Dry Hides and Sheepskins.

WOOL—Prices are quotable as follows: California—Spring, year's fleece, 7 to 9 c per lb; 6 to 8 months, 7 to 10 c; Foothill, 9 to 12 c; Extra Humboldt and Mendocino, 12 to 14 c. Fall—San Joaquin, plains, 3 to 4 c; do mountain, free, 5 to 7 c. Nevada—Choice and light, 12 to 14 c; heavy, 8 to 10 c. Oregon—Eastern, choice, 12 to 14 c; poor, 7 to 9 c; do Valley, 12 to 15 c.

HIDES AND SKINS—Dry Hides, sound, 5 to 6 c per lb; Kip and Calf, 6 c. Heavy Salted Steer, sound, do, 4½ to 4¾ c; medium, 4 c; do light, 3 c. Salted Cows, 3 c. Salted Kip, 3½ c. Salted Calf, 5½ c. Salted Veal, 4½ c (all culls ½ c less). Long Wool Pelts, 75 c each; medium do, 40 to 60 c; short do, 25 to 40 c; shearing, 10 to 20 c. Deerskins, summer, 25 to 30 c per lb; do medium, 15 to 20 c; do winter and long-haired Skins, 5 c. Goat-skins, prime and perfect, 30 to 50 c each; damaged, 10 to 25 c; Kids, 5 to 10 c.

TALLOW—Refined, 6 c per lb; No. 1 rendered, 5 c; country, 4 to 4½ c; grease, 2½ to 3½ c.

San Francisco Meat Market.

The market is liberally supplied with Mutton and prices are easy. Hogs are coming in freely, but prices are well sustained. We quote wholesale prices as follows:

BEEF—No. 1 Steers, 5 to 5½ c per lb, and occasionally higher for prime; No. 2, 4½ c; No. 3, 4 c. VEAL—From 4½ to 5½ c per lb for large; choice Dairy Calves higher.

MUTTON—From 5 to 6 c per lb for Wethers and 4½ to 5½ c for Ewes; Lamb, 6½ to 7½ c.

HOGS—Hard, heavy to medium, 5½ to 5¾ c per lb; Stock, 5 to 5½ c.

The Dried Fruit Market.

Following is the bulletin of the Santa Clara Fruit Exchange for the current week:

SAN JOSE, Cal., Oct. 11, 1893.

As the season for drying fruit nears its close, the management of the Exchange, looking forward to next year's campaign and backward to past experience, desires information of which it is sure many stockholders will soon be in possession. There are those in different parts of the valley who have carefully weighed their fruit, green and dried, and it is of much importance that the results of such painstaking shall be sent to the Exchange that accurate knowledge from year to year of the shrinkage may be had. Let every one having this knowledge communicate it to the Exchange.

The market has been very quiet during the past week and but few sales were made. There is, however, no change in prices beyond a recovery from the decline in peaches; they are in demand at from 6½ to 8 cents for choice quality, while fancy will insure 8½ cents. Pitted peaches, 11 to 14 cents.

Apricots remain unchanged from 8½ to 12 cents, with but little demand. The Exchange could insure a good price for five tons or more, if delivered during this week.

Pears have no established price as yet, but the Exchange price is from 6 to 7½ cents.

Silver prunes are held at from 6 to 7½ cents. Egg plums remain inactive at 3½ to 5 cents; pitted plums, 6 to 7½ cents. The Exchange would like two tons or more of pitted plums, there being a call for that amount.

Prunes remain unchanged, viz: 5 c for the four sizes, 60-90, with 40-50 at 6½ and 50-60 at 6½; while the 100s and upwards are selling for 4 cents.

The Exchange, equally with all others selling fruit, is very busy shipping to fill orders, and with the activity thus far manifested it will be able to fill its October shipments. Money is easier, and very satisfactory payments are being made to those who have delivered their fruit. * * * There are some complaints, many of which your president has no doubt are justly founded, but one he hears most of comes from the grading. While the Hamilton graders do uniform work and the sample weigher is especially instructed to be accurate, still people are now and then disappointed. However, we run far short of the small sizes to fill the regular orders for the four sizes, the 90's to 100's being very much below other sizes in amount.

SANTA CLARA COUNTY FRUIT EXCHANGE.

October Statement by the Agricultural Department.

WASHINGTON, October 9.—The October returns of the Department of Agriculture make the general condition of corn 76.7 last month, and 79.8 for October, 1892. This falling off is a result of the continued drought since June and which was not broken in the corn belt until the latter part of September. The drought was the most severe in the principal corn-producing States. The averages of the condition of these States are: Ohio, 70; Indiana, 61; Illinois, 66; Iowa, 93; Missouri, 69; Kansas, 64 and Nebraska, 65.

The returns of the yield per acre of wheat indicate a production of about 11.3 bushels, being 1.7 bushels less than the estimate of last October. The rate of yield is as follows: New York, 14.5; Pennsylvania, 14, Ohio, 15; Michigan, 13; Indiana, 14.2; Illinois, 14; Wisconsin, 13.3; Minnesota, 9.1; Iowa, 11.5; Missouri, 9.5; Kansas, 8.4; Nebraska, 8.7; South Dakota, 8.7; North Dakota, 9.5 and California, 11.2.

The highest rate is in the New England, Eastern,

extreme Western and Mountain States, and lowest in the Central, Western and Southern States. The small yield is the result of the drouth in the fall, which caused poor germination and growth, the severe winter following causing considerable winter killing. The low condition in many States is the result of a dry spring. The yield would have been much less had not much worthless wheat been plowed up and the ground put in other grains.

The quality in Eastern, Southern and Pacific States is up to the average, while in the States from which commercial supplies are obtained it is below the average. The States reporting the lowest averages as to quality are: Kentucky, 86; Illinois, 80; Wisconsin, 85; Iowa, 88; Missouri, 73; Kansas, 75; Nebraska, 84.

The average yield of oats, as consolidated, is 23.5 bushels, as against 24.3 last year. The last report of the condition was 74.9, as against 78.9 in the same month last year.

The average of the estimated yield of rye is 13.3, as against 12.7 last year.

The average yield of barley is 21.7, as against 23.7 last year.

The condition of buckwheat is 73.5, as against 77.5 last month and 85.6 on October 1, 1892.

The condition of potatoes is 71.2, a loss of only six-tenths of a point since the last report.

The condition of tobacco has improved slightly over last month, being 74.1, as against 72.3 in September.

Fruit Sales in the East.

NEW YORK, October 10.—Porter Brothers Company sold at auction to-day two carloads of California fruit at the following prices: De Comice Pears, \$4.00 @ 12; half-boxes Forelli Pears, \$1.95; Kelsey Japan Pears, \$3.60; Coe's Late Red Plums, \$1.55; Ickworth Plums, \$1.45; half-crates Tokay Grapes, \$1.00 @ 10; Salway Peaches, 75 c @ 10; Levi Cling Peaches, 75 c @ 10; George's Late Peaches, 60 c @ 10.

CHICAGO, October 10.—Porter Brothers Company sold at auction to-day eleven carloads of California fruit at the following prices: Bartlett Pears, \$2.75 @ 3.90; half-boxes Bartlett Pears, \$1.60; Glout Moreau Pears, \$3; De Comice Pears, \$2.75 @ 2.80; Burre Clairreau Pears, \$2.60 @ 2.65; Howell Pears, \$2.75; Beurre Hardy Pears, \$2.60; Lawrence Pears, \$2.60; Dayme Pears, \$1.05 @ 2.45; Beurre Die Pears, \$1.82 @ 2.20; Vicar Pears, \$1.80; Winter Nellis Pears, \$1.70; half-boxes Nellis Pears, \$1.10; half-boxes Seckel Pears, \$1.80; half-boxes Forelli Pears, \$1.25; Tokay Grapes, \$2.45 @ 2.95; half-crates Tokay Grapes, 65 c @ 1.40; Muscat Grapes, \$2.75; half-crates Muscat Grapes, 65 c @ 1.40; half-crates Cornish Grapes, \$1.20; Apples, \$1.45; Quinces, 80 c @ 1.10; Fellenberg Prunes, \$1.20; German Prunes, \$1.20; Coe's Late Red Plums, 90 c; Salway Peaches, 50 c @ 10; Cling Peaches, 60 c @ 75 c; half boxes Cling Peaches, 35 c @ 45 c.

CALIFORNIA FRUITS

—AND—

HOW TO GROW THEM.

A MANUAL OF METHODS WHICH HAVE YIELDED GREATEST SUCCESS; WITH LISTS OF VARIETIES BEST ADAPTED TO THE DIFFERENT DISTRICTS OF THE STATE.

BY EDWARD J. WICKSON, A. M.

Assoc. Prof. Agriculture, Horticulture and Entomology, University of California; Horticultural Editor PACIFIC RURAL PRESS, San Francisco; Sec'y California State Horticultural Society; Pres. California State Floral Society; Etc.

Large Octavo—599 Pages, Fully Illustrated. PRICE \$3, POSTPAID.

FOR SALE BY

THE DEWEY PUBLISHING CO.,
PUBLISHERS PACIFIC RURAL PRESS,
220 Market Street, Elevator, 12 Front Street
SAN FRANCISCO, CAL.

To Angora Goat Men.

MOHAIR We solicit consignments. Will give prompt personal attention to shipments, large or small. Have orders from manufacturers, therefore can promise full market prices and quick cash returns. Write us for quotations and shipping tags.

CILLEY & MARSHALL,

101 Gold St., N. Y.
W. R. PAYNE, Mgr. Mohair Dept.

THIS BIT combines the BEST QUALITIES of other patent bits and will easily control the most vicious horse at all times. It is the **COMMON SENSE BIT** because it can also be used as a mild bit. Xc Sample mailed \$1.00. Nickel 2.00.

RACINE MALLEABLE IRON CO.,

An Unusual Opportunity.

Every reader of the PACIFIC RURAL PRESS has a photograph of himself or herself or some friend that, reproduced with life-like accuracy and handsomely framed, would be of pleasant value.

The beauty and permanence of crayon portraits commend them to all, but hitherto the high price has deterred many. People naturally dislike to pay from ten to fifteen dollars for even a good portrait.

The PACIFIC RURAL PRESS has made such arrangements that any of its subscribers can secure a handsome crayon portrait for a trifling outlay. The price is set at \$2, and is put at that extraordinarily low figure to subscribers only. It is an unusual offer. The portrait will be gotten up in excellent style, will be 11 inches by 14, will be finely framed, the frame being 24 inches by 27, will have glass, etc., complete. The \$2 also includes boxing and packing—in short, a complete life-like portrait for two dollars, all ready to hang.

Any one sending \$2.40 for 12 mos. in advance or \$3 for 15 mos. in advance for a new subscription for the PACIFIC RURAL PRESS, or, if a subscriber already, either of these amounts for renewal, and two dollars additional, with the photograph they wish enlarged, will receive in return a finely finished portrait in crayon, fit to appear anywhere.

The PACIFIC RURAL PRESS makes no profit in this; it is a gift to our subscribers, present and prospective, and is an unusual opportunity to get a good picture at a nominal cost. This offer holds good for a short time only. Send the photograph you wish enlarged to this office, 220 Market street, giving postoffice directions plainly. The two dollars is for the portrait complete in this city. The freight charges are to be paid by the recipients of the portraits. Where several send from one postoffice address, those charges would be very light. Any size or style photograph will do to send, but of course much of the beauty of the portrait will depend upon the clearness of outline of the photograph from which the crayon portrait is made.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING SEPT. 19, 1893.

505,416.—REFINING ASPHALTUM—A. F. L. Bell, S. F.
505,058.—LAWN SPRINKLER—S. S. Black, Pasadena, Cal.
505,395.—UTILIZING WASTE PRODUCTS OF PETROLEUM—J. P. Engle, S. F.
505,099.—BRUSH BURNER—H. S. Gaylord, Armona, Cal.
505,219.—CLUTCH—J. C. Gibson, S. F.
505,402.—PROPPELLER—Hall & Sloan, S. F.
505,107.—BRASS—O. B. Jacobs, Fremont, Wash.
505,404.—PROPPELLER—P. L. Kosciolowski, S. F.
505,206.—FRUIT SPOON—P. Mason, S. F.
505,412.—CONCENTRATOR—T. McGlew, S. F.
505,410.—CONCENTRATOR—T. McGlew, S. F.
505,410.—HARNESS—Thos. Murphy, S. F.
505,176.—MART FOR DRUMMERS—W. B. Pless, Stockton, Cal.
505,133.—BUST FORM—N. Schell, S. F.
505,331.—SCREEN HOLDER—J. Scouler, S. F.
505,414.—BALLOON—C. A. Smith, S. F.
505,134.—RAIL HEATER—Smith & Knowles, Spokane, Wash.
505,257.—CLUTCH—L. F. Thompson, S. F.
505,339.—MOTOR—J. K. West, Centralia, Wash.

FOR THE WEEK ENDING SEPT. 26, 1893.

505,546.—CARPET STRETCHER—G. W. Ansley, Medical Lake, Wash.
505,564.—NUT LOCK—J. M. D. Bland, La Grande, Or.
505,697.—FURNACE—C. M. Bridges, Seattle, Wash.
505,599.—PUMP—Fulton & Ames, Galt, Cal.
505,460.—EXCAVATOR—W. M. Groes, Spokane, Wash.
505,605.—RAILWAY CONDUIT—G. W. McNear, Oakland, Cal.
505,575.—GYROSCOPE—J. N. Rowe, Seattle, Wash.
505,544.—VEHICLE TOP—J. U. Tabor, Los Angeles, Cal.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Experiment with a Cedar Shingle.

A correspondent of an English lumber paper gives the following information on an experiment made with a cedar shingle. A green shingle, fresh from the saw, was measured and weighed, care being taken to get both exact. It was found that it weighed seven ounces. It was then dried and again weighed and measured. It had shrunk nearly one-eighth inch, while the weight had decreased from seven to three ounces. It was then submerged in water 24 hours, and the size had not changed a particle, while the weight had increased about one ounce. He claims that this demonstrates the superiority of cedar shingles over others, as, when once dry, they will neither shrink with excessive heat nor pry one another off the roof in wet weather.

A New Rain-Maker.

Rain-makers have a rival in J. M. Matthews, of San Antonio, Texas, who is working on a new rain-making process. He is building a huge revolving wheel, with which to produce a cyclonic pressure of hot air upon the cold stratum of air above the earth, and thus condense the moisture in the hot air into raindrops.

Ten common-sized eggs weigh one pound.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

JERSEYS AND HOLSTEINS, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. William Niles & Co., Los Angeles, Cal., Breeders and Exporters. Established in 1876.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Siles, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER Saxe & Son, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS.—The best A. J. C. C. Registered Prize Herd is owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

THOROUGHBRED SPRING CHICKS, S. C. White & Buff Leghorns, Black Spanish, S. C. & White Wyandottes, Game Bantams, Mam. Bronze & White Hol. Turkeys. Theo. Cushing, Spokane, Washington.

WM. NILES & CO., Los Angeles, Cal., Breeders of nearly all varieties of Poultry, Dairy Cattle and Hogs.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

R. H. CRANF, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

SWINE.

H. J. PHILPOTT, Niles, Cal., Importer and breeder of Teumseh and other choice strains of Registered Poland-China Hogs.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, new Prices.

CHAS. A. STOWE, Stockton, Cal. (Box 283). Breeder of Berkshire and Poland-China Hogs; Milking Strain of Durham Cattle, and M. B. Turkeys. Write for Prices.

BERKSHIRES & POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. William Niles & Co., Los Angeles, Cal. Established 1876.

P. H. MURPHY, Perkins, Saco Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.



OXFORD DOWN SHEEP FOR THE PACIFIC COAST.

W. A. SHAFOR, Middletown, Ohio,

Largest American Importer of O. D. Sheep.

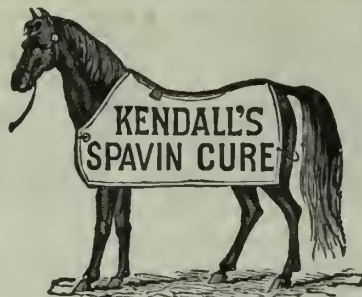
Is prepared to quote prices on the best stock of Oxford Down Sheep to be had in England. Parties wanting first-class stock should write for particulars and induce their neighbors to join them. Import will arrive about August 1st. Write at once.

FRANK A. BRUSH, SANTA ROSA, CAL. (Care Santa Rosa National Bank.)

Wants you all to write to him for prices on Young Stock.

MINORAS: White and Black. LEGHORNS: White, Brown, Black, Buff. B. P. ROCKS.

Mention the age desired and when shipped. Circular Free.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STAR, LANE CO., OREGON, Feb. 8th, 1892.

DR. B. J. KENDALL CO.,

Dear Sir:—I have used your KENDALL'S SPAVIN CURE for the last twelve years never being without it but a few weeks in that time and I have made several wonderful cures with it. I cured a Curd of long standing. Then I had a four year old colt badly sweened; tried every thing without any benefit, so I tried your liniment, and in a few weeks he was well and his shoulder filled up all right, and the other, a four year old that had a Thoroughpin and Blood Spavin on the same joint, and to-day no one can tell which leg it was on. These statements can be proven, if necessary; the four year olds are now seven and can be seen any day at Cottage Grove, Or.

S. Z. PAXTON.

Price \$1.00 per bottle.

DR. B. J. KENDALL CO., Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular

E. FOUGERA & CO.,

30 North William Street, New York.



In These Dull Times

You Can Largely Increase

Your income by buying an Incubator and engaging in the chicken business. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember, the best is the cheapest, PACIFIC INCUBATOR CO. 1317 Castro St., Oakland, Cal.

Short-Horn BULLS

Calves, Yearlings and 2-year-olds

FOR SALE.

ROBERT ASHBURNER,

Baden Station, San Mateo County, Cal.

Only three-fourths mile from the terminus of the S. F. and San Mateo Electric Road.

ROOFING

GUM ELASTIC ROOFING FELT costs only \$2 per 100 square feet. Makes a good roof for years, and any one can put it on.

GUM ELASTIC PAINT costs only 60 cents per gal. in bbl. lots or \$4.50 for 5 gal. tubs. Color red. Will stop leaks in tin or iron roofs that will last for years. TRY IT.

Gum Elastic Roofing Co.,

89 & 41 West Broadway, NEW YORK.

Local Agents Wanted.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.

The American Bee Journal,

(Established 1861.)
Is Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample. \$1.00 BEE-BOOK FREE.
W. W. YOUNG & CO., 54 E. Wabash, Chicago, Ill.



HALSTED INCUBATOR

COMPANY, 1312 Myrtle Street, Oakland, Cal. Send Stamp for Circular.

Commission Merchants.

ALLISON, GRAY & CO.,

501, 503, 505, 507 & 509 Front St.,
And 300 Washington Street, SAN FRANCISCO.

—GENERAL—

Commission - Merchants,
GREEN and DRIED FRUITS,
Poultry, Eggs, Game, Grain, Produce and Wool.

P. STEINHAGEN & CO.



404 & 406 DAVIS ST. S. F.

MOORE, FERGUSON & CO.

WOOL, GRAIN, FLOUR

—AND—

General Commission Merchants,

310 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

LINDSAY & CRAIG,

Crocker Building, San Francisco.

Mortgages Bought, Loans Negotiated.

Several buyers on hand for desirable Fruit and Grain Ranches.

Dewey & Co.'s Scientific Press Patent Agency.



OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library, containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free.

DEWEY & CO., Patent Agents,

220 Market St., Elevator, 12 Front St., S. F. TELEPHONE No. 658.

A. T. DEWEY, W. B. EWER, GEO. H. STRONG

AGENTS \$50 to \$100.—A. T. DEWEY, W. B. EWER, GEO. H. STRONG. Ladies of Gentle Best water known. Used at every house, place of business or farm the year round. "Home" Electric Motor runs all kinds of light machinery. Cheap—power on earth. Connected instantly to wash or sewing machine, corn sheller, pump, fan, lathe, jeweler's or dentist's machinery, etc. Clean, reliable, lasts a life-time. No experience needed. Show in operation almost a mile. Guaranteed. Profit immense. Circulars free. W. G. HARRISON & CO., Columbus, O.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering.

Surveying, Architecture, Drawing and Assaying, 728 MARKET ST., SAN FRANCISCO, CAL. Open All Year.

A. VAN DER NAILLEN, President.

Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$60. ESTABLISHED 1864. Send for circular.

THE STATE GRANGE.

Our record of the proceedings of the State Grange closed in last week's RURAL with the departure of the excursion for Sebastopol at noon on Wednesday. The trip was a delightful one. At Sebastopol the people spread a magnificent feast in a beautiful grove and after justice had been done to this feature of the entertainment the visitors were driven about the town and later to Santa Rosa, two miles away. Here the people were all attention and kindness and nothing was omitted which could add to the entertainment or pleasure of the guests. It was five o'clock before the train started on the return trip to Petaluma. The excursion was pronounced a complete success.

In the evening of the same day an open session was held to hear a lecture by Mr. Lubin of Sacramento on transportation. His plan was to have the Government carry all freight precisely as it carries the mails. By this plan it would cost the same to send a hundred pound package from San Francisco to New York as for Oakland to San Francisco. The general impression seemed to be that the scheme was more amusing than valuable and no serious attention was given to it.

THURSDAY.

Thursday was devoted almost wholly to the election of officers, with the following result:

Master—A. P. Roache, Watsonville, Santa Cruz County.
Overseer—W. W. Greer, Sacramento, Sacramento County.
Lecturer—S. Goodenough, Oakland, Alameda County.
Steward—E. C. Shoemaker, Visalia, Tulare County.
Assistant Steward—George Ohleyer, Jr., Yuba City, Sutter County.
Chaplain—S. Q. Barlow, Two Rock, Sonoma County.
Treasurer—A. D. Logan, Grangers' Bank, California Street, San Francisco.
Secretary—Don Mills, Santa Rosa, Sonoma County.
Gate-keeper—J. D. Cornell, Roulier Station, Sacramento County.
Ceres—Mrs. S. H. Dewey, Oakland, Alameda County.
Pomona—Mrs. E. W. Davis, Santa Rosa, Sonoma County.
Flora—Miss Alida Allison, Lodi, San Joaquin County.
Lady Assistant Steward—Miss S. A. Plummer, Brighton, Sacramento County.
Member of Executive Committee—George P. Loucks of Pacheco, Contra Costa County.

Only in the matter of the secretaryship was there any contest. The candidates were: Mr. A. T. Dewey of San Francisco, Mrs. Hattie S. Jones of Sacramento, Mr. D. Mills of Santa Rosa, and Mr. J. D. Huffman of Lodi. The fight was between the three first named, and the first ballot showed about even strength. On the second ballot Dewey had 23 votes, Mrs. Jones 17 and Mills 16. At this point there was an intermission for lunch. During the lunch hour Mr. Mills' friends must have been active, for when the next ballot was called he had 37 votes out of 65, and was declared elected. His election was assumed to be a victory of the "Native Son" element.

About the only other business transacted on Thursday was the passage of a resolution indorsing the candidacy of Hon. D. A. Ostrom of Yuba county for Assistant Secretary of Agriculture. The resolution was passed by a rising vote amid great enthusiasm.

The early part of the evening was devoted to initiating classes in the Fifth and Sixth degrees, there being a class of 34 for the Fifth and a class of 46 for the Sixth degree. Flint and Davis instructed these classes. Later, Past Master Overhiser exemplified the secret work of the order most acceptably.

After the exercises, the grange marched in a body to the theater building where the feast of Pomona and Flora had been spread. There were five tables each about 100 feet long, literally heaped with flowers, fruits, cakes, etc. The sight was a fine one. Long before the grange marched in, the galleries were crowded with spectators who cheered vociferously when the long line of visitors, headed by a brass band and led by Worthy Master Davis, marched into the building. Before the feast began a brilliant tableau was presented by half a score of young ladies beautifully costumed. Fully a thousand persons participated in the feast which was one of the largest and finest spreads ever witnessed in the State.

FRIDAY.

Friday was the field day of the session and while its record of transactions is not a long one it was really the most interesting day of the meeting. The first debate was on the proposition to appeal to the National Grange to revise and shorten the ritual. This was supported warmly by Mrs. Hattie Jones of Sacramento, Mr. Noyes of Stockton, Mr. Walton of Yuba City, Mrs. Walter

Greer of Sacramento and as warmly opposed by Past Master Steele, P. M. Overhiser, P. M. Flint, Mrs. Overhiser and others. The discussion ran through two hours and brought out the best oratorical ability in the meeting, the result being rejection of the proposition to revise.

Mr. Walter Greer proposed a resolution favorable to the Midwinter Fair, supporting it in a most eloquent speech and it was carried with great applause.

Perhaps the hotter fight of the session grew out of a question as to the location of the Secretary's office. This has always been at San Francisco where it has been maintained as a sort of headquarters for visiting Patrons; but the new Secretary (Mills) lives at Santa Rosa and it soon became known that he wished to maintain his office at his home. Discussion was precipitated by a recommendation from the Finance Committee that the pay of the Secretary should be \$50 per month and that this should include office rent. Heretofore the salary has been \$50 with an office in San Francisco for which the Executive Committee has paid \$15 per month. The recommendation to cut off the rent charge meant to cut off the San Francisco office, leaving it optional with Mr. Mills to take his office where it might please him. When the recommendation came up for action Past Master Steele proposed to amend leaving the salary \$50 per month as heretofore and providing that the office of the Secretary be located in San Francisco and authorizing the Executive Committee to secure a suitable office at a cost of not more than \$15 per month. This brought out a hot discussion and Mr. Greer contended that to require Mr. Mills to live in San Francisco would be an injustice; that it would not be possible for him to live upon the salary and that he ought to be allowed to keep his office where it suited his own convenience. Mr. Davis, too, thought that it would be an injustice to Mills and he pointed out that the office of the Secretary in other States was not required to be in the metropolis. Mr. Overhiser agreed with Mr. Steele in believing that the office should be at San Francisco, and that it would be of limited use to the order if removed to Santa Rosa. Mr. Coulter thought it would be just as well to have the office at Santa Rosa as at San Francisco.

The matter was discussed at length on both sides and Mr. Steele's amendment was lost by a large vote. This leaves the location of the Secretary's office to be settled by the Executive Committee and the new secretary. The latter will no doubt wish to have it at Santa Rosa.

The installation of the new officers took place in the evening, the ceremonies being conducted by Past Master Davis, assisted by Brother Denman and Sister S. E. Woods. It was a beautiful and happy occasion.

Following this came the memorial service and the closing scene in which Mr. Davis, Mr. Steele, Mr. Roache, Mrs. Allison, Mrs. Starr, Mr. Dewey, Mr. Walton, Mr. Ohleyer, Mr. Frisbie, Mrs. Jones, Mr. Johnston, Mrs. Roache and others took part. It was nearly midnight when the session came to an end, and it was with the best of spirit of fellowship and good feeling.

IN GENERAL.

A proposition to recommend the "initiative" was laid on the table.

In the closing hours the usual complimentary resolutions were passed.

Nothing was done with any of the proposed constitutional amendments.

Mr. Adams' proposition in commendation of the Government land-loan bill was indefinitely postponed.

The rule as to representation in the State Grange was amended so as to provide for the election of alternates in all cases.

All the officers of the State Grange were present excepting Pomona (Miss Nettie Brouse) who has gone to the Chicago Fair.

The matter of appointing and compensating a legislative committee at the proper time was left with the Executive Committee.

The Executive Committee will meet in San Francisco on Friday of this week, when many questions respecting the policy to be pursued during the year to come, will be settled.

Mr. B. F. Walton of the Executive Committee expects to leave next week for a two-months visit in the East. He will attend the Chicago Fair and the National Grange at Syracuse.

No further action was taken on the financial question than to approve the general sentiment expressed in the master's report, that every dollar ought to be as good as every other dollar.

A resolution was adopted requesting the Executive Committee to engage either the

master or the lecturer of the National Grange to make a lecture tour among the granges of California.

The Committee on Good of the Order recommended that arrangements be made with the RURAL PRESS for continued service as official organ, if possible, upon terms which will allow more space to grange matters.

The dead of the year include Sister Myers of March Grange, Bro. Orrin Dennis, P. M. of Eden Grange, Sister Plummer of Enterprise Grange, Sister Newkom of Yuba City (late Flora of the State Grange), and Bro. W. D. Woodworth, P. M. of Yuba City.

The only change in the by-laws was a slight one made at the request of Worthy Master Roache, allowing him to appoint district deputies upon recommendation; and doing away with the requirement that such deputies shall have served in the master's chair.

Some familiar faces were missed this year. Neither Webster, McConnell, Adams, Mrs. Landers, Dr. Caples or the Sanders were present. All the past masters living in the State, excepting Webster were present. He was detained by a pressing engagement in the southern part of the State.

Past Master Davis has lecture engagements in several Eastern States which will occupy his time between now and the meeting of the National Grange. It will be remembered that he is Overseer of that body, and it is more than likely that he will be chosen Master at the next election.

The committee on education reported that in its judgment "the best results in agricultural education could not be secured till the agricultural and mechanical college is separated from the classical University of California." The committee declares further that the law requiring instruction in the public schools in botany and entomology is wholly ignored.

STANDING COMMITTEES.

Credentials—Bros. J. D. Huffman, Harry C. Rapp, C. H. W. Bruning, Sisters M. E. Hook and D. Fisher.

Division of Labor—Bros. E. Greer, Walter Renwick, Sisters M. A. Saxton, U. G. Wilson and Jno. Burnham.

Resolutions—Bros. Wm. Johnston, Jas. Moran, J. M. White, Sisters Gustave Brown and G. Ohleyer.

Agriculture—Bros. I. C. Steele, W. W. Kilgore, Louis Sehlmyer, Sisters Philo Hersey and H. M. Woods.

Co-operation—Bros. A. P. Martin, J. R. Denman, L. A. Gremore, Sisters E. Greer and F. B. More.

Constitution and By-Laws—Bros. S. T. Coulter, Don Mills, Milton Casey, Sisters J. R. Denman, C. D. Grover.

Finance—Bros. Dan'l Flint, Chas. Gamble, D. Fisher, Sisters Marion T. Noyes and A. Bickford.

Education—G. N. Whittaker, W. D. Houcks, Sisters S. H. Dewey, and M. T. Noyes.

Good of the Order—Geo. Ohleyer, Marion T. Noyes, Sisters E. Z. Roache, Jas. Moran, and Alida Allison.

Woman's Work—Sisters Hattie S. Jones, R. O. Baldwin, Alida Allison, Jennie Starr and Nettie Brouse.

PETALUMA.

The Grange was especially fortunate in the selection of Petaluma as its place of meeting. The local Granges—Petaluma and Two Rock—led in the good offices of hospitality and the citizens of the city joined heartily with them. Everything that could be done to promote the convenience of the session and comfort and pleasure of the visitors was done heartily and royally. Everybody seemed proud to show off the town, and well they may be, for it is one of the brightest and most prosperous in the whole State. When the Federal census was taken Petaluma was credited with a population of about four thousand. The vote last fall, the attendance at the schools and the postoffice business indicate a present population of about five thousand. It has fine school buildings and excellent schools. There was recently added to the High school a normal training and a commercial department, both of which are largely attended, far beyond the most sanguine expectations, and include many pupils from other towns and counties. There are nine churches, Catholic, Protestant Episcopal, two Methodist Episcopal, Congregational, Presbyterian, Baptist, Christian and German Lutheran. There are four prosperous banks. There is a silk factory—the only one on the Coast—a prosperous woolen mill that has doubled its capacity within the past year, a cannery, a flouring mill, a grist mill, a pickle and preserve factory, a starch factory, a shoe factory, a foundry, a tannery, a flourishing incubator factory, two manufactories of saddles, harness, etc., an extensive manufactory of carriages, wagons, carts and agricultural machinery, besides several minor manufacturing enterprises. In these not far from one-third of the population is employed when they are running with a full complement of hands. The population is largely composed of pros-

perous old settlers, many of whom have amassed handsome fortunes, and the social conditions are excellent.

As an illustration of the good spirit which prevails among the older residents of the community it is proper to note two special instances of philanthropy. Last year Mr. H. Mecham, whose home is in the pleasant rolling country north of the city, deeded to trustees one thousand acres of fine land, having a present value of at least \$50,000, the income from which is devoted to the relief of Petaluma's poor. Previously this same gentleman had caused a drinking fountain to be erected, surmounted by a handsome bronze statue, to be erected on the corner of Main street and Washington avenue. Recently Mr. W. H. Pepper donated a corner lot and fine improvements, and \$15,000 in cash, for the endowment of a free kindergarten—the entire donation good value for \$25,000. These things not only speak loudly in praise of the donors but equally in praise of a city which opens the way to the prosperity of its citizens and then commands their gratitude and benevolence. It is not surprising that in such a town visitors are made welcome and that every good work prospers. May it always be the lot of the State Grange to meet with such progressive and kindly people!

GRANGERS' BANK

OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874.



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 800,000
Dividends paid to Stockholders.... 720,000

OFFICERS.
A. D. LOGAN.....President
I. C. STEELE.....Vice-President
ALBERT MONTELLIER.....Cashier and Manager
FRANK MC MULLEN.....Secretary
General Banking. Deposits received, Gold and Silver.
Bills of Exchange bought and sold.
Loans on wheat and country produce a specialty.
January 1, 1893. A. MONTELLIER, Manager.

Superphosphate Fertilizers

Made from GENUINE GUANO.

For Fruit Trees, Vines, Sugar Beets, Grains, Vegetables, Etc.

Special Grades put up to suit the soil.

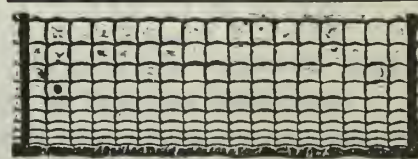
—ALSO—

GUANO FLOUR.

EQUAL TO PURE BONE MEAL. Circulars giving directions may be had on application to

Mexican Phosphate & Sulphur Co.,

H. M. NEWHALL & CO., Agents,
309 & 311 SANSOME STREET,
San Francisco.



Run for a Doctor.

"I am awful sick and if he'll work cheap, I want him." That must be the way some men talk, judging by the letters we get. Such men fence with barbed wire or anything cheap. Our customers buy because they prefer the best and most efficient article at a reasonable price.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

DOUBLE Breech-Loader \$6.00.
RIFLES \$2.00.
WATCHES
GUNS BICYCLES \$15
All kinds cheaper than elsewhere. Before you buy, send stamp for catalogue to POWELL & CLEMENT CO., 166 Main St., Cincinnati, O.

Seeds, Plants, Etc.

AN INVITATION

IS EXTENDED TO ALL INTERESTED TO VISIT THE SAUSAL FRUIT FARM DURING THE FRUITING SEASON, WHERE ALL VARIETIES ARE TESTED THAT ARE GROWN AT

NAPA VALLEY NURSERIES.

AN INSPECTION OF THE NURSERIES ALSO SOLICITED. CLEAN STOCK, UNIRRIGATED, PROPAGATED FROM BEARING TREES.

LEONARD COATES, NAPA, CAL.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrabalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

Santa Rosa Nurseries.

AN IMMENSE AND WELL ASSORTED STOCK.

TREES TRUE TO NAME.—Warranted clean and raised without irrigation.

PEARS AND PRUNES at about HALF USUAL PRICES till my surplus is sold.

Price List mailed free.

Address R. W. Bell, Santa Rosa, Cal.

GOLD DUST.

"Gold Dust Cling," says H. E. Van Deman, U. S. Pomologist, "is a yellow cling of medium size, round and regular in shape, and very firm in flesh. The color is very attractive, being dark yellow with a very red cheek. It bears heavily and carries to market with very little damage. Coming as it does before the main peach crop is gathered, it is about the first yellow cling of any special value and therefore finds a ready sale. Each year it gains in favor, but as it is a variety but recently originated the public know little of it. It is a very profitable variety." Price \$1 each, \$5 per half dozen. For sale by SACRAMENTO RIVER NURSERY COMPANY, Growers of HIGH-GRADE Fruit Trees, Walnut Grove, Sacramento County, California. Our Specialties—Genuine Tragedy Plums, Olyman and Japan Plums—price 15 cents each; Sacramento River Bartlett and Peaches—price 10 cents each.

OLIVE TREES

In Variety for Nurserymen,
Dealers and Planters.

Will also contract now to propagate Rooted Olive Cuttings for persons who wish to plant them in nursery spring of 1894.

OLIVE CULTURE IN CALIFORNIA,

Sixteen pages, mailed free.

Address:

JOHN S. CALKINS,
POMONA, LOS ANGELES COUNTY, CAL.

OLIVE TREES.

ALL KINDS OF

Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,
Pomona, Cal.

Pepper's Nurseries.

ESTABLISHED IN 1859.

For Sale at Low Rates, a General Assortment of Hardy Deciduous Fruit Trees.

I do not buy trees to sell; what is offered is grown in my own grounds and free from scale bugs. No scale bugs of any kind to be found in the Nursery. No agents employed. Order direct from the nursery and procure your trees true to label. Order early, as early planting is the most successful with deciduous trees. Prices furnished on application.

Address W. H. PEPPER, Petaluma, Cal.

B. F. GODFREY & CO.,
NURSEYRIMEN,

Davisville, Cal.

Write for Catalogue and Prices.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

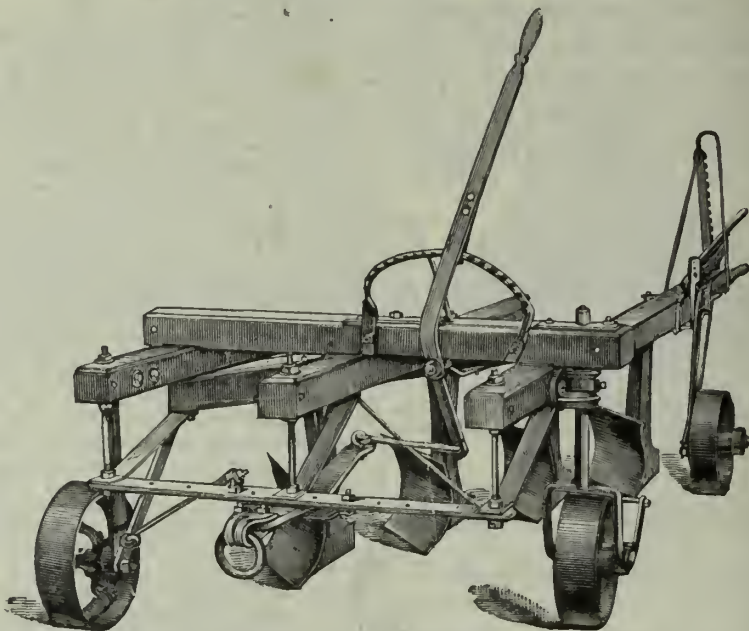
"Orange Culture in California" was written by Thos. A. Carey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 226 Market St., San Francisco.

IMPROVED GRANGER GANG PLOWS.

Reversible Moldboard Gang Plows.

Manufactured by the Benicia Agricultural Works.



Cut showing the Reversible Moldboard Gang, with Rear Lifting Lever and Land Gauge Lever.

THE GRANGER is conceded to be the best wood frame Bench Beam Plow now manufactured. It is clear, well-seasoned lumber, well bolted together and well painted. Bottoms have chemically hardened Steel Molds, which wear three times as long as ordinary ones.

GANG PLOWS—Our line is the largest and best in the State. It includes the Eureka, Peerless, Granger and Reversible Mold Gangs, in all sizes.

SINGLE PLOWS—We furnish the Benicia, Star, Gale, Princess and a score of others. We guarantee their quality.

HARROWS—We have all the various styles, from a common Drag to a Steel Frame Spring Tooth Lever Harrow.

SEEDERS—Our stock is not equaled; examine our Gem, with Armstrong's patent force feed, Gorham, Triumph, Monarch, Climax and others, before purchasing some other kind.

WRITE FOR OUR NO. 27 LATEST SPECIAL 144-PAGE CATALOGUE of Plows, Harrows, Seeders, Cultivators, etc.

BAKER & HAMILTON,
SAN FRANCISCO AND SACRAMENTO.

WE GIVE ESPECIAL ATTENTION TO

Fruit Trees! Deciduous Fruit Trees!

ALEXANDER & HAMMON'S

Rio Bonito Nurseries, Biggs, Butte Co., Cal.

STOCKTON NURSERIES,

ESTABLISHED 1853.

FRUIT TREES. FRUIT TREES.

GRAPE VINES.

Also Fine Stock of Shade and Ornamental Trees, Shrubs, Palms, Roses and Carnations.

Correspondence Solicited.

PLANTS IN GREAT VARIETY.

E. C. CLOWES, STOCKTON, CAL.

McKEVITT'S EARLY.

The New Yellow Freestone Peach!

FIRST AND BEST OF EARLY YELLOW PEACHES.

RIPENS IMMEDIATELY AFTER THE ALEXANDER (White Cling), which is the earliest peach in market.

Fruit is round, of medium size, VERY HIGHLY COLORED, flesh firm and sweet.

THIS PEACH HAS BEEN SUCCESSFULLY SHIPPED EAST FOR FIVE YEARS and is no new, untried variety.

Tree healthy, strong grower, and heavy bearer, never having missed a crop.

A limited number of yearling trees for sale this season. Apply early before stock is exhausted.

FRANK B. McKEVITT, : : : : VACAVILLE, CAL.

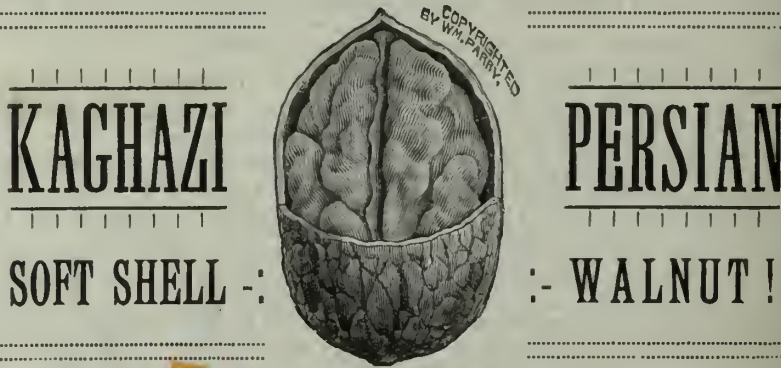
1858. 55 YEARS. 300 ACRES. 1893.

NEW APPLES, PEARS AND NUTS.

Starr, the largest early apple. Paragon, and other valuable sorts. Lincoln Coreless, Seneca and Japan Golden Russet Pears in collection at reduced rates. NUTS—Parry's Giant, Pedigree Mammoth, Paragon and other chestnuts. Walnuts—French, Persian, Japan, English and American. Pecans, Almonds and Filberts. Eleagnus Longipes, Hardy Oranges, Dwarf Rocky Mt. Cherries, free from insects, black knots or other diseases. Small Fruits, Grape Vines, Currants, Etc. SHADE TREES—Immense stock of Poplars and Maples, Ornamental shrubs and Vines.

ILLUSTRATED DESCRIPTIVE CATALOGUE FREE.

POMONA NURSERIES, WILLIAM PARRY, Parry, New Jersey.



Our Stock of TREES and VINES is Most Complete in EVERY CLASS of Fruits.

A LARGE STOCK OF THOMPSON'S SEEDLESS GRAPES.

SHIPPING, CANNING and DRYING Fruits of all Kinds.

Assortment of RAISIN and TABLE GRAPES in California.

Early Shipping Plums a Specialty.

SPECIAL PRICES FOR TREES IN LARGE QUANTITIES.

DURING the last three years, trees grown on the FEATHER RIVER BOTTOM LANDS, at RIO BONITO, BUTTE COUNTY, have been much sought after, and the demand for them is increasing all over the State where they have been planted. Owing to the peculiar adaptability of the soil and climate of this section for growing nursery stock, the trees making a very large and well-furnished system of root growth, and maintaining a correspondingly strong and vigorous top, maturing the wood thoroughly, we are enabled to supply our patrons with the best of trees, healthy in every respect, entirely free from insect pests, and in perfect condition for transplanting.

If You Are Going To Plant Trees, It Will Pay You To Correspond With Us Before Purchasing.

ALEXANDER & HAMMON,
BIGGS, BUTTE COUNTY, CALIFORNIA.

PACIFIC RURAL PRESS

Vol. XLVI. No. 17.

SAN FRANCISCO, SATURDAY, OCTOBER 21, 1893.

THE DUNN PUBLISHING CO.
Office, 220 Market Street.

The Midwinter Fair.

The Midwinter Fair comes on apace. Popular interest in the undertaking has vastly increased during the last few weeks. The voluntary contributions and cash in hand is now approaching \$225,000. All the chief buildings are under way and already begin to make an impression upon the landscape. The receipts of money from concessions is understood to be very large, even as much or more, it is said, than the amount of contributions mentioned above. Interest in exhibiting and in preparing taking entertainment for the visitors is constantly increasing, and the success of the enterprise seems now to be fully assured.

We give on this page a picture of the Administration Building, reproduced from the handsome pages of the *Illustrated Pacific States* of San Francisco, a journal which is giving much attention to the interests of the fair and proposes to make its coming issues a mirror of the exposition. It should command wide circulation. The Administration Building was designed by A. Page Brown. It is the smallest of the five main buildings of the fair, but is intended to be the most attractive in style and ornamentation. Its design is oriental, with additions. It consists of a central square structure covered by a lofty and highly ornamented dome, and has four pavilions, one on each corner of the square. All sides will be of equal dignity and finish, and the building will be, both in its style and its functions, the natural center of the midwinter plant. It will have considerable height and will be a striking object, as it is intended to be. In it all the executive offices of the fair will be situated.

THE vintage in the Santa Rosa region is said to be opening well. The quality of grapes is better than the average, and in quantity they are nearly up to the average yield. The prevailing prices range from \$7 to \$8 per ton, which vineyardists think is hardly enough to make grape-growing remunerative. We should call it altogether too low for remuneration.

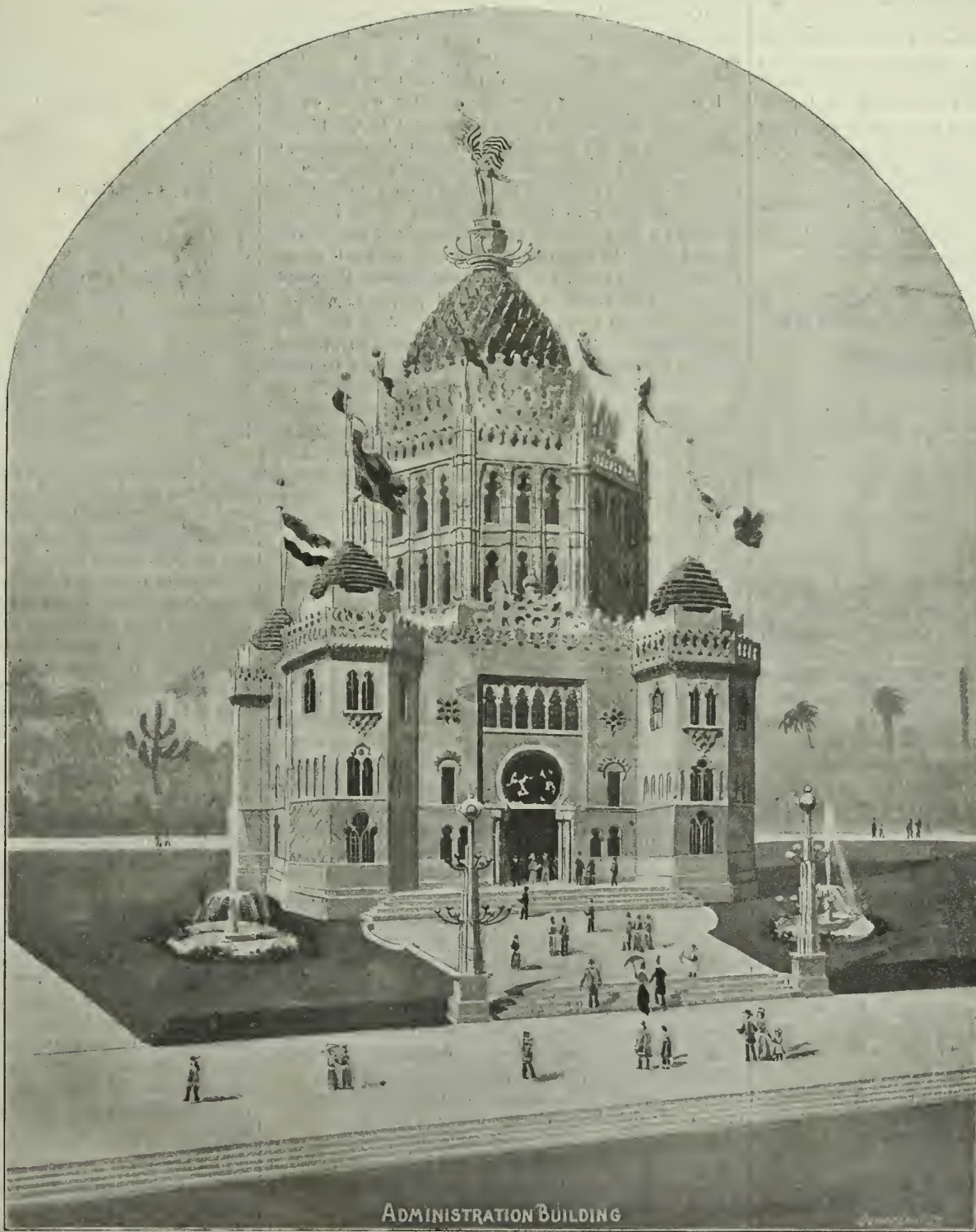
THIS year's fresh-fruit shipments are attaining large figures. Including October 14th the season's shipments have reached 5000 carloads. Most of the fruit is sent in refrigerator cars, carrying 12 tons to the car; the balance

THERE has been a local flurry in wheat in this market, and a strong bull movement has been developed. Probably some growers who desired to realize have thus been able to get higher prices than those hitherto prevailing,

but how thoroughly the movement is impregnated with gamblers' methods is seen in the published statement that "wash sales," or wholly fictitious transactions, are still possible under the rules of the Call Board. For instance, the sale of 1,000,000 tons of December wheat last Thursday appeared to be as regular as any sale made during the session. Yet, when the business of the session was concluded, both seller and buyer asked to be released. The wash sale had done its work, and both parties to it were, under the rules, released. Had it been a bona-fide sale it would have necessitated the payment of \$2500 into the treasury of the exchange. Some members are dissatisfied with such proceedings, and it is probable that an amendment to the rules will be suggested to fine the participants in a wash sale to the amount of what the commission to the exchange treasury would be; that is, at the rate of 25 cents a ton. But this would only be a partial remedy. The gambler would then merely figure whether he could make enough in other ways so that he could afford to pay the fine. The whole gambling system should be wiped out.

ROSE-GROWING FOR PROFIT is extending, notably on the east shore of the bay, and possibly in other suburbs as well. In Berkeley the area of glass devoted to roses has at least doubled within a year. Rose-growers are exploiting other markets than San Francisco, and

shipment of cut blooms to Portland and the cities of the Sound, and to points eastward at least to Salt Lake and Denver, are contemplated. The Dwight Way Nursery of Berkeley has perhaps the greatest area of glass devoted to roses in the State, and is giving much attention to the development of outside traffic. There will be no difficulty in multiplying our rose product to any extent that the market warrants. The climate of course favors cheap construction of houses and heaters will answer here which would be powerless against the eastern winters.



ADMINISTRATION BUILDING

ADMINISTRATION BUILDING AT THE MIDWINTER EXPOSITION.

goes in ventilated cars, carrying 10 tons. The average is 11½ tons to the car straight through, so that the shipments for the season thus far have been 57,500 tons. Up to the same date last year the green-fruit shipments amounted to 3600 cars or 41,400 tons, and for the same period in 1891 3100 cars or 35,650 tons. These figures are for deciduous green fruits only.

THE late President Garfield's farm at Mentor, Ohio, is to be divided up into building lots.

From an Independent Standpoint.

With some millions of the American people the national finances, the dead-lock in the Senate, the tariff question and even the hard times have, during the past two weeks, been matters of subordinate and minor interest compared with a series of races at New York between the American yacht *Vigilant* and the British yacht *Valkyrie*. The trophy contested for was a silver cup or vase, worth about five hundred dollars; but if it had been worth five millions, or five times that sum, there could not have been more interest in the races. To persons not familiar with all the circumstances it must seem very curious and very absurd that the whole country should get excited over a boat race; and so it would be if it were a mere sporting event.

From time out of mind the British yachtsmen have had an annual regatta for a silver cup, and to win this trophy and to hold it even for a single year has been the darling ambition of every young Englishman rich enough to own a boat. Princes of the blood, scions of the great hereditary families, the leading officers of the navy, not to mention the sons of rich brewers and tradesmen, have annually contested for this prize; while royalty, aristocracy and fashion have co-operated to make the race day a grand fete. In the year 1851 there was an exceptionally brilliant list of competitors, eighteen yachts owned by the prominent swells of the time having been entered for the prize. Mr. George Steers of Boston, who was the owner of a fine boat called the *America*, determined to try his chances, and accordingly sent his craft across the Atlantic. He was, for some technical reason, ruled out of the race; but the ocean was free, and five minutes after the eighteen Englishmen crossed the starting line, Mr. Steers sailed the *America* after them. In half an hour she overhauled the hindmost; in an hour she was ahead of the leader; and when she crossed the line the foremost of the eighteen could hardly be seen over her stern post with a magnifying glass. She had beaten the best of them by eight miles. It was a day when Britannia didn't rule the wave. While actually the victor, the *America* had not in a technical sense been in the race, and she could not therefore be given the trophy; but Queen Victoria was among the spectators, and, a few days later, Mr. Steers received from her a duplicate of the cup, accompanied by a complimentary letter in which the hope was expressed that British sailors might have the chance to win it in future competitions.

This gift of Queen Victoria is what is known as the "America cup," and, although the Britishers have tried again and again, they have never been able to win it back. Year after year they have come over with their fastest boat, but we have always been able to meet her with a faster one. The *Valkyrie*, which has just now been beaten by the American *Vigilant*, has won all the races of the season on the other side, and is supposed to be the fastest English yacht ever built. Her signal defeat is accepted as final demonstration that the American type of boat is a faster sailer. The difference is simple, but radical. The English boats are made with long fixed keels, the plan being to make a deep, sharp craft that will cut through the water with little friction. The American type is shallow and flat, with a movable keel or center-board which can be lowered or raised at will, the idea being to slide over the water. The result of this latest race—in which the American won in three straight heats—has forced the leading English yachtsman, Lord Dunraven, to admit that the American style of boat is the faster; and this he has done with the blunt manliness of a British sailor and a royal fine fellow.

The sentiment and spirit involved in these yachting contests are the same which ruled the day at Bunker's Hill and Yorktown, without the passion. A former generation won the America Cup under circumstances especially gratifying to our national pride. This generation wants to keep it, and the joy we feel every time we defeat those who try to win it is a natural, patriotic and wholesome sentiment. The *RURAL* is not much given to sports—it neither plays baseball nor lawn tennis nor keeps a trotting horse—but it throws up its hat and joins in the cheering for the good yacht *Vigilant*, which has again sent the *Lion* home with his tail between his legs. A boat race may not be a very serious or grave affair—but we are glad the one that bore the stars and stripes came out ahead.

The McCreary amendment to the Geary Chinese law, allowing another six months for registration, passed the House of Representatives on Monday by a vote of 179 to 1. Only the Democrats voted, the Republicans (with the exception of Hilborn of this State, who had the courage to vote for the amendment) sitting silently in their seats. Other features of the amendment, besides the extension of time, are: (1) Defining a "merchant" to be a "person engaged in buying and selling merchandise at a fixed place

of business, which business is conducted in his name, and who, during the time he claims to have been engaged as a merchant, does not engage in the performance of any manual labor except such as is necessary in the conduct of his business as such merchant;" (2) Making the execution of orders of deportation the duty of U. S. Marshals, and denying privilege of bail while under sentence of deportation; (3) Requiring that a photograph of each Chinaman to be attached to his certificate, and (4) Disqualifying for registration any Chinaman heretofore convicted of felony in any United States court.

This amendment will now go to the Senate, where it is certain to pass by a large vote. It is, in fact, the natural, orderly and proper course. Our Congressmen have made a lot of bluster in opposition to it; but they have known all along that nothing could or should be effected by it. They have, in fact, been "playing to the gallery" on this coast. The law as it now stands (or as it will stand within a few days) is very satisfactory. It is, in fact, all that the United States can do in decency and honor. It allows every Chinese, who came here under treaty assurances to remain, subject to reasonable regulations for his identification, provided he has not abused our hospitality; and it closes the door absolutely to fresh importations. Every reasonable man ought now to be satisfied, and we ought to hear no more of the Chinese question.

The question now uppermost at the National Capital is whether or not the majority shall rule. This question, involving as it does the integrity of our Government and its capacity to sustain itself, has really superseded the question nominally at issue. On our statute book there is a most hurtful and destructive law. The people demand its repeal; the President has urged its repeal; the dominant party has promised its repeal; the House of Representatives has voted its repeal; a majority of the members of the Senate clamor for its repeal; but there is a little coterie of Senators—a small minority of the membership—who represent an interest which they fancy will suffer if the pernicious law is repealed. Under the rules of the Senate this minority has up to the present time been able to prevent a vote by pretending to "debate" the question at issue. They take turns in holding the floor and kill time by reading long extracts from text books and newspapers simply to postpone a vote. This is nothing better than bare-faced nullification of the very function of the Senate, for Congress is constituted to duly discuss public measures and then to express by a direct vote the will of the majority. To refuse to permit a vote under the present circumstances is to nullify the constitution and overthrow the fundamental principle of free government; it is revolutionary in its purpose and method. This was pointed out in the Senate a few days ago by Senator Voorhees, who, addressing his fellow Senators, said:

I believe that this body should have rules by which to conclude a discussion and reach a vote. This is more reasonable, more sensible and more decent than the rule on which we are entering now, which is the only one possible, for the opponents of this bill will not name any day for a vote. They will resort to dilatory measures to prevent action being taken. Who is to quit? Sir, I would rather be carried from this desk feet foremost and put to sleep at my home in Terre Haute forever than to yield the principle that the majority has the right to govern. I stand here for the highest principle of free government known to history. We started in here some weeks ago to discuss the repeal of a bad measure of financial legislation. We have reached the question of free government; we have reached the question of constitutional government; we have reached the question whether or not we have a government that can administer itself. Idle, vapid talk takes place in the papers in regard to abolishing the Senate of the United States. The Senate can no more be abolished than can the Constitution, for it is a great part thereof, but it can be governed by rules of its own making so as to make it a self-acting, proper and reasonable body of legislation. I am tender of minorities. I would not injure the minority, but shall the minority govern? Answer me. Shall the minority govern? Somebody has to rule. Somebody has to control this Government. Shall it be the minority or the majority? The Senator from Idaho intimated that possibly they had a majority. Then let us ascertain that by a vote, and we will submit to it gladly, willingly. If we are the majority, will you not?

This appeal was of no effect. The anti-repealers simply laughed in his face and renewed their threat to hold the Senate to inaction until it should promise to adopt in place of the Sherman law another law that will "make a market for silver." This demand is the same in principle as if the Senators from the wheat States should "hold up" the Senate until it should pass an act providing that the Government should make a market for wheat. And now, is a minority of the Senate to control against the majority of that body, against the people, against the House of Representatives, and substitute for government by the people the rule of an oligarchy composed of a senatorial minority? This inquiry is put by Col. McClure of the *Philadelphia Times*, a veteran observer of public affairs, who answers it as follows: "There is no rule or law, or semblance of rule or law, by which the majority of the Senate is forbidden to exercise its authority at any

time and under any circumstances consistent with its pleasure; and if Senator Voorhees were to call for a rising vote of the Senate to instruct the president of that body to put the Voorhees bill at once to a vote, and a majority of the members of the Senate rose in response to that call, the president would be faithless to his trust and false to every tradition of the Senate if he did not obey its command." This is sound sense, and what Col. McClure proposes ought to be done. It is idle to say that the Senate has any rule preventing its own action which it may not correct by the expressed will of a majority of its membership. To declare this is to maintain that the Senate has no power to govern itself.

Within the past two days the situation has grown very serious. The impatience of the majority, the continued pressure of the financial stringency which rests upon the situation, the increasing insolence of the obstructive minority, the growing dissatisfaction of the people—all these influences are working toward some sort of result. Yesterday (Tuesday) Senator Sherman declared on the floor of the Senate that "in two months not a single measure had been passed by the Senate that was of the slightest importance; that if this should continue the Senate would no longer command the respect of active and intelligent people—and Americans were men of action in all departments." Continuing, he said that the responsibility of the present situation rested upon the Democrats; that they had the power, but seemed incapable of forming a policy. He continued:

We ask our brothers on the other side to consult with each other. If they do not like the President's plan on the silver question, give us some other, and in God's name let us settle this important question for the people of our country. Then we will take it into our consideration. If we can agree with you we will, but we will not follow your example blindly. If we cannot agree with you we will give you a manly "No."

This taunt under all the circumstances was a home thrust and it went straight to the mark. Mills of Texas, a leading Democrat, followed Sherman and addressing his fellow Democrats said that they were showing themselves incapable and unworthy. There was great excitement on the Democratic side and after adjournment there was a movement for the Democrats of both houses to meet in caucus and try to find a way out of the muddle. Thus the matter stands as we go to press Wednesday evening. We cannot doubt that some conclusion will have been reached before another week.

There was a joint meeting of the State Board of Trade and the Fruit Growers' Association on Tuesday to consider how California's interests might be furthered in the matter of the tariff measure which is being formulated at Washington. Mr. Lelong, of the State Board of Horticulture, reported that the committee designated by the Fruit Growers' Convention held in this city last July had prepared a brief showing the cost of fruit production in California compared with the cost in the countries which compete with us in the U. S. markets, the relative charges for freight, etc.; and that the same had been put in the hands of the Ways and Means Committee who are making up the new tariff bill. Mr. Maslin submitted a brief by Gen. N. P. Chipman, prepared by request, dealing with the same subject. Col. Irish thought the information contained in these briefs most complete, excellent and timely, but he thought ten minutes' talk with a member of Congress worth a ton of printed matter. Somebody should, he declared, be sent to Washington to represent in a personal way the interests of California. Mr. G. J. Griffith, of Los Angeles, was of the same mind, and reported that a considerable sum of money had been pledged at Los Angeles and Riverside for the purpose of sending Gen. Chipman. The outcome of the discussion was the appointment of Messrs. Griffith, Maslin and Lelong as a committee instructed to send a man to Washington in our interest. It was the general sentiment of the meeting that Gen. Chipman would be the best man, and after him the choice was Col. Irish. It is expected that Gen. Chipman will consent to go. Very foolishly, we think, the meeting voted against the publication here of the briefs which have been submitted at Washington, upon the theory that we should not let those who oppose our interests know the line of our argument. As a matter of fact they will know it as soon by publication at Washington as at home; and, furthermore, if we have any arguments worth putting forth it doesn't matter who knows them. We see no reason to be ashamed of the arguments in support of our demand for protection and have no fear that they can be successfully controverted.

THE Russian Finance Minister has ordered an inquiry into the reason why much more American than Russian flour has been sold recently in Finland. The inquiry is regarded as a forerunner of preparations to exclude American flour from Russia.

Sultana Preferred to Thompson Seedless.

TO THE EDITOR:—Having noticed a cut of the Thompson's Seedless grape in your issue of Sept. 30th of the RURAL PRESS, I thought it might be of interest to your many readers to know how I am succeeding with the Seedless Sultana. I have a 2½-acre vineyard of this fine grape, from which I gathered last season 11¼ tons of raisins, for which I received \$118.52.

I have the Thompson's Seedless growing on my grounds, and have investigated it pretty thoroughly, and find the Seedless Sultana very much superior in point of flavor and productiveness. Some of my Sultana vines yielded 125 pounds to the vine by actual weight. I had over 50 tons of green grapes from my little patch of 2½ acres last year. I regard the Seedless Sultana as the most profitable of any grape of which I have any knowledge. Another point in its favor is that it is a very strong grower, and will adapt itself to nearly all classes of soils. It will do well on sandy soil where the Muscat will scarcely make a berry, and it will do equally well on soil considerably afflicted with alkali where the Muscat will literally fail to produce fruit.

I send you a photograph of one of my Seedless Sultana vines, taken last August, after the leaves had been taken from one side of the vines.

My crop of Sultana grapes is very fine this year, and the grapes still hold their reputation of being one of the most profitable grown in this State. J. P. JOHNSTON.
Fresno.

[Mr. Johnston sends an excellent photograph of the Sultana trained to a high stake and wonderfully laden with fruit. We shall be pleased to bear from other readers their experience with either or both of these rivals to seedless honors.—Ed.]

California State Horticultural Society.

A General Discussion of Distant Marketing of California Fruits and Fruit Products.

The next regular meeting will be held at San Jose, in the building of the Santa Clara Valley Fruit Exchange, on Friday, October 27th, at 10:30 o'clock A. M., and continue in session through the day.

The society extends a general invitation to all interested in better and wider distribution and sale of our fruits and fruit products to attend and take part in this meeting. All horticultural societies are invited to send delegates, and all individual growers are welcome. It is hoped that some action can be taken which will be of great value to our fruit interests. All matters of transportation, distribution and sale will be in order.

Rev. A. T. Perkins of Alameda will describe the results of a long investigation in keeping and shipping fruits without ice.

The buildings of the exchange are near the Narrow Gauge depot, and but a few minutes' walk.

Let us have a large meeting, a free contribution of experience and the wisest course of action for the future.

B. M. LELONG, President.
E. J. WICKSON, Secretary.

Lime for Swine Plague.

TO THE EDITOR:—On looking over one or two back numbers I note that "swine plague" has been discussed in your columns. There was an outbreak of what I took for swine plague on my farm last spring. Between 30 and 40 head died or were shot before the disease was stamped out. The reports of the Agricultural Department were studied to find some remedy, but nothing was found. One recommendation therein was perhaps of value—to give the affected pens a dressing of lime, air-slacked. The reports states that with such a dressing the disease germ would be destroyed, or at least rendered innocuous, in two weeks, otherwise a period of six months must elapse before it would be safe to keep hogs on the same premises. I also put lime in the drinking water and think it was some little benefit. Carmel Valley, October 10, 1893. EDW. BERWICK.

The Commission and the Raisin Duty.

Resolved, By the Executive Committee of the Board of State Viticultural Commissioners, that this board heartily endorses the efforts of the raisin-packers of Fresno to retain the duty on raisins imported into the United States; and that this board deems that any reduction in duty would be attended by loss on the part of domestic producers.

Resolved, That this board favors placing the duty of two and a half cents per pound upon all Zante currants imported into the United States as a means of extending the sale of low-grade domestic raisins.

Resolved, That these resolutions be sent to the Pacific Coast delegation in Congress, the Ways and Means Committee and to the press. WINFIELD SCOTT, Sec'y.
San Francisco, Cal., Oct. 13, 1893.

EARLY FRUITS of the recent road convention are to be gathered in Sacramento county. A large assemblage of farmers and townspeople was held last Saturday, which, after due discussion, adopted the following terse platform: "More good roads are wanted; we want them now; that a direct tax to secure them is unwise, we believe; that to borrow \$250,000 for 40 years on five-year calls is the most economical plan." The convention elected an executive committee of 17 and adopted a petition to the supervisors to submit the question of bonds to a vote of the people. There seems to be some opposition to the bonding proposition, but it seems fair enough to get the roads and let posterity take its share in paying for them.

THE IRRIGATIONIST.

The Irrigation Congress at Los Angeles.

An Outline of the Proceedings.

As stated in last week's RURAL, the Irrigation Congress convened in due form, the attendance of delegates being increased by late comers to upward of 300. Interested spectators far outnumbered the delegated body. The Opera House was suitably decorated, delegates from foreign countries being assigned to the boxes, which bore suitable distinctive insignia.

The assemblage was called to order by F. E. Smythe of Salt Lake, Secretary of the Executive Committee, in these words:

This assembly is destined to have a place in the history of human progress. We meet not merely to extend our country's frontiers, but to widen the boundaries of civilization. The seed which we shall plant in the arid soil of the desert will bear the flower of industrial independence for millions of the freest men who ever trod the earth. It is given to this generation of Americans to build nobly and greatly for their country and their race.

Irrigation is not merely a Western, nor is it merely a national problem. These flags of Russia and of France, of Ecuador and of Mexico, and the presence in this convention of their distinguished representatives, remind us that irrigation is as ancient as the human race and as wide as the world.

Address of Welcome.—Secretary Smythe said the greatest ancient civilization was on the shores of the Mediterranean, but now we are in States facing a greater Mediterranean, and he predicted that in the latter the 20th century would show the greatest civilization of modern times. It was therefore fitting that the chief executive of the great State of California should welcome the delegates.

Governor Markham was then presented and greeted with applause. He expressed his pleasure at the honor of meeting the visitors and welcoming them. They have a hearty greeting and cordial welcome. California delegates are justly proud that so many responded to the call, and are determined to do all possible for the success of the congress. California is justly proud of her name and fame. She has been blest with nearly every advantage in the Western hemisphere. All that is required is enterprise, genius and energy. Quadruple her population, giving her the proportion of other States, and she will show results that will challenge the world. No place is better adapted to consider the irrigation question. Its results are seen on every hand. A dozen years ago land was worth 25 cents to \$5 per acre that now brings \$100 to \$1000. Every phase of irrigation is found here, from the most profligate to the most economical and from the primitive to the scientific and practical.

On one Kern county ranch, prior to use of water, land was worth 25 cents to \$1.25 an acre, and it took 20 acres to keep a Texas steer. Now only a quarter to half an acre is required, and that ranch sends out 26,000 head of cattle now a year. In fruit production 12 years ago the shipment of fruit of all classes from California was only 500 cars, and last year it was 20,000 cars! The Governor believed that the people would fitly employ the opportunities bestowed upon them. The work of this convention is watched with deep interest and the people expect from it the highest results.

Mayor Rowan also made a brief address of welcome on behalf of the city and extended warm greeting to the visitors, hoping that their stay would be pleasant and that the results of the congress would be promotive of irrigation, civilization and progress.

Choice of Temporary Officers.—Nominations for temporary chairman were called for, and Colonel Rice of Gila Bend said that in days that were forgotten in history canals were made in Arizona. Buried cities found in that Territory were made possible by these canals. The most ancient civilization found its perfection in Arizona; the pueblos, the *casa grandes*, the ancient canals, reservoirs and buried cities attest this fact. Now it is the newest and youngest Territory, asking admission as a State. It has the life of the new America and hopes to build on the foundations of the buried cities a new civilization, the highest and best successor of the wisdom of ancient Egypt, Chaldea and Babylon. All the honor she asks of this congress is the temporary chairmanship, and that it be given to Hon. Jerry Millay of Phoenix.

Will S. Green of Colusa presented Hon. J. R. McDonald of California for the position, and urged him as the man who called the first irrigation meeting and taken the lead in securing irrigation laws.

A rising vote was taken and Arizona's candidate was elected. Messrs. Rice and Green were appointed to escort Mr. Millay to the chair. He was received with applause and in eloquent terms returned thanks for the honor. Arizona is proud of California's intelligence and energy. She beholds what has been done here and what it is possible for her to do. There is California blood in Arizona. That vast Territory has not only the bloody Apache to contend against, but reptiles and deserts for hundreds of miles; but all these things will be overcome in the march of development. Other irrigation congresses have not accomplished much on account of delegates who had axes to grind. This congress should see that there is nothing of this kind.

F. L. Alles was chosen temporary secretary.

The Committees.—Committees were appointed as follows: On permanent organization—Arizona, J. L. Van Lermarker; California, Judge Puterbaugh; Idaho, I. D. Babbitt; Kansas, H. V. Hinckley; Montana, H. O. Peterson; Nebraska, J. M. Lee; Nevada, L. H. Taylor; New Mexico, R. J. Hinton; Utah, W. S. Stone; Illinois, W. E. Allen; Washington, G. A. Miller; New South Wales, Alexander Bruce; France, R. Lefebvre; Russia, Count Comodinsky.

Order of business—Arizona, L. A. Hicks; California,

Judge Gibson; Illinois, N. E. Allen; Kansas, E. R. Moses; Nebraska, J. M. Lee; Nevada, A. Nicholls; Utah, W. S. Stone; New Mexico, H. B. Heintzleman; New South Wales, Russia and France represented as above.

On resolutions—Arizona, Dr. T. B. Comstock; California, L. A. Sheldon; Illinois, W. E. Allen; Kansas, Judge J. L. Emery; Montana, Otto Petterson; Nebraska, J. M. Lee; Nevada, John G. W. Merrill; New Mexico, R. J. Hinton; Utah, W. E. Smythe; New South Wales, Alexander Bruce; France and Russia, the same as on other committees; Washington, G. A. Miller; Idaho, T. B. Babbitt; the American Society of Irrigation Engineers, W. Ham Hall, California. The society was allowed four additional members.

The Texas delegation was given permission to name a member of the resolutions committee.

Permanent Officers.—The committee on permanent organization reported the following list of the officers: President, Judge J. O. Emery, Lawrence, Kan.; honorary president, R. Lefebvre, France; Count Comodinsky, Russia; Alexander Bruce, New South Wales; Mexico and Ecuador to be announced later.

Vice-presidents—Arizona, Dr. T. B. Comstock; California, J. R. McDonald; Nebraska, J. M. Lee; Utah, W. S. Stone; Idaho, T. D. Babbitt; Washington, Dr. G. A. Miller; Nevada, John E. Jones; Montana, C. Kenck; Kansas, E. R. Moses; New Mexico, S. P. Heintzleman; Illinois, W. E. Allen; Oregon, R. T. Cox; for the American Society of Irrigation Engineers, J. N. Schuyler of California.

Secretary—F. L. Alles, Los Angeles.

Assistant Secretaries—J. M. Gregory, Garden City, Kan.; L. A. Hicks, Yuma, A. T.

Official stenographers—J. Hardie Watkins and J. D. Fennessy.

Executive Committee to consist of one member from each State and Territory represented. The report was adopted, and President Emery was escorted to the platform amid applause, and delivered his address. After the address the congress adjourned till the following day.

The President's Address.—Judge Emery said the activity and heat and bustle of life all increase as we go toward the setting sun. "In Los Angeles we appear to have reached the maximum of activity as well as of beauty. We must remember that the very name of irrigation is a new one to Eastern people. Even men of education have little conception of its meaning, although it is as old as civilization. In my own State I am frequently asked: 'Where are you going to get your water to moisten the great West with?' They have little idea that there is water enough now on the surface to irrigate 150,000,000 acres. I don't pretend to be a prophet, but I believe the boy is now born who will see lands all the way from here to the ninety-seventh meridian blossom as the rose.

You are entering on a battle here to-day that is not to be an easy one. When I rode last night from San Bernardino I felt that half had not been told me about California. We shall learn in time that the Almighty has given us enough rain if we will only take care of it. Irrigation will afford a place for many young men congested in our cities. As Macaulay and Carlyle have said: 'Our safety so far has been in the fact that we have so much public land.'

Irrigation will mark the downfall of the big farms. I am free to admit that I am no friend of big farms. You, in this country, are working on the true idea. It is to see on how small a piece of land a family can live. We are coming upon a new era of smaller farms and better farming.

"I hope we can come out here again and learn some more about this from you. Then you must come to Denver or some other city and keep at it until the United States Government does what it ought to do. I am not prepared to say what Uncle Sam ought to do. He has already done a good deal. I submit to the American people that we are not asking him to exercise a spirit of paternalism."

Outlines of Papers Presented.—The following papers were presented at different sessions:

T. H. Newell of the Interior Department read a paper on Government investigations. He declared that the main question was, after getting water, to make proper distribution of it.

Col. John P. Irish read a paper on the need of unity of action and the compilation and publication of irrigation matters. Col. Irish represented the irrigation division of the Department of Agriculture. He declared that the laws were loose and that the judges got in a tangle. He declared that the land and water right should be lumped in one.

Hon. J. W. Gregory of Kansas read a paper entitled "The Significance of Irrigation as Regards the Great Plains Regions of the United States." Those semi-arid lands, Mr. Gregory maintains, can be made to blossom like an oriental garden when it gets water. He said that the tenacity of the farmer of the plains was heroic, and that their suffering from the heat and storms was something horrible. He declared that with scientific irrigation the scorching, dry months would be robbed of their damaging effects and terror, and that the plains would have a large population.

Dr. Joseph Jarvis of Riverside read a paper on "Irrigation as Applied to Horticulture." He said that the whole irrigation problem rests on the education of the East to its importance and to the extent of the great Western plains and the possibilities of production by the use of water, so that concert of action could be taken by the entire country on irrigation development. He gave a thorough and interesting review of irrigation in southern California under the old regime and the modern methods, with the magnificent results under the latter.

Dr. S. M. Woodbridge of Los Angeles read a paper on the "Relation of Irrigation to Fertilization."

The address of Ramon de Ibarrola, the Mexican representative, included a very thorough review of the irrigation and other public works in Mexico. He said that he was compelled to blush for the ignorance on many questions as to Mexico's advancement, and assured his hearers that his country was a splendid field for honorable enterprise. The sister republics, he said, are too near together and too far

advanced in material interests to fight, and they should be found doing as all nations should do—loving one another. As the speaker closed he was accorded long and loud applause.

Leon Philippe of France read a paper, which was brief, and the main feature was the discussion of the fact that no irrigation enterprise could be carried on in France without community help. This statement caused much significant applause, showing the sentiment on this point.

C. W. Cross of San Francisco read a paper on "Irrigation and Its Effects on Civilization." At the outset he doubted his ability to speak authoritatively, as he was offered land where Governor Markham's house now stands at Pasadena not many years ago for \$10 an acre and did not have foresight enough to take it. He reviewed in a masterly manner the rise and progress of irrigation and how it had increased the independence and strong character of the agriculturists. It is the friend of good morals and good government, he said, whether it be a republic, monarchy or oligarchy. Irrigation increases the density of population, and on this depends the prosperity of railroads, telegraph lines, the press, schools, etc. Advanced learning in this country has drawn most of its brightest exemplars from the farm. Art and literature are likewise stimulated. The results of irrigation, he concluded, direct and indirect, are among the most important in the history of the human kind.

Some of the above papers which bear directly upon irrigation practices will ere long appear in full in the RURAL.

GOVERNMENT AID TO IRRIGATION ENTERPRISES.

What should be the relations of the General Government to the country? occupied much of the attention of the congress. Many conflicting resolutions were presented, and we shall give in another place the action of the congress upon them. The representatives of the Geological Survey and of the Department of Agriculture, both of whom read papers, took grounds apparently diametrically opposite. The following outline of these two papers is from the pen of W. Hammond Hall, ex-State Engineer of California:

The Governmental work in irrigation investigation, and incidentally the conflict between two departments of our General Government on the matter of irrigation work and policy, was brought before the convention by the reading of two papers—one by F. Newell, a representative of the Interior Department, and the other written by Charles M. Irish, in charge of the irrigation inquiry being prosecuted under the direction of the Department of Agriculture.

The Geological Survey.—Mr. Newell's paper described the work of the United States Geological Survey in its topographic, geologic and hydrographic departments, and laid before the convention a number of exhibits in the form of maps, charts, diagrams, instruments, etc., illustrating what he said, the whole making a very creditable showing, all going to show the methods pursued and the results obtained by the field work of the survey.

The Geological Survey is an institution of large proportions, within which about three years ago a special irrigation inquiry was started as a result of a resolution passed by our National Congress calling upon the Secretary of the Interior to furnish the congress such information as he had in his possession relative to the irrigation of arid lands. The idea of the resolution was that Congress should be put in possession of the data upon which it could intelligently remodel the desert and other land laws, with which great fault was found and which had, it was asserted, proven inadequate for the development of the arid regions.

Commencement of the Inquiry.—Under this resolution the Secretary of the Interior called upon the Director of the Geological Survey to furnish the information, and then an appropriation was made to pay the expenses of acquiring and compiling the information. This was the commencement of the irrigation inquiry or survey concerning which so much was said and over which such a great conflict was had at succeeding sessions of Congress. Whatever may be said of the system of arid land development by irrigation which Major J. W. Powell, as the Director of the Geological Survey proposed to found, the work of the survey itself, on the basis of which he sought to build his national irrigation policy, was the industrial development of arid America. The policy of the Director, in the prosecution of this irrigation survey, that is, the specific manner in which it was to be carried on and the exact character of the work which was to be done, was not approved by the irrigation engineers whom Major Powell called to his counsel. There was a very radical difference of opinion on these points. The engineers wanted to see the money expended in a direct and what they thought more practical inquiry, so as to be able to lay before Congress some finished work at as early a date as possible. The Director, however, thought that a greater degree of thoroughness, more complete topographic knowledge in the country, should be had before the formation of any final conclusions should be attempted, and so there was a disagreement, which the engineers regretted, but they could not with dignity recede from their ground.

The result was that some of the enemies of Major Powell and other members of the Senate who desired to hasten the results of the survey as far as possible, made a violent attack upon the Geological Survey Bureau, and its irrigation branch was practically abolished. Since then the Director has been carrying forward quietly such portions of the inquiry as could be prosecuted with appropriations made for topographic survey purposes, and it devolved upon Mr. Newell, as one of his principal assistants, to lay the result of this work and its methods before the convention, and his remarks and exhibit were well received.

It was a most admirable idea thus to bring the work of this bureau directly to the notice, and if need be, criticism of those whose interests it most affects, viz., the people of the arid States and Territories as represented in this Irrigation Congress; and it is hoped that the action will be productive of good results.

If only the Director of the Survey could refrain from too strenuously pressing his idea as to how these valuable data are to be used in Congressional legislation, the outcome

would be a better understanding and a closer sympathy with the legitimate work of a topographic and irrigation survey.

The Department of Agriculture.—Following the paper of Mr. Newell came that of Mr. Irish of the Agricultural Department. In it he took occasion to disparage everything like scientific inquiry in the nature of surveys to ascertain the possibilities of extending irrigation by great works of storage or of diversion from the streams. There was much which directly reflected upon the value of engineering and scientific surveys and plans for irrigation works; the idea of this representative of the Agricultural Department being that the farmers of the country would work out all these problems for themselves when they were shown how to irrigate, when to irrigate and how to manage crops under irrigation. He appeared to think that the solution of the irrigation problem rested almost entirely upon the bettering of the practice of irrigation. The Desert Land law, he said, should be amended or repealed. Individual rights to the desert lands of the country should be acquired under some other system to be enacted, or under the existing Homestead law; and each owner of land thus claimed should be permitted to go to the streams and take out such water as he needed for the irrigation of his tract.

There should be some law under which communities might unite in the prosecution of irrigation works, very much as has been done by the Mormon communities in Utah and southern Nevada. The presence of engineers and scientific men in connection with such developments was not desirable. They merely served to increase the cost of works and delay their completion and run the people into debt who were endeavoring to construct them.

The representative of the Agricultural Bureau opposed any State ownership or control of streams or of waters used for purposes of irrigation, or any Governmental interference whatever with the same. His idea is exclusively that of individual or community effort.

The Conflicting Systems.—The Director of the Geological Survey has proceeded with a view to an entirely different line of organization for irrigation enterprise. He has endeavored to outline great works for large areas of country, which, he proposes, should be organized into some form of districts under Governmental and State supervision districts which would extend over many square miles of territory, and the construction of whose work would involve the use of hundreds of thousands, even millions, of dollars. This, of course, would necessitate the introduction of capital or large credit into the system in some form. Either the Government or State would have to supply this capital or credit, or money in large quantities would have to be raised upon the credit of the several districts all under the Government or State supervision. This, of course, would mean to issue bonds in some form. The representative of the Interior Department, on the contrary, opposes any such organization. He decries the construction of irrigation works on credit as represented by bonds. He wants the capitalists kept out of the matter altogether. Here we have the opening up of one of the important conflicts affecting an arid land policy with which this Irrigation Congress will have to deal. Are the primary views represented by the leading idea on which the Geological Survey irrigation inquiry is founded to be adopted as the foundation of this convention's results? Or is the idea of irrigation growth which the representative of the Agricultural Department embodied in his paper to govern the growth of this Irrigation Congress?

A Crucial Test.—The question is a crucial one, so far as the output of the congress is concerned. It is not to be understood that the governmental officers who have appeared in person or by proxy before the convention and presented these papers are here to make any fight to influence the action of the convention. They have simply been actuated by a desire to set forward the merits of their respective irrigation inquiries and to have their methods and results understood. But the question raised by these papers practically is: "Shall we have a thorough irrigation system founded, or shall we try to develop the arid regions after the primitive manner of the Mormons?"

THE CONGRESS ADOPTS A PLATFORM.

The platform committee reported its platform to the Irrigation Congress. It was read by ex-Governor Lionel Sheldon and was received with vociferous applause.

Earnest attention is given to the situation. The scenes recently enacted in the Cherokee strip is a reminder that the pressure of the surplus population still seeks an outlet west; that it has practically reached the limit of settlement in that portion of the public domain where the rainfall is sufficient to support agriculture.

The existing social and industrial conditions of the great cities east of the Middle West remind us of the alarming increase of a class of homeless people within the borders of the United States, and to provide a further field for colonization, under conditions which promise good average prosperity of the individual citizen, by the utilization of the great public estate still remaining in the hands of the Government, is, in our judgement, a work which must now appeal with irresistible force to American statesmanship.

The lands belonging to the United States, for the most part arid and semi-arid, lie between the 97th meridian of the Pacific ocean and are divided between 17 States and Territories. This domain is estimated by the General Land Office to contain 542,000,000 acres, enough arable land to provide homes and farms for a million of people. The portion which can never be cultivated is valuable for range purposes or for forest reservations.

Notwithstanding the present condition of these arid lands we confidently predict that they will become the seat of the highest civilization and the greatest average prosperity yet developed on this continent.

The platform then goes on to state that the best results can only be attained by national legislation. The laws now governing the waters and lands in a number of States and Territories are inadequate and dangerous. Streams are appropriated under lax and conflicting State laws, and the absorption of interstate waters promises to become the

fruitful source of future litigation and social disturbance.

The desert land law, under the operations of which the public land is passing away from the people, is largely perverted from its original purpose. It offers the settler land upon terms with which he cannot ordinarily comply except by resorting to perjury. The law has become in its execution the instrument of corporations who acquire land for \$1.25 per acre, reclaim it at an average cost of \$8.15 per acre and sell it back again to the people upon profitable terms named only by themselves.

We declare that water in natural channels and beds is not private property, and that it can neither be bought nor sold. Companies for supplying and distributing water are common carriers, subject to the supervision of the power from which they derive their rights.

We declare that all streams rising in one State and flowing by natural courses through one or more other States must be conserved and equitably divided under Federal authority. Nothing must be allowed to jeopardize interstate streams. It is highly important that the drainage areas of streams should be promptly known and defined at once in a way sufficient for the purpose here in view, and not await the slow results of thorough and technical inquiry, which latter may follow in its train and for its needed purposes.

The pastoral areas, especially within these drainage areas, should also, in our judgment, be reserved for the present from sale or permanent disposal.

The whole subject of national legislation should be investigated by Federal authority, and as a means to this end we suggest the appointment of a non-partisan national commission, to be named at once and instructed to report as soon as possible.

The importance of the development of local laws to control waters lying wholly within the individual States constitutes the reasons for the early admission of Territories into the Union.

The platform favors the limiting the amount of land that may be taken up by settlers under the systems of irrigation to 40 acres, and predicts that in the future it will be found desirable to reduce the amount still further. It especially urges the importance of an enlightened policy for the care and preservation of forests against wanton destruction by fire or otherwise.

We indorse the policy of forest and storage reservations covering the mountain water-sheds of the West. Sums amounting to millions in the aggregate have been paid the Government for lands of the semi-arid region, which are understood to be fit for agriculture without irrigation. The experience of years, during which the settlers and their families have suffered the severest hardships, demonstrates that they can only be made productive by the artificial application of water.

It is an act of simple justice to ask the Government to devote a portion of the money received from the sale of these lands to a scientific investigation of the means for reclamation from surface streams, storm waters and underground supplies. We earnestly urge the speedy action of Congress in this direction.

In regard to the arid lands, the following plan is recommended: There shall be appointed by the national executive committee of the Irrigation Congress a commission for each State and Territory in the arid or semi-arid regions, consisting of five members each, who shall be competent and experienced men. These commissions shall at once enter upon a careful investigation of the conditions existing in each of their States or Territories, and then formulate plans looking to the adoption of a national policy, to be supplemented by appropriate local laws. The results of the investigations of the several commissions shall be submitted to the next Irrigation Congress, and upon these reports the final and definite declarations of the people of the Western States and Territories may be based.

The platform indorses the Wright law. While we do not assert that it is suited to the needs of unsettled localities, it says, or that it cannot be improved in some of its minor details, we do declare that experience has demonstrated its usefulness, its fairness and its economy.

We advise all States in the arid region to make provision for departments of irrigation, supervision and engineering, and to vigorously prosecute the work of practical investigation.

While mining and its kindred employments are vastly important to the Western States, directly and indirectly, the irrigation industry is and must ever be their supreme interest. Under just laws and proper national encouragement it will add new luster to the American name.

DISCUSSION AND AMENDMENT.

The various paragraphs of the report of the committee on resolutions were considered respectively and two or three minor changes were made. The platform was so modified as to recommend that none but American citizens should be permitted to take up Government land.

A substitute was adopted declaring that in correct principle water in natural channels and beds is public property, and that when under the law of any State vested rights have been secured thereto, such rights, like all other private property, may be supervised for beneficial purposes and be condemned for public uses under the power of eminent domain.

A paragraph was inserted declaring that any international questions that may arise with Mexico or any other country should be settled on just and equitable terms to all nations concerned.

A substitute by Hickley of Kansas was adopted advising each State in the arid domain which has not already provided for irrigation supervision and engineering to do so at its next legislative session, and to vigorously prosecute the work of investigating the extent to which further irrigation can be carried on with success and profit.

A BOMBHELL BY MAJOR POWELL.

Major Powell, director of the United States Geological Survey, said that he was profoundly impressed with the wisdom, vigor and lucidity of the report, but there were

questions therein that needed special discussion. His prime interest is not in railroads and other corporation enterprises, but that which will develop the greatest number of cottage homes for the people. His work for 30 years had been in that direction, and he gave elaborate details of his observations of the country and the importance of irrigation.

Statistics were given of the proportion of water falling from the heavens that can be used for irrigation. There is not enough rain water to irrigate all the arable lands. Only a small part of the irrigation lands can be irrigated with water available for that purpose. If the lands belonging to private individuals in arid regions were alone irrigated, to say nothing of Government lands, there would not be enough water.

Only one-third of the lands now owned by private individuals can be irrigated by all the water that can be stored, so that it is not a question of getting lands from the Government for irrigation. If the Government lands are to be irrigated, it follows that the private lands must suffer. He held that the Government lands should be for mining and stock-raising and not for irrigation.

He said that 750,000,000 acres of public lands have passed from the Government to private ownership, and that there are millions of acres more that can be irrigated, but that there is not the water to do it with.

Then arose quite a bitter discussion, in which Major Powell was severely scored. Colonel Hinton and Mr. Barber of California and others took part in the discussion and declared that Powell was wrong when he stated that there was not enough water for reclamation purposes.

A motion was made to expunge Powell's speech from the records. Chairman Emery said that the speech was not on the records, as it was a "sprung speech."

Powell was called all sorts of names and told to go home and revise his report.

FLORIST AND GARDENER.

An English Flower Show.

[A paper by Timothy Hopkins Esq., of Menlo Park at the October meeting of the State Floral Society.]

The summer of 1892 was an excellent one in England, viewed from a tourist standpoint, as what little rain there was seemed to be distributed for his personal benefit in sight-seeing, as well as the nourishment of nature, for his enjoyment.

When the saying is remembered that "England has no climate—only a collection of samples," we in California, who are disposed to grumble if everything climatic is not always up to our high standard, can perhaps appreciate how pleasant this was, and also some of the difficulties attending the pursuit of floriculture in the British Isles, where only a few of our abundance of plants and flowers will flourish.

Our British cousins, however, make the most of what they have, for I have never seen a more general love of plants and flowers than in England, and, from the orchid, peach and grape houses of the ducal demesne to the demure primrose of the thatched cottage window, all were carefully cultivated, and the results show that Flora is always kind to her votaries here, as elsewhere.

I cannot help wishing that a portion of this love and enthusiasm could be transported to our already glorious State, with its better situation and possibilities, for are not most of us prone to rest contented with nature's gifts to us, without striving to aid her in her generous intentions?

While traveling in the south of England during this phenomenal summer of 1892, I had opportunities of seeing several flower shows, the best of which having been at Salisbury. I think that a description of it would be perhaps a representative of them all, as they necessarily possessed similarities.

These particular days in August were full of surprises to me, for our party, having just come from a drive among the charming lanes, green and fringed with wildflowers and grasses, and the small forests of rhododendrons on the coast wise side of the county of Wilts (the latter of which were just over their bloom, but showed how magnificent they must have been earlier in the season), had just reached Salisbury, the county seat, in the evening. The next morning I visited the museum of that town and was surprised to find a very interesting collection of American antiquities at that distance from home.

I had already been thinking how poor the cooking had been in various parts of England, but never appreciated how bad it could be until we reached Salisbury. Even the carved figure of a white hart which embellished the old-fashioned doorway of our inn seemed to have a pathetically yearning look in his painted eyes for "other pastures green," and I could find nothing but sympathy for him in my heart.

Physical discomfort, however, was forgotten when we learned that the Annual County Horticultural Show was to take place that day, and in the afternoon we bent our steps toward the Cathedral Close, entering it through the antiquated Bishop's Gate which pierces the battlemented wall (which is still kept in repair) and forms an interesting surrounding to the Bishop's Palace, on the lawns of which the Flower Show was being held.

The Cathedral and the Bishop's Palace (built over 200 years before Columbus sailed for our shores), surrounded by green and magnificent beeches and oaks, formed a beautiful and fitting setting for the animated scene which met our eyes as we passed through the turnstiles which constituted the "gate," in the modern acceptance of the term.

The prices of admission varied with the hours of the afternoon—from 2 to 3 being 2s 6d; 3 to 6, 1s, and from 6 to 7, 6d, so as to accommodate respectively the gentry, the middle classes and the laboring people.

Music began with the opening of the show, and two

military bands alternated every hour in discoursing sweet strains of good music, most of the selections being operatic and classical.

Salisbury itself contains about 15,000 people, and the horticultural society draws upon the surrounding country for part of its support, the subscriptions ranging from £10 down to "3s and under," according to the means and generosity of the subscribers; but the show that they gave was an excellent one and deserved more patronage than it was able to draw. The subscriptions during 1891 amounted to about \$800.

Three large tents sufficed to hold the exhibits, and the rules governing the society were about the same as we have, with few differences. For example, the exhibitors in all the classes, except the "cottagers," must be subscribers of not less than 5s. The amateur class is sharply defined to be "those who employ not more than one gardener."

As vegetables are included in the horticultural exhibition, a dish of vegetables had also to be defined, as "a dish of dwarf beans must contain 40," while broad beans are limited to 20, and only a "brace" of vegetable marrows and cucumbers were required.

The cottagers, however, were not allowed to enter into competition for the "Cottagers' prizes," unless they were recommended by an annual subscriber.

The show, as I have said, was an excellent one, the bulk of which was made up of roses, carnations and exotic plants, and fresh vegetables and fruits, which were very finely tabled and arranged, with a general selection of begonias, dahlias, gladioli, etc., and one lonely pineapple.

Among the prizes offered were some for dressed flower vases, with wild flowers, foliage and grasses, and some of these, by the ladies, formed one of the most beautiful parts of the exhibition, and were very tastefully arranged. The vase which took the prize was a fairy-like conception of wild fern and grasses, with a few bits of color thrown into it by the addition of poppies and other roadside flowers.

The competition for boutonnières was also lively, and the flowers were tastefully exhibited on different colored backgrounds, as best suited the ideas of the exhibitors, all of whom were amateurs. It might interest the society to hear that, while in the plants and fruits a difference was made between gardeners and amateurs, in the cut flowers gentlemen's gardeners and amateurs were grouped together in one class, there still being, however, a division for amateurs residing within 12 miles of the town, most of the prizes being donated by the subscribers.

One tent was devoted to exotic plants, which consisted of some of the finest crotons and ferns I have ever seen. The first prize, for the six best ferns, was taken by an exhibition including the following specimens, in 14-inch pots: Farleyense, Adiantum, Devallis and Mooriana. They were well cultivated, and came from a gentleman's place in the neighborhood. Among the palms was a large *Latania barbonica*, which must have been from 12 to 15 feet across.

Roses were exhibited in sloping boxes, rather smaller than our society uses, and which were fitted with hinges, so that exhibitors could arrange them at home, and they were ready for exhibition as soon as placed on the benches, by merely taking off the cover. Small zinc or galvanized-iron cans were used to contain the water and the blooms.

The roses were shown with foliage, but the leaves were not allowed to remain around the bloom itself. Carnations were shown with no grass, and dahlias, asters, etc., with no foliage, but were shown flat upon white paper.

The judges awarded the first amateur prize of 30 shillings for 24 cut roses, which will be seen by the following list to consist of an assortment of 11 teas, 11 hybrid-perpetuals, 1 noisette, and one bourbon (Mme. Isaac Pereire):

Marie Van Houe,
Mme. J. Laing,
Mme. Isaac Pereire,
Mme. Cusin,
Bride,
Anna Oliver,
Duke of Teck,
Innocent Pirola,
Princess of Wales,
Marchal Neil,
Hon. Edith Gifford,
Cleopatra,

Alfred Colcombe,
La France,
Earl of Dufferin,
Jas. Brownlow,
Marie Bauman,
Souvenir Elise Vardon,
Marquise de Castlemaine,
Dr. Andry,
Ulrich Brunner,
Gustav Piganeau,
Mme. Hosie,
Souv. de S. A. Prince.

The first amateur prize of ten shillings, "for 18 carnations, in not less than six varieties," was taken with the following:

Gladys Nellie Almira,
Gladys Madeline,
Sheel Anchor,
Stadrait,
Bail,
Mrs. Walford,
Queen of Hearts,
Almira.

Terra Cotta,
Germania,
Lord Rendlesham,
Lillian,
Victory,
Little Phil,
Mrs. Channels,

Much attention was given to the cultivation of both roses and carnations; in fact, England is the land of small cultivators of flowers. No little farm house or workingman's cottage is complete without a few plants in the windows, and a small vegetable garden in the front yard. The variety, however, was limited largely by climatic conditions.

The hot-house grapes, peaches and melons were delicious looking, but I was told that the best fruit had been saved for a fruit competition about to take place in London.

A feature of the exhibition was the showing of the Allotment Association, held in a separate tent, and for a distinct set of prizes. These "allotments" are subdivisions of about 12 acres, leased by a gentleman from the Earl of Pembroke, and divided up into small pieces and sub-let to the laboring classes of the town of Salisbury at cost. They are about a mile from town, and the labor upon them is done entirely out of working hours.

Their show consisted of vegetables, and I thought them fully as fine as those shown by their richer neighbors. The prizes were donated, and were entirely of a practical nature, the first prize being a trouser-piece; second, five cwt. coal; third, two loads of manure, etc. The women, I am glad to say, were not neglected. They had a very palatable-looking exhibit of boiled potatoes, and were rewarded with a dress-piece, garden seeds and half a bushel

of flour. There was also a similar series of prizes for the best window plants.

There were thus two separate exhibitions, and the interest in each may be judged by the fact that, while the society had 346 exhibitors, the "Allotments" had 210, which, I think, under the circumstances, a very good showing for the latter. The day's receipts were a little over \$300.

After going through all the tents, listening to the music and watching the cheerful crowd, of which both young and old seemed to drink in the beauties of nature, we strolled over toward the old Bishop's Palace, the sides of which were almost invisible beneath the covering of ivy and creepers, and thence to our inn, through the exit gate placed at the other end of the grounds. It was already dusk, and our parting salutation was the solemn sound of the evening services in the cathedral, coming softly through the open windows, and floating out into the warm evening air, under the spreading beeches and towering oaks, which surrounded this beautiful spot.

If asked to compare our exhibitions in California, with our wealth and range of flowers, with the one in Salisbury, I can think of no better comparison than the bright American girl's comment upon Vesuvius, which was "that Niagara could put it out in a minute."

Winter and Spring Flowering Bulbs.

[Read by F. A. Miller, Esq., of San Francisco at the October meeting of the State Floral Society.]

Bulb-growing forms a most important factor in gardening in the house as well as in the open ground; and at this time I will endeavor to enumerate them according to their season of flowering, commencing with the earliest flowering sorts.

Early Roman Hyacinths may be had in bloom long before the holidays, provided they are planted at once, plunged outdoors in pots, and removed to the house as soon as the growth is an inch high. If planted out of doors, of course, they will flower later, say in February, if the weather is not too severe. Roman hyacinths are valuable for cut flowers, and also very desirable for pot culture.

Cyclamen persicum is one of the sweetest flowering bulbs under cultivation, and if properly treated will not only flower early, but will keep in bloom all winter. They are quite fragrant and vary in color from pure white to a dark purple. They are mostly treated as house plants in pots, although I have occasionally observed some beautiful plants in the open ground. If grown in pots I prefer a rather heavy loam with good drainage. They like a cool atmosphere and must be kept clean from insects. They should be planted in pots so that about one-third of the bulb stands above ground. The variety known as *Cyclamen persicum giganteum* is by far the best. I have seen some beautiful specimens with 50 flowers at one time. They can be grown from seeds so as to flower within one year.

Freesia refracta alba has been quite a favorite within the last few years. The flowers are most deliciously fragrant, and are chiefly grown for cut flowers. I usually plant six to seven bulbs in a six-inch pot, and cover them up fully one inch; some say to cover them two inches is better. They should be plunged out of doors, and removed into the house as soon as frost appears. If planted at once, they can be had in bloom in January and February.

Narcissus polyanthus, or bunch-flowering narcissus, are also very early, and some of them can be had in bloom by Christmas if planted at once. Some of the most popular are the Paper White, the Chinese Sacred Lily, the double Roman, Grand Monarque and others. All of these can be grown in pots, in water or in the open garden.

Crocus.—This early flowering bulb has been a disappointment in California. There is no doubt that it thrives better in colder climates, for the simple reason that in cold climate roots are developed before new growth is made, while in a mild climate like others the bulb will start its upward growth before sufficient roots are developed to maintain the growth. Add to this the fact that the crocus bulbs we receive here are generally of a very cheap and low-grade class, and that they are planted too late, and I am not at all surprised that they give very little satisfaction. I have planted good round bulbs here in boxes, and kept them out of doors in a cool place, and found them in February one mass of well-developed flowers. They certainly should not be planted later than October. As a border plant for early flowering they certainly ought to receive some attention.

As for the *Snowdrops*, I can only say what I have said about the crocus; failure or success must be attributed to the same causes.

Allium Neapolitanum is an early flowering bulb introduced within the last few years and is quite successfully grown in the East for forcing as well as out of doors. The white flowers are produced in large umbels about 15 to 18 inches high. Very little care is required in its cultivation. If planted in pots it can be had in bloom in the house in January or February; out of doors it will bloom in March or April.

Erythronium (dog's tooth violet) is hardly known to our garden. We have some very fine varieties growing wild in California and Oregon. They are very fragrant and can be had in bloom here in the house in January. The flowers are quite showy and mostly of a cream to yellow color. They require very little care.

Tulips are certainly the most showy of early flowering bulbs, and all the world over they are very popular. Some say this is no country for tulips, and while I have seen them in the greatest perfection in Europe, and while I am satisfied that we cannot grow them to perfection here, I am still of the opinion that tulips can be grown to satisfaction with a reasonable amount of precaution. First of all, tulips should be planted early. October is the best month; November will do yet. Select round bulbs; plant them three inches deep and cover with wood ashes to the depth of one-fourth to one-half inch. Any moderately good garden soil will answer the purpose. Water well before the top dressing of wood ashes is put on. If you wish to grow some of them in the house, put three bulbs of the

early varieties in a five-inch pot, plant them just deep enough to cover the top of the bulb, water thoroughly, plunge the pots in the soil out of doors and cover over with one-half inch of wood ashes. When the young growth is from one to two inches high, remove them into the house in a sunny position and keep them absolutely clean from insects. They will be sure to flower if so treated.

Hyacinths are the most popular of all winter and spring flowering bulbs. Under ordinary treatment they are always a success, whether they are cultivated in pots in the house or in the borders of the garden. For both purposes they should be planted in October or not later than November. If you plant them in pots, one bulb will do for a five-inch pot; three bulbs can be planted in a six-inch pot. The after treatment should be precisely the same as that for tulips, and if planted in the open border follow the same suggestions as I prescribed for the tulips. Most people seem to prefer double hyacinths to the single. I myself prefer the single; the spikes of the single hyacinth are fuller and will generally stand in an upright position without the support of sticks.

Daffodils are the most popular of the narcissus family, and they are also the most admired, but flowers later than the bunch narcissus; most of them produce only one flower to the stem. They should be treated the same as the bunch narcissus, but they do not succeed well in water. There are quite a number of excellent varieties, but the following are the most popular: Trumpet Major, Von Sion, Orange Phoenix, Princeps, Incomparable, Biflorus and Bicolor Horsefieldis.

Jonquils are excellent for bedding purposes. They require very little care and succeed well in any fair soil. They are sweet scented and give general satisfaction.

Lily of the Valley is one of the old favorites, admired by everybody, but its proper cultivation is not thoroughly understood. They come to us in two distinct conditions, in single crowns, called pips, and in clumps. The pips are imported for forcing purposes, and they cannot successfully be forced without artificial heat, and even under this treatment they are first subjected to a freezing point. This makes the pips not very satisfactory to the amateur, and, although thousands are sold annually to amateurs on account of their cheapness, disappointment is general. Clumps are necessary to insure success to the amateur. They flower in due time and if bedded out in a sheltered, partially shaded situation, with proper care they can readily be established and produce their flowers from year to year. But they must not be allowed to dry up completely; they must receive at least a moderate supply of water throughout the entire summer season. There are several well established beds of lily of the valley in Oakland, which certainly establish the fact that the lily of the valley can be made a success.

The *Iris* family is now becoming more popular every year and should receive more attention. From year to year new varieties are introduced. The colors are very numerous shades. They are perfectly hardy; they can be cultivated in shady places where other plants will not thrive; the flowers are most curiously constructed and they will thrive in any kind of soil and without much attention. The English, the Spanish, the German, the Japanese and the California *Iris*, all of them are well worth cultivating.

There are many other spring flowering bulbs, but time will not allow me to make any extended remarks on their cultivation at this time. Anemones, Ranunculus, Dielytra Spectabilis (or Bleeding Heart), Ixias, Peonies, Spiraea Japonica, Sparaxis, Fritillarias, Scillas, Ornithogalum (Star of Bethlehem). All of these are well worth cultivating and should receive our attention at this time.

HORTICULTURE.

The Importance of Summer Cultivation.

T. N. Warner read the following brief essay at the Santa Maria Farmers' Institute recently:

To get the most from our orchards is the object of every intelligent fruit-grower. Cultivation forms an important factor in the attainment of this object. Without the necessary moisture there will be a lack of growth, small fruitage and inferior size. While many are deferring planting, pending the irrigation question, are we making the best of the means we now have at our command? With a rainfall of 15 to 25 inches, and the right cultivation at the right time all through the season, and the best tools for the conservation of moisture, aided by systematic pruning and

thorough thinning, our valley will take a front rank as a great fruit-producing center. To accomplish this we must work with head and hands.

"Any one can run an orchard—plant the trees and let them grow." Those ideas generally explode with the contents of the pocket. Too much cannot be said in favor of clean culture; in fact, it must be done. Weeds should be looked upon as our bitterest enemies. They not only absorb a vast amount of moisture, but a large amount of plant food as well. It is said, were vegetables to take the place of weeds, every family would have a supply for the season.

Prof. Wickson tells us of an experiment where the loss by weeds in one week was equal to one-fourth inch of rain. Think of that you who are too busy just now—will wait a few days. Trees must be fed; they live by their roots, not stomachs. This must commence early. Have the top soil deep and loose. Constant cultivation brings moisture to the surface. A fine deep tilth prevents evaporation. Care should be taken that no crust forms or remains. In some hot, exposed localities, there should not be a smooth, glassy surface, as it has a tendency to draw heat. No tools should be used that bring up fresh soil to dry out, nor should there be a hard surface near the top, but a deep, pulverized soil of three or four inches.

A Californian's Reflections at a N. Y. Fruit Auction.

I have for two days been an interested visitor to the California fruit auctions upon the piers of the Erie Railroad in this city, one conducted by the California Fruit Union, the other by E. L. Goodsell, and it would be idle to say that the wretched prices realized were distressing to me.

Yesterday one carload of peaches from Bakersfield were—given away—I shall not say "sold." It was a cruel imposition on the part of the firm which directed this carload of choice fruit to New York, where it must have known that the Delaware and New Jersey crop of inferior fruit had for weeks glutted the market. I think the Bakersfield peaches brought 65 cents per 20 lb case. The same two sales sacrificed Tokay grapes at 65 cents to \$1.05 and really beautiful plums and Bartlett pears were quite as ruthlessly slaughtered.

In one auction the buyers were largely Italian and yesterday the receiver of the goods made no effort to protect the price. When the stuff was offered, up went the Italian cry, "six-i-e-ty five," and sometimes 55; and rarely was the bid raised more than 5 cents per case. In fact, it seemed to me, without any evidence to support it, save what I saw with my own eyes, that the "Mafia" had just a clear understanding and no one made a raise of more than 5 cents per package, or 1/4 cent per pound, because, this morning in Goodsell's auction, the receiver, to whom was consigned the entire catalogue of four cars, was on the floor right by the auctioneer, and immediately upon the opening by the auctioneer the same old cry "six-i-e-ty five" came out. "I am offered 75 cents by the house" (meaning the receiver), said the auctioneer, and not a lot was sold lower than 70 cents and most of it brought 75 cents and more. These were Tokay grapes.

This set me to thinking, thus: These fellows must have the California fruit. Now why not make the receiver protect the grower or shipper by starting everything (except fruit rotten and almost worthless) at a price that will, after paying the awful railroad and commission charges, give the grower a fair, honest profit?

It's just as I state it. The peddlers must have the California fruit. Now if the growers can only come to some understanding among themselves, so that rich middle men, like Porter and Earl, cannot use their consignors, goods to fight each other with (as they are ruinously doing here), and if they have their own representatives here and in Chicago there will be hopes for the growers of green fruit.

The auctions are not known to be free to all and only the few who deal exclusively in fruit are attending them. Why not invite the canners, the hotel stewards, and, at stated seasons, send to private houses and invite the people to come and buy for their winter canned stock? Thousands of cases of ripe fruit, but not rotten, are now sacrificed, when if distributed in two to six case lots to the 3,000,000 people who live in and about New York, there would be a scarcity rather than a glut. I took pains to follow some of the Tokay grapes from the auction to the retailer. I had a catalogue marked and the lot number is upon the end and cover of a good many of the boxes. A certain lot, (sold at 65c in the morning, the buyers all turning up their noses and saying "all rot, all rot,") was offered to me at the fruit store by the case as "very nice fruit, so cheap at \$1.35,

sell very fast sir." "Well," said I, "that's the Duchman's one per cent, sure enough." Pretty soon a sunny but greasy son of Italy packed off two cases and I followed. He opened up the lot and the waste appeared about one pound in twenty, and he sold them out at 10c per pound on scales that only gave about ten ounces to the pound, or I am no good as a detective.

Well, here was evidence. Now what are you going to do about it my friend Mr. Fruitgrower? Better far fatten pigs on your grapes and dry your peaches. Let me tell you what I would do, if I were cultivating a small area of Kern Delta rich land. I would get all the manure I could onto the land and grow the biggest cabbage, cauliflower and celery on earth and have it in this market if possible in February. It can be done and I believe good money can be made on it using refrigerator cars to protect from frost. You pay no extra charges, as for ice, and I think Goodsell smart enough to get a good round profit for you. You must force your plants and use the warmest soil you have. The people here must eat and all say there is no such celery on earth as ours.—W. H. H., in Bakersfield Californian.

SHEEP AND WOOL.

Wheat as Sheep Feed.

John A. Craig, of the Wisconsin Experiment Station discusses the following question in the *Breeders' Gazette*:

With wheat at \$15 per ton, bran \$11 and oats \$8, what is the best ration that could be made of these for lambs and for breeding ewes?

In view of the prices given and the results that have been obtained from these foods I believe the wheat to be the best choice for fattening lambs. I cannot see how any better results would be gained by the addition of either of the other foods mentioned.

The best evidence of the feeding value of wheat for sheep comes from Dr. Gilbert, who conducted a series of experiments with it at Woburn. The sheep were about ten months old and they were divided into lots with eight sheep in each. All the lots received one-quarter pound of hay chaff and eleven pounds of Swedes to begin with, and this was increased until they received one-half pound of the former and twenty pounds of the latter per head daily. In addition to this the respective lots were fed as follows: Lot 1, linseed cake; lot 2, linseed cake and undecorticated cotton cake mixed equally by weight; lot 3, wheat-meal during the first period of thirty-three days and whole wheat during the succeeding seventy-three days; lot 4, crushed oats and barley-meal equally mixed by weight; lot 5, crushed oats and split beans equally mixed by weight. All of the lots were fed one-half pound of the respective grains per head per day. The experiment was carried on from Dec. 3 to March 19, an interval of 106 days. During that time the following gains were made: Lot 1, linseed cake, 3.3 lbs. per head weekly; lot 2, linseed and cotton cake, 2.7 lbs.; lot 3, wheat-meal and whole wheat, 3.4 lbs.; lot 4, crushed oats and barley-meal, 2.6 lbs.; lot 5, crushed oats and split beans, 2.7 lbs. It is clear from such returns that wheat is a valuable food for sheep, as it leads these both in the gain and cost of gain.

During the first part of the experiment the wheat was ground into meal; but it was found that the sheep did not relish it prepared in that way and their gains were not so satisfactory as when it was fed whole.

The succeeding winter another experiment was conducted with wethers ten months old and of the same breeding as those in the first trial. All of the lots received a daily ration of about twenty-eight pounds of Swedes and one-half pound of hay chaff, and in addition to those the following foods were fed to the respective lots at the rate of three-quarters of a pound per head daily: Lot 1, linseed cake; lot 2, whole wheat; lot 3, decorticated cotton cake; lot 4, linseed cake and crushed barley; lot 5, decorticated cotton cake and crushed barley. During the period of ninety-five days the weekly increase per head was: Lot 1, 2.4 lbs.; lot 2, 2.3 lbs.; lot 3, 2.7 lbs.; lot 4, 1.8 lbs.; lot 5, 1.4 lbs. At the prices current in England when the experiment was conducted the decorticated cotton cake made the cheapest gain and in that particular the wheat ranked second. The heaviest fleeces were grown by the sheep fed the cotton cake, while those receiving the linseed came next and the wheat followed these.

For the breeding ewes I should select bran at the prices quoted. Our practice has been to feed oats to our breeding ewes in late fall and bran toward lambing time; but at the prices given I should feed bran exclusively.

A SUBSTITUTE

Advantages of this Paper for a Drying Surface.

ABSOLUTELY ODORLESS.

WATER, ACID AND ALKALI PROOF.

WILL IMPART NO TASTE NOR ODOR TO FRUIT.

CHEAP AND DURABLE.

ITS BRILLIANT BLACK SURFACE, which absorbs the heat, drying both sides of fruit at the same time, and rendering the labor of turning unnecessary.



FOR TRAYS!

Unequaled for DRYING GRAPES.

Write for SAMPLES AND CIRCULAR.

Paraffine Paint Co.

116 Battery St.

SAN FRANCISCO.

E. G. JUDAH, Agent, 221 South Broadway St., Los Angeles.

HAMILTON FRUIT GRADER.

(PATENTED MAY 13, 1890.)

FOR SEPARATING AND ASSORTING IN DIFFERENT GRADES BOTH GREEN AND DRIED FRUITS.

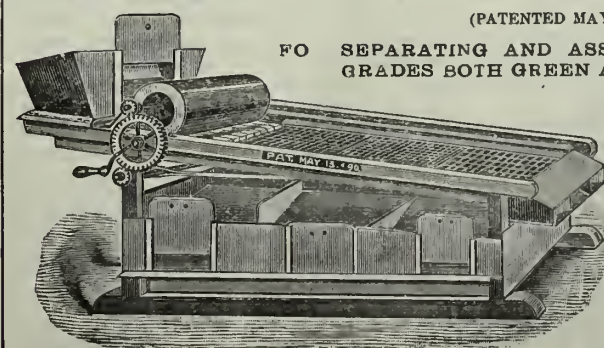
It is Simple, Durable and Efficient.

It has become the leading Fruit Grader of California. Col. Hersev has ordered three of these Fruit Graders this season. Send for catalogue and testimonials.

—A VARIETY OF—

Fruit Cars, Transfer Cars, Turntables and Dipping Baskets

ALWAYS ON HAND.



MANUFACTURED AND FOR SALE BY

W. C. HAMILTON,

SAN JOSE.....CALIFORNIA.

THE HOME CIRCLE.

The Dinner Horn.

When I hear the dinner horn,
Ain't I glad that I wuz horn?
Oh, thet holler tootle-too,
How it thrills a feller through!

Talk about yer simphonies,
Now, I tell y' what it is,
Angels' harps don't stand a show
When that horn begins to blow.

Don't I quit the pesky plow
Kind o' mighty sudden, now,
When I hear the welcome sound
Echoin' from the woods around!

Gosh! them hurstin' 'taters sweet,
Jes' like warmed-up snow to eat!
And them fritters thick and brown—
Feller hates to let 'em down!

Get up, Sorrel! seems ez though
Horses' walk is mighty slow.
Hi, thar, hoys! quit droppin' corn—
Don't ye hear the dinner horn?

—James Buckham, in Detroit Free Press.

A Philosopher and His Family.

His mind was in a perpetual spasm
About the cause of protoplasm,
And w'en 'twas caused he longed to know
Just what it was that made it grow.
He longed to know just what it was,
The cause behind the primal cause.

Just what was Chaos made of, and
Upon what ground did Chaos stand?
He wished to know what it could be
When in the shape of nebulae;
And what was nature's underpinning
'Fore it began in the beginning?

He longed to know how it began,
The much debated Fall of Man,
What language Eden's old snake talked?
And if upon its tail it walked?
And if we'd landed high an' dry
Had Eve's old apple hung too high?
He tried to find some one to tell
Of the "lost tribes of Israel."
And 'twas the problem of his life
To find out who was old Cain's wife,
And just how much the world would gain
Had Abel lived, instead of Cain.

But his coarse neighbors wished to know
How his poor wife could sew
Enough to huy him clothes and food
And feed seven children—hungry brood.

They were dull-minded creatures, so
This simple thing they longed to know.
—Sam Walter Foss, in Boston Globe.

Women in English Politics.



THE part the women play in an English election is one of the things which no American can accept as an improvement over our own methods. It may either amuse him or shock him, but he would not care to see it adopted at home. The canvassing in the country from cottage to cottage he can understand; that seems possible enough. It takes the form of a polite visit to the tenants, and the real object is cloaked with a few vague inquiries about the health of the children or the condition of the crops, and the tractlike distribution of campaign documents. But in town it is different. The invasion of bachelor apartments by young Primrose dames is embarrassing and un-nice, and is the sort of thing we would not allow our sisters to do; and the house-to-house canvass in the alleys of Whitechapel or among the savages of Lambeth, which results in insult and personal abuse, is to our way of thinking, a simple impossibility. The English, as a rule, think we allow our women to do pretty much as they please, and it is true that they do in many things enjoy more freedom than their British cousins, but the men in our country are not so anxious to get into office, greedy as they are after it, as to allow their wives, in order to attain that end, to be even subject to annoyance, certainly not to be stoned and hustled off their feet or splattered with the mud of the Mile End road. Any one in England who followed the election last year knows to the wife of which distinguished candidate and to the daughters of which cabinet minister I refer.

I have seen women of the best class struck by stones, and eggs and dead fish, and the game did not seem to me to be worth the candle. I confess that at the time I was so intent in admiring their pluck that it appeared to me as rather fine than otherwise, but from this calmer distance I can see nothing in the active work of the English woman in politics which justifies the risks she voluntarily runs of insult and indignity and bodily injury. A seat in the House would hardly repay a candidate for the loss of one of his wife's eyes, or of all his sister's front teeth, and, though that is putting it brutally, it is putting it fairly.

It would not be fair, however, if I left the

idea in the reader's mind that the women go into this work unwillingly; on the contrary, they delight in it, and some of them are as clever at it as the men, and go to as great lengths, from Mrs. Langtry, who plastered her house from pavement to roof with red and white posters for the Conservative candidate, to the Duchesses who sat at the side of the member of Westminster and regretted that it threatened to be an orderly meeting. It is also only fair to add that many of the most prominent Englishmen in politics are as much opposed to what they call the interference of women in matters political as they are to bribery and corruption, and regard both elements of an electoral campaign with a pronounced disfavor. The reply which the present President of the United States made to those enthusiastic and no doubt well-meaning women who wished to form leagues and name them after his wife illustrates the spirit with which the interference of women in politics is regarded in this country. But then it is a new thing with us, and it is only right to remember that from the days of the Duchess of Devonshire's sentimental canvass to the present, English women have taken a part in general elections; that there is a precedent for it; and when you have said that of anything English, you have justified it for all time to come. The young American girl who would not think it proper to address men from a platform, and give them a chance to throw things at her, must remember that the English girl would not give the man she knew a cup of tea in the afternoon unless her mother were in the room to take care of her. And I am sure the women in My Candidate's campaign almost persuaded me that they, as the political agent declared, did more than himself to win the election.—Harper's Magazine.

Darning.

Darning seems almost in danger of becoming a lost art. With the cheap price of clothing to-day, many people find it easier to buy the new than to mend the old. While such a spirit of wastefulness is certainly to be deprecated, it is true that in olden days a great deal of time which modern housekeepers can ill afford with their many duties was spent in mending rents. For, in spite of the improvements in modern life, labor-saving machines have not kept pace with the added duties of the modern housekeeper.

While it is true that the modern housekeeper is a much happier and wiser woman than her grandmother, she is not apt to be so skillful in purely manual tasks. It is a matter of regret that children are not taught mending and the art of needlework as carefully as they were in the olden time. It is a rare thing for a young girl to be able to make a neat darn in cloth. She should use the ravelings of the goods wherever it is possible to do so, or a sewing silk exactly matching the cloth. Where the cloth is very thick and heavy it will not be necessary to put a second piece of cloth under it, but the edges of the cloth can be woven together, and when pressed the darned spot will be practically invisible. Where the cloth is thinner, a piece of cloth exactly matching it, or a piece of the cloth itself, should be placed under it to strengthen the stitches.

In the mending of kid gloves a piece of silk exactly matching the gloves should be placed under the seam where they split, and the glove drawn together over this silk, that it may serve as a stay to the seam. This will make a neat as well as strong seam, for the silk remains invisible. The darning of thin muslin or tissue is one of the most delicate matters. For the fine muslin, a thread about the same size as the thread of the goods should be chosen, and the darn should be woven together so as to match the weave of the goods. This must be done very firmly and thoroughly, as no stay can be put under it.

The darning of stockings is an art in which every girl should be taught from her childhood, as there is no mechanical means by which it may be performed, and it is the most important part of the mending of every family. A matter of great importance in this particular is often overlooked. The darning wool or darning cotton should be chosen in the same quality as the stocking. It is not an uncommon thing to see a coarse, heavy quality of cotton used, because this fills up the darn more rapidly. This is a mistake. It makes the work clumsy and ugly, and shows a slovenly manner.—New York Tribune.

The Art of Breathing.

Major-Gen. Drayson, of the English army, has made a special study of the art of breathing, and is now free from coughs, colds, sore throats and other ailments from which he suffered when a young man. He

declares food and liquid insignificant in comparison with air in the support of life. A man may live for days without food, but he dies in a few minutes without air. Rapid breathing in pure air, making forty or fifty deep inhalations per minute (the usual number is about twenty), is his panacea for the immediate recovery from headache, toothache, pains in the heart, restlessness and sleeplessness. He recommends for the two latter, walking about the room to make sure of not breathing the same air a second time. He considers it an advantage in some cases to place a handkerchief over the nostrils and filter the air as it passes into the lungs, then forcing it out through the mouth. By continued lack of oxidization the blood becomes permanently bad, and tissue of the same character is formed from it with the result of impairing the health.

Society and the College Girl.

Too often the college girl feels out of touch socially, writes Anna Robertson Brown in the fourth paper of her admirable series of papers on "The Girl Who Goes to College," in the October Ladies' Home Journal. It is hard for her to find her exact place. Yet the college woman, of all others, should be a leading social power, since she ought to be able to add much to current life. There is also a vital responsibility involved, for a college girl not only returns, in some instances, to a home where social leadership is hers by right, but when she marries her husband is, in many cases, a man of distinct prominence and wide influence, and she should be adequate for the new position which she holds as his wife.

The social difficulties of college girls usually arise from one of two causes. In a few cases they do not care for society, and scorn it outright; others do care for it, but are so alarmingly earnest, and (from the ordinary point of view) so intimidatingly learned, that they are somewhat unmanageable socially; between them and the world at large there is an awkward constraint. The girls of the first sort are making a very serious mistake personally. More than that, they are selfishly casting discredit on their training, and are making life hard for all other college girls. One unkempt, brusque, eccentric college graduate does more harm to her college than many of her delightful classmates together can do good.

The Good-Night Story.

Every night when I watch my little daughter working off the big thoughts that sweep over her brain as her tired body begins to relax, while her mentality seems to be briefly and proportionately stimulated, I tremble to think of the harm that could be done to her or any child—for Mabel is not an abnormal child in any way—by an ignorant nurse or thoughtless parent.

The fact that every normal child cries out for a bedtime story shows that its mental nature needs it just as its physical nature craves sweets. You want to give your child pure candy, so give him the unadulterated story. Leave out the fearful personalities, the grim and gigantic figures—these, even if they are properly vanquished by the gallant hero, are too distinct for the crib-side tale.

Sit down by your little one's bed and speak low and evenly. Weave a fanciful but quiet story that tells of pretty fairies, and birds and flowers and droning bees, and loving little boys and girls—these who sleep to the weary but still active brain, not with the suffocating pressure of the gathering storm lit with lurid flashes, but with the soft clouds of the sunset horizon that change from rosy pink to tender enveloping gray, and gradually deepen into restful gloom.—New York Times.

Uses for Soda.

Tinware may be brightened by dipping a damp cloth in common soda and rubbing it well.

Very hot soda in a solution, applied with a soft flannel, will remove paint splashes.

Use soda in the water to clean paint and glass instead of soap.

Strong, tepid soda water will make glass very brilliant, then rinse in cold water, wipe dry with linen cloth.

Ceilings that have become soaked by kerosene lamps may be cleaned by washing off with soda water.

For cleaning oil paint before repainting, use two ounces of soda dissolved in a quart of hot water, then rinse off with clear water.

A lump of soda laid on the drain pipe will prevent the pipes becoming clogged with grease; also, flood the pipes once a week with boiling water, in which a little soda is dissolved.

Wash white marble porches, bath, etc., with a mop dipped in boiling hot water and soda. A good deal of soda should be dissolved in the water.

A little soda put in the water in which cut flowers are placed will keep them fresh for a long time.

If grease has been spilt on table or floor of kitchen or pantry, put a little soda on the spots and then pour boiling water over them.

Steel knives that are not always used may be kept from rusting if they are dipped in a strong solution of soda—three parts of soda to one part of water; after dipping them, wipe dry, roll them in flannel, and keep in a dry place.

Hints to Housekeepers.

Breadcrumbs cleanse silk gowns.

Gloves can be cleaned at home by rubbing with gasoline.

Tooth powder is an excellent cleanser of fine filigree jewelry.

Corks warmed in oil make excellent substitutes for glass stoppers.

The fumes of a brimstone match will remove herry stains from the fingers.

An inexpensive afghan is made of white cricket cloth, a material like elder down, with tiny pink rosebuds embroidered around the edge.

To roast small birds, fasten the head under the wings. Lay a thin slice of pork on the breast of each bird and a piece of bread underneath. Roast in a hot oven.

Scratches on furniture may be removed by rubbing with a woolen rag dipped in boiled linseed oil. The varnishing may then be done with shellac dissolved in alcohol.

If celery were eaten freely, sufferers from rheumatism would be comparatively few. It is a mistaken idea that cold and damp produce the disease—they simply develop it. Acid blood is the primary and sustaining cause. If celery is eaten largely, an alkaline blood is the result, and where this exists there can be neither rheumatism nor gout. It should be eaten cooked.

Carrot pudding is said by those who have eaten it to be very nice. Boil and mash fine six ounces of carrot, add six ounces of suet chopped fine, half a pound of currants, two large tablespoonfuls of sugar, half a nutmeg, a saltspoonful of salt and three large tablespoonfuls of flour. Mix all these ingredients thoroughly, put them in a greased pot and boil the pudding for three hours. This receipt is from a correspondent who has tried it.

A home way to repair garden hose when you are at a distance from the supply shop: Take two ounces or more of naphtha, into which drop as much shellac as it will absorb till of the consistency of thin gum. Cut some bandages of canvas or thick leather, spread the composition on one side of them, bind tightly round the hose, and fasten firmly with twine. Let it remain a day; then remove the twine. The hose must be kept dry before the plasters are applied. Keep the cement in a glass-stoppered bottle.

A good whitewash is prepared as follows: Take six quarts of nice lime, slack it with boiling water, then cover it till it cools a little, and strain it; add then a quarter of a pound of alum, burnt and powdered, one pound of sugar, three pints of rice flour boiled to a thin paste with water, and a pound of clean glue dissolved. When all these ingredients are well mixed, add five gallons of hot water. If this whitewash is

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder
ABSOLUTELY PURE

applied to outside buildings while it is hot, it will last for a long time; it may be colored. A little copperas as large as a hickory nut is said to give a buff shade. A certain proportion of salt is ordinarily added to common whitewash to make it stick, but salt is not used in this rule, other ingredients taking its place.
—American Cultivator.

The Family, Pro and Con.

Family reunions seem to be growing very popular. They have been chronicled by the score in the newspapers this summer, and the increasing frequency of them may, perhaps, be taken as a sign of a growing interest among Americans in family stocks. In Virginia, and more or less generally throughout the South, people have been in the habit of acknowledging their cousins, and keeping some sort of track of them; but it used to be asserted down there that, in the North, blood was not much thicker than water, and that relationship was but a slender tie, to be recognized or ignored as expediency might direct. The North must be improving in that respect, and perhaps it is well that it is. The tendency of American institutions and of the conditions of life in this country for the last century has been to develop individualism to an extreme degree. Families have been systematically scattered. Some members have gone West, others have moved to town, and all have worked out their independent destinies as best they could.

That is a good way; but there are advantages, too, of people of the same blood touching elbows and keeping one another in sight. A large family connection has its drawbacks, but it has compensations, too. It involves a degree of mutual assistance that may sometimes be inconvenient to the more prosperous members; but it also involves co-operation which may be helpful to all the parties to it, and, by creating new interests in people, it helps to quicken one's interest in life. Life is no fun unless one takes an interest in somebody, and to be interested, not exclusively, but genially, in one's relations is a good plan, and is really no more trouble and costs no more than to be interested in people who are other people's relations. Family reunions, provided they are skillfully engineered and do not happen too often, may be pretty good sport, and people who keep out of them for fear of meeting poor relations whom they do not know are in reasonable danger of losing more than they escape.—Harper's Weekly.

Useful Things To Know.

The question, "What does a man buy when he purchases the title to a farm?" has been often asked, says an exchange, but not so satisfactorily determined. From the latest decisions on the subject it is plain that he buys the ground, of course, and all the buildings erected on it, whether these are mentioned or not. He also buys all the fences, but not material once used, then taken down and laid aside, nor material purchased for a new fence, unless these are specifically mentioned. He also buys all adjuncts necessary to the farm, except implements and machinery. For instance, if there is a pile of bean-poles cut and once used for the purpose, these go with the farm; but if cut and never used, they are the seller's property, unless specified as sold. Standing trees and trees which have fallen or blown down go with the ground; but if cut down and made into cordwood, they become personal property, and to go with the land must be specified in the sale.

Avoid Them.

The following list of "words and phrases to be avoided," prepared by an Eastern teacher, deserves a wide circulation:

Had rather, for Would rather; Had better, for Would better; Posted, for Informed; Depot, for Station; Try and go, for Try to go; Cunning, for Smart; Above, for Foregoing; Like I do, for As I do; Feel badly, for Feel bad; Feel good, for Feel well; Expect, for Suspect; Nice, or real nice, used indiscriminately; Funny, for Odd or unusual; Seldom or ever, for Seldom or never; More than you think for, instead of More than you think; Nicely, in answer to a question as to health; Just as soon, for Just as lief; Guess, for Think; Fix, for Arrange or Prepare; Real good, for Really good; Try an experiment, for Make an experiment; It storms, for It rains or it blows; Not as I know, for Not that I know; Every man or woman should do their duty; A party, for A person; Healthy for Wholesome.

Saved by an Organ-Grinder.

A devout woman of this city was recently sick, as her family and friends believed, unto death. She had made her preparations and

was daily awaiting her end with patient resignation. Her hours of suffering were cheered by the glimpses of the unseen world that came to her, and one day she called to her attendants who were grouped about her in hourly anticipation of her decease: "Oh, that heavenly music! Don't you hear it?" Strongly impressed, in spite of themselves, by her fervor, the rest strained their ears to catch the harmonies of heaven, when a cyclonic burst of sound from a street piano, manipulated by an Italian across the street, swung full into the rollicking measures of "Johnny, get your gun." There was a moment's silence in the sick-room, then an involuntary burst of laughter, in which the sick woman joined. From that moment a reaction set in, and to-day, though still an invalid, she has the prospect of years of life before her.—Buffalo Courier.

Don't Hear Everything.

That was a wise remark by a lady who had brought up a large family: "You have got to overlook some things in a little child. You cannot expect them to be perfect." In the same line are these remarks from a religious paper:

"The art of not hearing should be learned by all. There are so many things which it is painful to hear, very many of which, if heard, will disturb the temper, corrupt simplicity and modesty, detract from contentment and happiness. If a man falls into a violent passion, and calls us all manner of names, at the first sound we should shut our ears and hear no more. If in a quiet voyage of life we find ourselves caught in one of those domestic whirlwinds of scolding, we should shut our ears as a sailor would furl his sail, and, making all tight, scud before the gale. If a hot, restless man begins to inflame our feelings, we should consider what mischief the fiery sparks may do in our magazine below, where our temper is kept, and instantly close the door. If all the petty things said of one by heedless or ill-natured idlers were brought home to him, he would become a mere walking pin-cushion stuck full of sharp remarks. If we would be happy when among good men, we should open our ears; when among bad men, shut them. It is not worth while to hear what our neighbors say about our children, what our rivals say about our business, our dress or our affairs."—Observer.

Misapplied Service.

"Whenever I try to do anybody a service," said a good-natured young man, "something seems to go wrong, and I make up my mind that I'll never try again. In a street-car the other day I saw a mother quiet a crying infant by what seemed a very simple expedient. She pointed her finger at the little one and said, with increasing rapidity of utterance, 'Cutcher, cutcher, cutcher-cutcher-cutcher,' at the same time advancing her finger rapidly toward the child with a sort of corkscrew movement. The child appeared to be greatly amused by this; it stopped crying and began to laugh. In a street-car this morning I saw a mother with a crying child; the mother appeared too tired to make even an effort to quiet the infant. Catching the child's eye I said to it, 'Cutcher, cutcher, cutcher-cutcher-cutcher,' at the same time advancing my finger spirally. But the charm didn't work; the child looked at me for a moment with a frozen sort of look, and with a stillness that was positively alarming, and then it began to scream louder than ever."—New York Sun.

A Rebus on An Envelope.

A curiously addressed letter lately passed through the postoffice at Madrid, which was deciphered and correctly delivered, notwithstanding all difficulties.

The address was a perfect rebus. At the left-hand side was the figure of a lady; it was clear, therefore, to which sex the recipient should belong. Over the lady's head the sun was rising, hence her name was inferred to be Aurora. For her surname stood a hill with a castle at its foot, which gives us, "Montes y Castello."

Next comes the town, for which a plan of a city was drawn, on which the Alhambra was legible. This indicated Granada, but in order to leave no doubt possible, a pomegranate was drawn beside the plan. To complete the address, a number was drawn in one of the streets of the city plan.

The postal authorities took three days to study this curiosity, and then triumphantly delivered the letter to "Senorita Aurora Montes y Castello, Azacayas, No. 20, Granada," and so far from censuring the sender, they had the envelope photographed, and a copy printed in the Madrid papers as a proof of the intelligence of the department.

DOMESTIC ECONOMY.

One Way to Use Seedless Raisins.

TO THE EDITOR:—The RURAL asks for recipes for ways to cook raisins. We have one, and a valuable one, and we hasten to give it: Make a quick, hot fire and put over two quarts of water in a granite kettle. Into this put a quart of clean, seedless raisins, and after the water begins to boil sift in flour, stirring the pudding rapidly. In five minutes from the time the water boils the "duff" is done and sets steaming on the supper table. We eat it with sweetened cream. We have eaten it with sweetened cream, wine sauce, vinegar sauce, maple syrup, and have carried large pieces of it for school lunch. It is good any way, so it only contains plenty of our fine-flavored, seedless Fresno raisins.

JEANNIE CARR SANDERS.

Sanders P. O., Cal.

FRENCH METHOD OF COOKING BEEF.

Take several pounds of lean beef, cut from that side of the round where the flesh is thickest. Do not have it in steaks, but thick and square. Lard it very fully with strips of fat salt pork, tie with a small cord to keep in shape, and put it in a perfectly tight-covered tin pail. Put it in without any water, and add one carrot chopped, one-half slice of onion chopped, a little celery seed (or celery salt) and one-half teaspoonful each of sage, sweet marjoram and thyme. Cover the pail in such a way as to entirely exclude the air, put it in an iron pot of water and let it boil steadily. If the water in the outside vessel boils away replenish it with hot water from the teakettle. After three hours open the pail and turn the beef the other side up. Add salt and pepper and fill the pail nearly to the top, with raw potatoes, cut in thick slices, cover again and boil three hours longer. Then take out the meat, remove the cord, and place in the center of a hot platter and surround it with boiled rice; put the potatoes upon the rice and pour over all the seasoned extract or gravy. If it is inconvenient to have the range occupied so long by the kettle, set the covered pail in the oven and the result will be almost equal. In that case, it will require but five hours cooking. It seems like a long process, but it requires very little care or watching, and if once successfully tried, it is sure to become a family institution. If properly prepared no one flavor predominates.—Mary Mason.

FARMER'S FRUIT CAKE.—Two cups of dried apples, two cups of molasses, one cup of butter, two eggs, one teaspoonful each of cloves, cinnamon and nutmeg, three and a half cups of flour, one teaspoonful of soda. Soak the apples over night in cold water. Drain and chop them the size of raisins, put them in the molasses and simmer slowly two hours. Add the other ingredients, mix well, and bake.

CINNAMON WAFERS.—One pound of sugar, one quarter of a pound of butter, one tablespoonful of cinnamon, three eggs, half a teaspoonful of soda, dissolved in a tablespoonful of wine or water, flour enough to roll out. Roll thin and bake in a quick oven. These will keep for weeks.

Facts About Glycerine.

Glycerine is one of the most useful and misunderstood of every-day assistants. It must not be applied to the skin undiluted or it will cause it to become red and hard, but if rubbed well into the skin while wet, it has a softening and whitening effect. It will prevent and cure chapped hands; two or three drops will often stop the baby's stomach ache. It will allay the thirst of a fever patient and soothe an irritable cough by moistening the dryness of the throat. Equal parts of bay-rum and glycerine applied to the face after shaving, makes a man rise up and call the woman who provided it blessed. Applied to shoes, glycerine is a great preservative of the leather and effectually keeps out water and prevents wet feet. A few drops of glycerine put in the fruit jars the last thing before sealing them, helps to keep the preserves from molding on top. For flatulency, there is no better remedy than a teaspoonful of glycerine after each meal.

World's Fair Distances.

To see the World's Fair and walk through the buildings the grand total is something in excess of 118,000 feet, or nearly 23 miles. This estimate does not include State, Government or private buildings; the plaisance is ignored and no account is taken of the ong jumps from one building to another. A walk of about 40 miles is necessary to do the whole thing up.

GRANGERS' BANK

OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874.



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 800,000
Dividends paid to Stockholders.... 720,000

OFFICERS.

A. D. LOGAN.....President
I. C. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary
General Banking. Deposits received, Gold and Silver.
Bills of Exchange bought and sold.
Loans on wheat and country produce a specialty.
January 1, 1893. A. MONTPELLIER, Manager.

Superphosphate Fertilizers

Made from GENUINE GUANO.

For Fruit Trees, Vines, Sugar Beets, Grains, Vegetables, Etc.

Special Grades put up to suit the soil.

—ALSO—

GUANO FLOUR.

EQUAL TO PURE BONE MEAL. Circulars giving directions may be had on application to

Mexican Phosphate & Sulphur Co.,

H. M. NEWHALL & CO., Agents,
309 & 311 SANSOME STREET,
San Francisco.

RELIABLE INCUBATOR

And Brooder Combined.
40 in stamps will bring you a catalogue and book of hundreds of testimonials of successful artificial hatching by the "Reliable." The best, most durable, easiest operated, made of best material & workmanship. A conceded fact. Reliable Incubator & Brooder Co., Quincy, Ill.



Horse Owners! Try GOMBAULT'S Caustic Balsam

A Safe Speedy and Positive Cure
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Hemorrhoids from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

Almond Hullers FOR SALE

—BY—

A. O. RIX, Irvington, Alameda Co., Cal.

TREE WASH.

"Greenbank" Powdered Caustic Soda and Insecticide.

T. W. JACKSON & CO..

Sole Agents,

No. 5 Market Street, San Francisco, Cal

MAKE YOUR OWN GAS! BADLAM BROS..

519 Market St., San Francisco,

SOLE MANUFACTURERS OF THE CELEBRATED PEERLESS GAS WORKS. New process, safe and inexpensive, from \$100 upward. Light cheaper than coal oil. Send for catalogue and prices.

PATRONS OF HUSBANDRY.

The Master's Desk.

Salutatory.

DEAR PATRONS:—The morning of a new year is soon to dawn upon us, with its hopes, fears and trials, its responsibilities, successes and failures.

The relentless hand of change is upon us, and we are brought face to face with new conditions, new problems, new laborers and new tasks; yet we would not, and should not, forget either the victories or defeats of the dying year, because an approach to perfection is soonest made through the wisdom gained by defeat, and a lost battle is often the incentive to the gaining of a brilliant victory.

In this wondrous age, when mind has at last dominated matter, when distance has been annihilated, when time is being annulled, when the lightnings have been harnessed to the wheels of progress, we of the farm, of the grange, whose clear brains and strong arms have been material factors in producing these wonderful results, may be occupying a dangerous position and in imminent peril of losing that which has cost so many years of toil to obtain.

To be conservative is well, but when it degenerates into inaction and fossilization it is death. To be progressive is God-like; to extend it to the point of tyrannical radicalism defeats its own purpose and is as sure death as fossil conservatism.

Our duty, then, is plain; the happy medium, the mediator between extremes, must be the position we should occupy, and while riches on the one hand and poverty on the other writhes and struggle for some unfair advantage over each other, threatening in the meantime to embroil us in their senseless imbroglia, the jar and tremble of their frantic evolutions should be but the tamping bars to solidify our structure in our always avowed and strictly adhered to principles of sustaining Americanism, patriotism, republicanism and justice.

The work before us is the work of giants; the object to be attained the purest and noblest in which mortals can engage, because virtue and temperance and honor and truth are the only sure foundations on which any structure can safely be built. The reward, not dollars alone, but happiness, that acme of earthly ambition, a monument of good deeds and the supreme satisfaction of having made the world the better for our having existed.

And now, kind friends, the work of the year is before us; it is to be one of broadest charity and love; true hearts and willing hands are coming to the rescue of our mighty cause.

Fair women and stalwart men, with moistened eyes and fervent pledges have clasped hands and promised, with a promise that came from the depths of the soul, to aid, support and sustain the grand "Old Grange," the only representative of agriculture.

In a few days I will bid me away to our National Council to imbibe that wisdom and knowledge in which I am so deficient, and then back again to the "golden shores" and "fadeless flowers" of our matchless State, trying as best I may to deserve the honor bestowed upon me, standing shoulder to shoulder with you in the battle for emancipation. Then, turning our faces resolutely toward the future, while reverently placing the mantle of charity over the past, we will garner our harvest of kindly deeds, hopeful words and trusting friendships, while our motto shall ever be: Union, equality, sobriety and justice. Affectionately and fraternally yours,

A. P. ROACHE.

National Legislation.

The Legislative Committee of the National Grange—Messrs. Brigham, Rhone and Trimble—have addressed the following communication to the members of the Senate and the House of Representatives:

In behalf of the farmers of the United States, we ask your Honorable Committee to leave, undisturbed, the duties now imposed upon agricultural products which are imported into this country to be sold in competition with the products of the farmers of the United States. It is generally conceded that, in former revisions of the tariff, agriculture has not received the same measure of protection accorded to other industries; and, in the late revision, the farmers appeared before the committee and secured, in nearly every instance, such duties as have proven of great benefit to them; and they desire that these duties be maintained as

long as protection is accorded to any industry in the land.

We earnestly protest against the removal of the duty from any agricultural product, such as wool, vegetables, fruits, hay, eggs, live stock, dairy produce and tobacco, unless the products of the factory and mine be also left without protection. Wool is the finished production of the farmer, just the same as cloth is the finished product of the manufacturer.

We seek no class discrimination in our favor, and ask that none be made against us.

The Secretary's Column.

By request of the manager of the PACIFIC RURAL PRESS and members of the Executive Committee of State Grange, I am to furnish such data as may be gleaned from the correspondence received at this office.

Owing to the change of office, I am not able at the present time to furnish much news regarding the doings of the different subordinates throughout the State, as my correspondence has been limited. I trust, however, that I may be able from time to time to supply much that will be of interest to the readers of this column; and, while I may not have the experience of my predecessor, or be able to use as elegant rhetoric as our worthy junior past master, yet I am willing to put my shoulder to the wheel and try.

I shall not be able, however, to fill the space allotted to me every week with fresh, readable matter without the assistance and co-operation of the members throughout the State.

If you are interested in grange work, let me hear semi-occasionally from your different localities what you are doing and how you are doing it. With good will to all, and malice to none, I enter upon the duties assigned to me.

EXECUTIVE COMMITTEE MEETING.—The Executive Committee of California State Grange met in regular session Oct. 13, 1893, at the office of Bro. A. T. Dewey, 220 Market St., San Francisco, Cal.

Present—Worthy Master A. P. Roache, B. F. Walton, G. P. Loucks and Secretary Mills. Visiting patrons present—Bros. Amos Adams and Alfred Holman.

The minutes of the last day of the 21st annual session of the California State Grange, held in Petaluma, Oct. 3d to 7th, 1893, were read, corrected and approved.

The printing of the annual proceedings was referred to a committee of three, consisting of Bros. Loucks, Jones and Secretary Mills.

Bro. G. P. Loucks was appointed a committee of one to audit all bills.

The secretary was ordered to file a bond of one thousand dollars, subject to the approval of the Executive Committee.

On motion, a room was leased from Mr. J. H. Halloran, in the Boyd & Davis building, San Francisco, at a nominal rental, for the storage of old records and paraphernalia not needed by the secretary.

The secretary was authorized to receipt for all records and paraphernalia belonging to the State Grange.

The next meeting of the committee will be held in the office of the RURAL PRESS, 220 Market street, San Francisco. Adjourned.

Worthy Master A. P. Roache and wife expected to leave for the East Tuesday the 16th, en route to Syracuse, N. Y., to be in attendance at the coming session of the National Grange.

Bro. B. F. Walton, of the Executive Committee, started on the 13th for Chicago, expecting to remain East until the latter part of December. Bro. Walton combines business with pleasure and will visit the principal Eastern cities in the interest of the Sutter County Fruit Packing Co.

Bro. E. W. Davis, worthy overseer of the National Grange, left the first of the week for Syracuse, N. Y.

Address all communications for the California State Grange to
DON MILLS, Secretary,
Santa Rosa, Sonoma Co., Cal.

A Gala Day at San Antonio.

After long delay in the mails a letter has just been received giving an account of an entertainment and dance given by San Antonio Grange on the 22d of September.

The occasion was a joint celebration by Ceres and Pomona, these officers, Mrs. Pinkerton and Mrs. Davison, having entire charge of the exercises which were given in a barn that was beautifully decorated and provided with a temporary stage. A fine

programme of literary and musical numbers was performed, the supper was all that anybody could desire and the occasion was pronounced a complete success. The correspondent adds: "I am glad to see our members taking more interest again in grange matters."

Resolutions of Respect and Sympathy.

At its first meeting in October, Two Rock Grange adopted resolutions expressing the sorrow of the members for the death of the late Sister Allen Roseburgh.

At the same meeting, resolutions of sympathy with Brother and Sister Middaugh in the death of one of their little ones.

State Grange at Stockton.

It should have been stated last week that the next State Grange will be held at Stockton. The choice was made at Petaluma and was unanimous.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

Pelermo Progress: In inspecting the orange groves one has to remark on the stupendous new growth that the trees have made in the past year. On many of the trees the new growth is from three to seven feet and is of a deep, dark green, indicating vigor and health. The crop is now far enough advanced to show that it will be very heavy. Every tree is filled with large, fine fruit, now more than half grown. From indications there will undoubtedly be many carloads of fruit shipped from the colony this winter.

Oroville Register: E. A. Mount, who has had many years' experience in raising fruit of all kinds, is confident that the foothills here will grow a better wine grape than Napa valley. Some years ago he shipped a quantity of grapes from Red Bluff to Napa city, and one of the wine-makers there—a leading one, too—told him the grapes made a far better wine than any grapes he had ever crushed in Napa. There was more sugar in the grapes and no "mud" in the wine. The grapes, says Mr. Mount, were grown upon red, gravelly land, very similar to that about Thermelito and Palermo.

Colusa.

The Colusa Sun reports a talk with H. S. Cook of Glenn valley, one of the most prosperous farmers of Colusa county, as follows: Mr. Cook says that he makes more by selling his wheat early in the season. He sold his wheat for \$1.08 and is the only farmer in his vicinity who got that price, as the rest of them waited until they had to sell for 85 cents. Some have not sold yet. He says he paid up all his store bills and commenced a clean book. He thinks this idea of holding on to wheat is a wrong one. The farmer will get along better if he sells early, pays his debts, stops interest and other expenses. Mr. Cook says figures won't lie, and he keeps accurate accounts and finds that the farmer who sells early is far better off in the end.

Contra Costa.

Concord Sun: Low as the prices have ranged for fruit, even at the very lowest market quotations, growers in Contra Costa county find it a far more profitable industry than wheat-raising. From among the crop results we have selected the following as a fair average, showing what is done in our valleys without much hard labor: H. P. Penniman, whose orchard adjoins the Bencroft's, in Ygnacio valley, and between Concord and Walnut Creek, secured ten tons of dried apricots from 13 acres of trees, selling at 64 cents a pound for the lot; total, \$1300, or \$100 per acre. From 25 acres in fine prunes, not all bearing, and four-year-olds, he secured 31 tons of dried fruit, selling the lot at the rate of 7 cents per pound; total, \$4340, or \$173.60 per acre. The total for the 38 acres is \$5640, or \$148.42 per acre. There are numerous results in the county that have gone 30 and 50 per cent in yield above the result of this orchard.

There is now stored at Port Costa 200,000 gallons of wine belonging to the Stanford estate. This represents 5000 barrels. It was thought to be too hot at Vina for the proper storage and care of the product, and so this large amount was transported to Port Costa last spring and stored in a warehouse rented for that purpose.

Fresno.

Expositor: Montague Parsons, who has been working in the packing house of the Fresno Fruit-Packing Company, was compelled to go home to-day on account of having been poisoned by Paris green. The raisin-stemmer blows the dry dust containing the poison into the air, and this is breathed by persons working in the vicinity. This poison was put on the vines to kill the worms, and it seems that it has stuck to the grapes. It is reported that one of the Griffin & Skelly's men is dangerously ill from the effects of poison by Paris green.

Kings.

Journal: A better season for harvesting the raisin crop has never been experienced in Kings county since the raisin industry became a leading one here. There has been but one shower of rain since the first raisins went on the trays, and that was so slight that it did not lay the dust and no damage was done. The first crop of raisins will nearly all be in the sweat boxes by the end of this week, and the growers—those

who will harvest the second crop—have a good prospect ahead for drying it. Kings county raisins will this year be more than usually excellent in quality.

Henford Journal: At the regular monthly meeting of the Lincner Horticultural Society held yesterday afternoon the subject under discussion was wages for farm help. The subject was discussed by Messrs. Motheral, Irwin, Flora, Downing, Gray and others. It was concluded that farm wages should be reduced in order to enable horticulturists to conduct their business successfully.

Kern.

Bakersfield Californian: Mrs. R. A. Wyatt of Kernville has sent a collection of apples of the Gloria Mundi variety for exhibition at our fair, and afterward at the Midwinter Fair. They are truly kings among apples. The largest one weighs 27 ounces, and any number of them will weigh 14 pounds each.

Lake.

From the Lekeport Democrat we learn that one Leke county man has sold his prune at 14 cents on the trees.

T. J. Fenght of Scott's valley raised about one-sixth of the 200,000 pounds of fine Leke county hops this year from 18 acres, which averaged over 1800 to the acre. Seven acres of this field yielded 2300 to the acre.

Napa.

Register: Midwinter Fair headquarters show up in fine form. Commissioner Wood devotes much of his time to gathering and putting up fruit. Some 400 gellons are now in jars. It begins to look as though Napa would line up with the foremost counties in the State when the time comes for placing exhibits in the fair.

At Rutherford wine grapes bring about \$8 per ton. Many of the smaller wine-makers are selling their cooperage as well as their grapes this year for whatever they can get.

Orange.

Anaheim Gazette: J. A. Montgomery, secretary of the Rivera Walnut Growers' Association, has just returned from an extensive trip through the Eastern and Central States on official business. The association's crop is about half disposed of at 7½ cents for hard and 8½ cents for soft shells, and it is yet about three weeks before the first delivery. Certain parties in Los Angeles, who are working against the interests of the association, have been circulating among the Rivera people, trying to buy walnuts at 5½ to 6 cents per pound, and making misleading statements in order to induce growers to sell. But the members of the association are standing firmly together, and are more than ever impressed with the benefit of their organization.

Riverside.

Riverside Press: The walnut-growers of Riverside have sold about half of their crop at 7½ cents for hard and 8½ cents for soft shells, and it is about three weeks yet before the first delivery. The growers are organized in the reason good prices are obtained.

Perris New Era: The monthly report of the Riverside Horticultural Commissioners shows that out of 3749 trees in the district, 233 trees only were affected by black scale, and that in the younger orchards, numbering 22,000 trees, only 200 were affected by brown scale.

Sacramento.

Folsom Telegraph: Warden Aull has received a consignment of Mongolian pheasants, consisting of three cocks and six hens, and has prepared a suitable place to keep them. He expects to be able to raise 200 by next season. The pheasant is a prolific breeder, and it will not take long to populate this and adjacent counties with this magnificent game bird. A few years ago a couple of dozen were imported into Oregon. The legislature of that State protected them, and now they are so abundant that the hunters do not materially decrease them. Our last legislature also passed a stringent law, protecting them for three years. Any person found with one in his possession is subject to a heavy fine.

San Bernardino.

Chino Champion: The total beet harvest of the season to date is 33,400 tons, and there are probably about 8000 tons yet in the fields, carrying the harvest some days into November. The weather generally lately has been excellent for ripening beets, the air being quite dry, the nights cool and the days warm.

San Diego.

Escondido Advocate: Mr. J. C. Dickson of this valley has been known as such a careful and conscientious raisin-packer that at times it seemed to his neighbors that he was wasting time and money in his determination to have the raisins in each layer in the box fully as good as the top one. But Mr. Dickson, who stubbornly persisted in his exact methods, has unexpectedly been rewarded for his care and painstaking. He has just received a letter from Chicago buyers asking for his whole peck of raisins at 40 cents per box over and above the market price.

San Joaquin.

The Lodi Sentinel figures out an average profit of from \$200 to \$300 an acre from a tobacco crop. It says a contract has been made for 60,000 pounds of California cigar leaf at 50 cents per pound. It is supposed that an acre may be cultivated for \$50 a year, and that an average crop will range between 1000 and 1500 pounds. Taking the whole product together, the value will be about 20 cents a pound. Of course, calculations of this nature must be taken with some grains of allowance. Estimates rarely hold good one with another. But considerable reduction may be made on a crop

valued at \$200 an acre, the cost of which is not greater than \$50 per acre.

San Luis Obispo.

San Miguel Californian: Only about half the grain crop is now in the warehouse, but the other half is rapidly coming in that direction. There is, however, no shipment of grain to tide water—only eight carloads last week. Where usually, in past years, 50 to 75 carloads left daily, now the diminutive freight trains sneak out of our towns with an air of uncertainty as plainly as though the Southern Pacific was thinking about paying its back taxes. The warehouses are about filled to the rafters. So much for a bountiful harvest and a closed market.

Solano.

Dixon Tribune: The local grain dealers have been selling large quantities of wheat and barley to the tule farmers this fall, to be used for seeding their land. On account of last winter's overflow, they were unable to save enough grain for seed.

Sonoma.

Miles upon miles of fencing were destroyed, together with thousands of cords of stovewood and timber, by the forest fires in Sonoma valley ten days ago.

Phil G. Schluch, "Pomologist," writes to the **Sonoma Farmer:** The best time to prune is as soon as possible after the tree ceases to grow. We should be all done by the middle of February, with exceptions to the locality. As early as the latter part of September or October is none too soon to commence pruning. By early pruning, that is, before the sap is out of the branches, the pores of the wounds close up sooner and have a better chance to heal, provided the cut is made properly. The sooner an orchard is pruned and the brush burned before the heavy rains set in, so much more advantage there is in working the soil.

Republican: The vineyard acreage in the county is about 23,000, and a very large force is required to take care of the crop. At an average of three tons to the acre, the crop of the county would amount to 69,000 tons. The Chinese are not doing much work in the vineyards this year. White people are saving most of the grapes. In our trip Saturday we saw whole families—father, mother and children—picking grapes. They were living in tents and were having a good outdoor picnic. The general impression we get in regard to the grape crop of the county is that it is above the average, but the percentage of sugar is generally light, say 21 to 23. There has not been enough hot weather the past few weeks to give high percentage of saccharine matter, but some varieties are comparatively better than others.

Sonoma schools have been dismissed for two weeks to allow the pupils to make some money picking grapes. As money-making seems to be one of the important things of life, many think a few weeks practical schooling in that line does not come amiss. Then, too, the pupils help their neighbors in saving their crops.

Healdsburg Tribune: The grape crop has been far worse damaged by the rain than what was supposed a couple of weeks ago. On the lowlands especially is this the case, and a close estimate of the loss of the Zinfandels is two-thirds of the crop. Other varieties have been so badly damaged that even the distilleries cannot utilize them. The Missions were damaged to less extent than any other kind of wine grapes, and they constitute a large part of the grape product of Dry Creek and Alexander valleys.

Santa Rosa Democrat: Wine grapes can be quoted at about \$8. Considerable sales have been made at that figure for wineries in Napa and Sonoma. In the San Francisco market they are quoted higher; but, less freight and commissions, the home price is perhaps the best. The Santa Rosa wineries are not running to their full capacity, manufacturers contenting themselves with buying only what will meet the demands of their established trade. Canvet & Co., at Glen Ellen, are buying their grapes by the saccharine test, \$9 a ton for 22 per cent and over, and 50 cents for each degree less sugar shown. The average is about 20 degrees and the price \$8. Some lots, however, go below 20 degrees, and the price for them is not over \$7.50. Kohler & Frohling, at Windsor, are handling a very large amount of wine grapes, at least 5000 tons for the season. Their regular paying price is \$8 a ton. Other wineries in that section are also buying at about the same figure, and a large number of grapes have also been shipped abroad from that station.

Tulare.

C. J. Berry writes to the **Tulare Times:** It only pays to raise two qualities of fruit—good and extra fine. The most expensive fruit one can raise is a poor quality, and the most profitable is a good quality. A fruit-grower who raises big peaches never need be afraid of reproduction. The demand for such fruit is the supply, and always will. To do this successfully it is imperatively necessary that you thin the fruit on your trees. Do not experiment with novelties too much; let the nurserymen do that. Confine your orchard-planting to the established varieties.

The **Lemoore Leader** finds jack-rabbits less plentiful since the new county was created. It says: "Jack-rabbits are very scarce in this vicinity the present season. The dogs and hunters have made life too exciting for the pests. West of Kings river the rabbits may be found in great droves."

Ventura.

Venturian: F. E. Barnard states that he has shipped 75 cars of beans since the 15th of September. He expected to get off 40,000 bags between this and November 1st. He has been so busy that an assistant has been sent here for a

short time in the person of Mr. Stubbs, son of the Southern Pacific traffic manager.

Sutter.

Farmer: The hop crop at Nicolaus this year was very good, and besides the heavy yield the quality was extra. All the old vines bore heavily, and the new ones were also good. T. J. Mnlvany had several acres of new hops from which he secured over a ton to the acre, when usually half a ton to the acre is considered good for the first season. His total crop was 250 bales, a portion of which has been sold and shipped, and the balance stored. D. Redfield, who has just entered upon the business this season, had six tons net from six acres.

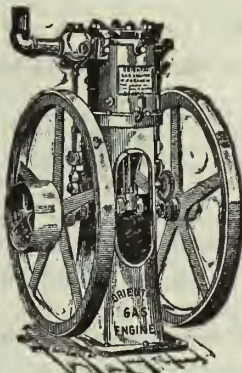
Farmer: The custom of our farmers of exchanging grain for seeding purposes should be more general, as constant cropping of the same variety of wheat on the same ground is not profitable. Some make it a point to secure their seed wheat or barley from adjoining counties, and thus make sure of new seed. Last week Wm. Gottwals and Conrad Schuler went to Cacheville, Yolo county, and secured several loads of a white Club wheat, which they will give a trial. The wheat is credited with having all the good qualities of Club, and the berry is of a similar grade as Chile or good milling wheat.

Yolo.

Cacheville Cor. **Woodland Democrat:** Farmers are taking things easy. There is not much for them to do until there has been rain enough to start them to re-plowing.

PIANOS A. L. BANCROFT & CO.
363 SUTTER ST., S. F.
KNAKE, HAINES, BUSH & GERTS, and others.
Cash or installments. Please call or correspond.
SAN FRANCISCO. **BANCROFT**

THE ORIENTAL GAS ENGINE



IS THE BEST, because it combines simplicity of construction with power and economy in space. It can be run with natural or manufactured gas or gasoline at a cost of 20 to 25 cents per horse power per day.

It can be used for pumping purposes, as well as for all purposes where a perfect engine is required, with the advantage of lessening the risk of explosions. No licensed engineer at a high salary needed to operate it. Send for circulars and prices if a good safe engine is what you need.

The Oriental Launch is Perfection.
M. A. GRAHAM,
Inventor and Manufacturer,
105 BEALE STREET, SAN FRANCISCO.



ROOFING

GUM ELASTIC ROOFING FELT costs only \$2 per 100 square feet. Makes a good roof for years, and any one can put it on.

GUM ELASTIC PAINT costs only 60 cents per gal. in bbl. lots or \$4.50 for 5 gal. tubs. Color red. Will stop leaks in tin or iron roofs that will last for years. TRY IT.

Gum Elastic Roofing Co.,

89 & 41 West Broadway, NEW YORK.

Local Agents Wanted.



The Educated Horse

picks out a 5/A horse blanket every time; he knows that it keeps him warmer and his master soon learns that it lasts longer and costs less than the other kinds. Made in 250 styles.

Ask your dealer for them.
WM. AYRES & SONS, Philadelphia.

C. H. EVANS & CO.,

(Successors to THOMSON & EVANS.)

110 and 112 Beale Street, S. F.
MACHINE WORKS,
Steam Pumps Steam Engines
And All Kinds of MACHINERY.



DEEP WELL PUMPS

STOCK SCALES

4 TON \$45.

U.S. STANDARD. FULLY WARRANTED.

Delivered at your R. R. Station and ample time for building and testing allowed before acceptance.

OSGOOD & THOMPSON, Binghamton, N. Y.

PORTABLE PLATFORM SCALES TRUCKS, ETC.

Twenty-five per cent cheaper than any other on the market. Send for Catalogue.

C. H. LINDEMANN, Agent,

126 KEARNY STREET, SAN FRANCISCO.

ACTUAL BUSINESS PRACTICE.

PACIFIC Business College,
320 POST ST. SAN FRANCISCO.
LIFE SCHOLARSHIPS, \$75.

Bookkeeping, Penmanship, Shortband, Typewriting, English Branches, etc. Graduates aided in getting positions. Send for circulars. T. A. ROBINSON, Pres.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,

Surveying, Architecture, Drawing and Assaying,
728 MARKET ST., SAN FRANCISCO, CAL.
Open All Year.

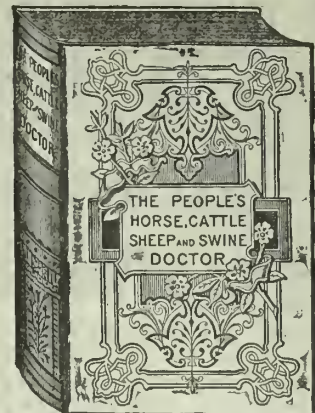
A. VAN DER NAILLEN, President.

Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. ESTABLISHED 1864. Send for circular.

DOUBLE Breech-Loader \$6.00
RIFLES \$2.00
WATCHES

GUNS
BICYCLES \$15
All kinds cheaper than elsewhere. Before you buy, send stamp for catalogue to POWELL & CLEMENT CO. 108 Main St., Cincinnati, O.

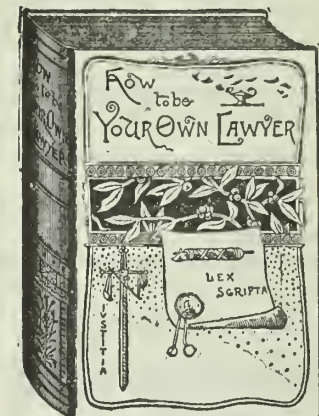
THE PEOPLE'S HORSE, CATTLE, SHEEP & SWINE DOCTOR



Containing in four parts clear and concise descriptions of the diseases of the respective animals, with the exact doses of medicines for each. A book on diseases of domestic animals, which should present a description of each disease and name the proper medicines for treatment in such condensed form as to be within the means of everybody, has long been recognized as a desideratum. This work covers the ground completely. The book embodies the best practice of the ablest Veterinarians in this country and Europe, and the information is arranged so as to be easily accessible—an important consideration. Each disease is first described, then follows the symptoms by which it may be recognized and lastly is given the proper remedies. The different medicines employed in all diseases are described and the doses required are given. The book is copiously illustrated, including engravings showing the shapes of horses' teeth at different ages. An elaborate index is a valuable feature. It will be sent to any address—postpaid—on receipt of the price, ONE DOLLAR.

Address THE DEWEY PUBLISHING CO.,
220 Market St., San Francisco, Cal.

\$1000 WORTH OF LAW FOR \$1.50.



"How to Be Your Own Lawyer" is the title of a book of over 600 pages, adapted for use in every State and Territory in the Union, and is by far the best and most complete work of the kind ever published. It gives instruction on all the most important law points which a Farmer, Mechanic, Merchant or anybody else would want to know about, and if carefully studied and kept at hand for consultation when needed will save any man, in the course of an ordinary business career, hundreds, if not thousands of dollars. It is a lawyer whose retaining fee (the price of the book, \$1.50) has to be paid but once in a lifetime. Plain and concise directions are given and forms furnished for the transaction of all kinds of business, and the preparation of every description of legal document in common use. A copy of this valuable work, handsomely bound in extra cloth, with ink slide-stamp, will be mailed to any address on receipt of \$1.50.

Address THE DEWEY PUBLISHING CO.,
220 Market St., San Francisco, Cal.

To Angora Goat Men.

MOHAIR We solicit consignments. Will give prompt personal attention to shipments, large or small. Have orders from manufacturers, therefore can promise full market prices and quick cash returns. Write us for quotations and shipping tags.

OILLEY & MARSHALL.

101 Gold St., N. Y.

W. R. PAYNE, Mgr. Mohair Dept.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cases and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.

THE American Bee Journal,

(Established 1861.)

IS Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample. \$1.00 BEE-BOOK FREE

AND W. YORK & CO. 54 Fifth Ave. Chicago, Ill.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos. A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St., San Francisco.

Seeds, Plants, Etc.

AN INVITATION

IS EXTENDED TO ALL INTERESTED TO VISIT THE SAUSAL FRUIT FARM DURING THE FRUITING SEASON, WHERE ALL VARIETIES ARE TESTED THAT ARE GROWN AT

NAPA VALLEY NURSERIES.

AN INSPECTION OF THE NURSERIES ALSO SOLICITED. CLEAN STOCK, UNIRRIGATED, PROPAGATED FROM BEARING TREES.

LEONARD COATES, NAPA, CAL.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrabalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond
Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

Santa Rosa

Nurseries.

AN IMMENSE AND WELL
ASSORTED STOCK.

TREES TRUE TO NAME.—Warranted clean and raised without irrigation.

PEARS AND PRUNES at about HALF USUAL PRICES till my surplus is sold.

Price List mailed free.

Address R. W. Bell, Santa Rosa, Cal.

GOLD DUST.

"Gold Dust Cling," says H. E. Van Daman, U. S. Pomologist, "is a yellow cling of medium size, round and regular in shape, and very firm in flesh. The color is very attractive, being dark yellow with a very red cheek. It bears heavily and carries to market with very little damage. Coming as it does before the main peach crop is gathered, it is about the first yellow cling of any special value and therefore finds a ready sale. Each year it gains in favor, but as it is a variety but recently originated the public know little of it. It is a very profitable variety." Price \$1 each, \$5 per half dozen. For sale by SACRAMENTO RIVER NURSERY COMPANY, Growers of HIGH-GRADE Fruit Trees, Walnut Grove, Sacramento County, California. Our Specialties—Genuine Tragedy Prunes, Olyman and Japan Plums—price 15 cents each; Sacramento River Bartlett's and Peaches—price 10 cents each.

Pepper's Nurseries.

ESTABLISHED IN 1859.

For Sale at Low Rates, a General Assortment of Hardy Deciduous Fruit Trees.

I do not buy trees to sell; what is offered is grown in my own grounds and free from scale bugs. No scale bugs of any kind to be found in the Nursery. No agents employed. Order direct from the nursery and procure your trees true to label. Order early, as early planting is the most successful with deciduous trees. Prices furnished on application.

Address W. H. PEPPER Petaluma, Cal.

McKEVITT'S EARLY.

The New Yellow Freestone Peach!

FIRST AND BEST OF EARLY YELLOW PEACHES.

RIPENS IMMEDIATELY AFTER THE ALEXANDER (White Cling), which is the earliest peach in market.

Fruit is round, of medium size, VERY HIGHLY COLORED, flesh firm and sweet. THIS PEACH HAS BEEN SUCCESSFULLY SHIPPED EAST FOR FIVE YEARS and is no new, untried variety.

Tree healthy, strong grower, and heavy bearer, never having missed a crop. A limited number of yearling trees for sale this season. Apply early before stock is exhausted.

FRANK B. McKEVITT, : : : : VACAVILLE, CAL.

ALMOND TREES!

California Paper-Shell, Nonpareil, Ne Plus Ultra and I. X. L.

A pamphlet on Almonds mailed free of charge on application. A large supply of the GOLDEN PEACH and FRENCH PRUNE. All kinds of leading fruit trees for sale. No charges made for baling trees.

PRICES: 4 to 6 ft. Trees, 80; 3 to 4 ft. Trees, 35c.

Address, PERCY W. TREAT.

Davisville Nurseries.....Concord, California.

OLIVE TREES

In Variety for Nurserymen,
Dealers and Planters.

Will also contract now to propagate Rooted Olive Cuttings for persons who wish to plant them in nursery spring of 1894.

OLIVE CULTURE IN CALIFORNIA,

Sixteen pages, mailed free.

Address:

JOHN S. CALKINS,
POMONA, LOS ANGELES COUNTY, CAL.

OLIVE TREES.

ALL KINDS OF

Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,
Pomona, Cal.

OAK LAWN NURSERY.

90,000 First-Class Fruit Trees
AT LOWEST PRICES.

MUST BE SOLD.

PLEASE WRITE AT ONCE.

HARRY E. HULBERT,
211 THIRD STREET,
SANTA ROSA. - - SONOMA CO., CAL.

B. F. GODFREY & CO.,
NURSEYMEN,

Davisville, Cal.

Write for Catalogue and Prices.

Trees, Vines and
Plants,

— FOR 1893 and 1894. —

Terms on Application.

ADDRESS, - - L. D. BUTT,
Penryn, Placer Co.....California.

CALIFORNIA FRUITS

AND HOW TO GROW THEM.
By Prof. Edward J. Wickson.
A practical, explicit and comprehensive book embodying the experience and methods of hundreds of successful growers, and constituting a trustworthy guide by which the inexperienced may successfully produce the fruits for which California is famous. 600 pages. Fully illustrated. Price \$3. Postpaid. Send for circular. DEWEY PUBLISHING CO. Publishers 220 Market Street, San Francisco, Cal.

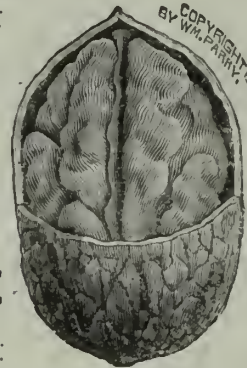
WE GIVE ESPECIAL ATTENTION TO

Fruit Trees! Deciduous Fruit Trees!

ALEXANDER & HAMMON'S

Rio Bonito Nurseries, Biggs, Butte Co., Cal.

KAGHAZI



PERSIAN

- SOFT SHELL -

- WALNUT! -

Our Stock of TREES and VINES is Most Complete
in EVERY CLASS of Fruits.

A LARGE STOCK OF THOMPSON'S SEEDLESS GRAPES.

SHIPPING, CANNING and DRYING Fruits of all kinds.

Best Assortment of RAISIN and TABLE GRAPES in California

Early Shipping Plums a Specialty.

SPECIAL PRICES FOR TREES IN LARGE QUANTITIES.

DURING the last three years, trees grown on the FEATHER RIVER BOTTOM LANDS, at RIO BONITO BUTTE COUNTY, have been much sought after, and the demand for them is increasing all over the State where they have been planted. Owing to the peculiar adaptability of the soil and climate of this section for growing nursery stock, the trees making a very large and well-furnished system of root growth, and maintaining a correspondingly strong and vigorous top, maturing the wood thoroughly, we are enabled to supply our patrons with the best of trees, healthy in every respect, entirely free from insect pests, and in perfect condition for transplanting.

If You Are Going To Plant Trees, It Will Pay You To Correspond With Us Before Purchasing.

ALEXANDER & HAMMON,
BIGGS, BUTTE COUNTY. CALIFORNIA.

STOCKTON NURSERIES,

ESTABLISHED 1853.

FRUIT TREES. FRUIT TREES.

GRAPE VINES.

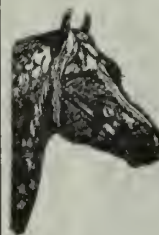
Also Fine Stock of Shade and Ornamental Trees, Shrubs, Palms, Roses and Carnations.

PLANTS IN GREAT VARIETY.

Correspondence Solicited.

E. C. CLOWES, STOCKTON, CAL.

ONLY 25 YEARS OLD
AND A GIANT!



THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,
SOLE PROPRIETORS.....STOCKTON, CAL.

FULDA'S PATENT.

DEC. 2ND 1890.

FULDA'S PATENT BAND AND HOOP COUPLIN.

The Best, Simplest and Cheapest Coupling for Tank Hoops. sufficient lap of hoop renders it unnecessary to rivet the hoop. It will fit the circle of any tank, regardless of size. Made in sizes to fit any width of iron.

Prices, \$1.00 to \$1.50 per Pair. For sale to the trade. Liberal discount in quantities.

FULDA BROTHERS,
30 TO 40 SPEAR ST., SAN FRANCISCO,

MANUFACTURERS OF MINING AND WATER TANK.
Send for Catalogue.

IN EXCHANGE,
5 KEARNY STREET, SAN FRANCISCO.

Cure for Snake Bites.

E. F. De Celis of Mexico writes the following to the *Scientific American*: From time to time I see in the papers recipes for curing the bites of poisonous snakes, recommended by medical and other people. In California, where I come from, we have occasion at times to treat animals for the bite of the deadly rattlesnake. I have seen two kinds of herbs used; one is called in Spanish "la golondrina" (the swallow), growing in the most arid plains; the other is the rattlesnake weed. Both are very effective, but it is not every one who can tell them, even when at hand. What I know from my own experience to be an infallible cure is the gall of the snake itself. One drop of it on the wound will effect a cure, even when inflammation is far advanced. I have seen a dog treated whose head had already swollen to twice its natural size, and it cured him almost instantaneously. The gall may be preserved in alcohol, or even dried, requiring in the latter case only to be moistened; even saliva alone between two stones will do. I have seen a case of this kind. If preserved in alcohol, of course, the whole bag of the gall is put into the liquid entire. If true of the rattlesnake, and, as I said before, I know it is infallible from my own experience, it is probably true of all other poisonous snakes, and might it not be true in the case of the rabies that the gall of the animal would cure the bite?

When at college, in London, the teacher in French, who had been a Spahis in Algiers, assured me that the Arabs cured the sting of the scorpion by mashing the scorpion and applying it as a poultice on the wound. This I have never seen tried, however.

Hygienic Treatment of Sprains.

Sprains are so common that their treatment should be well understood. While all cases are not to be treated exactly alike, yet the general principles are the same in most instances, says the *Journal of Hygiene*. The method we can recommend as most efficacious is somewhat as follows: The injured part or joint is immersed in very warm water as soon as may be after the injury, in order to dilate the superficial vessels for a few minutes. After this, massage should be practiced, above, below and around the injured part, then gradually approached and a very gentle stroking is applied to it. After that, a little more vigorous friction is practiced. Insensibility is thus gradually produced. When partially obtained, a more or less energetic kneading is practiced, according to the varying degree of sensibility experienced by the patient, but pain should not be caused. To the massaged part is finally applied a compressive bandage, with wadding, which is wrapped in a flannel or linen band. If the sprain occurs in the inferior limbs, the practice of avoiding movements for a shorter or longer period is not advised, but the patient may use his limb to walk as soon as he can do so without feeling great pain. Walking promotes the venal and the lymphatic circulations by the muscular contractions, but if much pain is caused it should not be long continued.

Enormous Heat of the Sun.

It has been calculated that the heat given off by the sun in a second of time would melt a pillar of ice 1590 square miles at its base and 194,626 miles in height. If this heat is produced by fuel added from outside of the sun, there must be added every second of time a quantity of fuel capable of melting this enormous quantity of ice, and this would require a quantity of coal of almost equal mass. If iron, copper or stones were added, we cannot conceive how this would generate heat, for, if added to terrestrial fires, they absorb heat instead of producing it. Meteors are of this nature, containing a large percentage of iron, and being composed of what we would term non-combustible materials.

Not "Monkey Wrench."

Many persons wonder why the monkey wrench received such a name and imagine it must have a connection in some remote way with the animal from which its curious designation seems to be derived. In fact, its name is not monkey wrench at all, this being a corruption of the title originally given it.

It was invented by Charles Monckey of Williamsburg, N. Y., who sold his patent to a firm who undertook to manufacture and put it on the market. In honor of the inventor they called it Monck's wrench, but both they and he were soon much disgusted to find it known as a monkey wrench.

SOLSVILLE MIRACLE.

RESTORATION OF PHILANDER HYDE FROM PARALYSIS.

Helpless and Bed-Ridden—His Recovery from this Pitiable Condition. A Remarkable Narrative.

(From the *Syracuse Standard*.)

During the past few months there have appeared in the columns of the *Standard* the particulars of a number of cures so remarkable as to justify the term miraculous. These cases were investigated and vouched for by the *Albany Journal*, the *Detroit News*, *Albany Express*, and other papers whose reputation is a guarantee that the facts were as stated. That the term miraculous was justified will be admitted when it is remembered that in each of the cases referred to the sufferer had been pronounced incurable by leading physicians; at least one of the cases was treated by men whose reputation has placed them among the leaders of the world's medical scientists, but without avail, and the patient was sent to his home with the verdict that only death could intervene to relieve his sufferings. When some months later the restoration to health and strength of the former sufferer was announced it is little wonder that the case created a profound sensation throughout the country. Recently the following letter, which indicated an equally remarkable cure, came to the notice of the *Standard*:

SOLSVILLE, MADISON CO., N. Y., June 25, 1892.

Five weeks ago father, Philander Hyde, was very low and not expected to live but a short time. He was in such agony that we had to give him morphine to relieve the terrible pain from which he was suffering. He heard of Dr. Williams' Pink Pills and sent for six boxes; he has taken four, and what a blessing they have been! He is no longer confined to his bed, but is able to get up without assistance and with the aid only of a cane to walk about the house and all around out of doors. He has a good hearty appetite, his food agrees with him, the pain in the back from which he suffered so long and so terribly has left him. He has no more creeping chills and he appears and says he feels like a new man. The doctors had pronounced his disease creeping paralysis and said he could not be cured. How glad we are that we heard about these wonderful Pink Pills, and how thankful we are for what they have done for father. Indeed they have done wonders, yes, even a miracle for him.

Respectfully yours,

MRS. WILLIAM JOHNSON.

The letter seemed worthy of investigation, and to the *Standard's* representative Mr. Hyde said: "I will be 70 in September. I was born in Brookfield, Madison county, where all my life was spent until recently, when, becoming helpless, I came to live with my daughter here. My life occupation has been that of a farmer. I was always well and rugged until two years ago last winter, when I had the grip. When it left me I had a sensation of numbness in my legs, which gradually grew to be stiff at the joints and very painful. I felt the stiffness in my feet first, and the pain and the stiffness extended to my knees and to my hip joints, and to the bowels and stomach and prevented digestion. To move the bowels I was compelled to take great quantities of castor oil.

"While I was in this condition, cold feelings would begin in my feet and streak up my legs to my back, and would follow the whole length of my back-bone. I could not sleep, I had no appetite, I became helpless, and life was such a burden that I prayed for death.

"While in this condition I was treated by a number of prominent physicians. They did me no good. I soon became perfectly helpless and lost all power of motion even in my bed."

"When we brought father home," said Mr. and Mrs. Johnson, "he had to be carried all the way in a bed. The doctors said they could only relieve the pain, and for the purpose he took a pint of whisky a day for three months and morphine in great quantities.

"When he began taking Pink Pills we stopped giving him morphine or any other medicine, and cut off all stimulants. In ten days after father began taking the pills he could get out of bed and walk without assistance, and has continued to improve until now he walks about the house and the streets by the aid of a cane only."

"Yes," said Mr. Hyde, "and the pain has gone out of my back and the numbness out of my legs. I have no more chills, my digestion is good, and I have an excellent appetite." And then, after a pause, "But, ah me, I am an old man; I have seen my best days, and cannot hope to recover my old vigor as a younger man might, but I am so thankful to have the use of my limbs and to be relieved of those dreadful pains."

Mr. Hyde has continued to take the pills regularly since he began their use, and was on his tenth box at the time he told his story.

Others in Solville are taking Pink Pills, notably the mother of Abel Curtis, who is using them with satisfactory effect for rheumatism, and Mrs. Lippitt, wife of ex-Senator Lippitt, is using them with much benefit for nervous debility.

Pink Pills restore pale people and sallow complexions to the glow of health, and are a specific for all the troubles peculiar to the female sex. In men they effect a radical cure in all cases arising from mental worry, overwork, or excesses of whatever nature. They are manufactured by the Dr. Williams' Medicine Company, Schenectady, N. Y., and Brockville, Ont. They are sold in boxes (never in loose form, by the dozen or hundred, and the public is cautioned against numerous imitations sold in this shape) at 50 cents a box or six boxes for \$2.50, and may be had of all druggists or direct by mail from the Dr. Williams' Medicine Company, from either address.

The bluebottle fly discharges a not unimportant duty as a natural scavenger. Its larvæ of maggots must devour large quantities of putrefying and decaying matter, and must, therefore, remove from the earth's surface much material offensive, if not disease-producing, in its tendencies.

Breeder's Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

JERSEYS AND HOLSTEINS, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. William Niles & Co., Los Angeles, Cal., Breeders and Exporters. Established 1876.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. E. Collier.

PETER SAKS & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS—The best A. J. C. C. Registered Prize Herd is owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

WM. NILES & CO., Los Angeles, Cal., Breeders of nearly all varieties of Poultry, Dairy Cattle and Hogs.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

R. H. CRANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

SWINE.

H. J. PHILPOTT, Niles, Cal., Importer and breeder of Tuscumbia and other choice strains of Registered Poland-China Hogs.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock. New Prices.

CHAS. A. STOWE, Stockton, Cal., (Box 239). Breeder of Berkshire and Poland-China Hogs; Milking Strain of Durham Cattle, and M. R. Turkeys. Write for Prices.

BERKSHIRES & POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. William Niles & Co., Los Angeles, Cal. Established 1876.

P. H. MURPHY, Perkins, Sac. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.



OXFORD DOWN SHEEP FOR THE PACIFIC COAST.

W. A. SHAFOR, Middletown, Ohio, Largest American Importer of O. D. Sheep.

Is prepared to quote prices on the best stock of Oxford Down Sheep to be had in England. Parties wanting first-class stock should write for particulars and induce their neighbors to join them. Import will arrive about August 1st. Write at once.

FRANK A. BRUSH, SANTA ROSA, CAL. (Care Santa Rosa National Bank.)

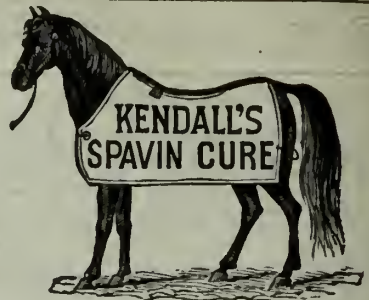
Wants you all to write to him for prices on Young Stock.

MINORCAs: White and Black.

LEGHORNS: White, Brown, Black, Buff. B. P. ROCKS.

Mention the age desired and when shipped. Circular Free.

HAS DONE IT for others, will do it for you. Our mustache in 10 days! Full beard in 20. Never known to fail. Sample package, postpaid, 15c., two for 25c., one dozen, \$1.00. Agents wanted everywhere. Address WESSON MFG. CO., 6 & 8 St., Providence, R. I.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STAR, LANE CO., OREGON, Feb. 8th, 1892.

DR. B. J. KENDALL CO.,

Dear Sirs:—I have used your KENDALL'S SPAVIN CURE for the last twelve years never being without it but a few weeks in that time and I have made several wonderful cures with it. I cured a Curb of long standing. Then I had a four year old colt badly sweened; tried every thing without any benefit, so I tried your liniment, and in a few weeks he was well and his shoulder filled up all right, and the other, a four year old that had a Thoroughpin and Blood Spavin on the same joint, and to-day no one can tell which leg it was on. These statements can be proven, if necessary; the four year olds are now seven and can be seen any day at Cottage Grove, Or.

—Price \$1.00 per bottle.

DR. B. J. KENDALL CO.,

Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular

E. FOUGERA & CO.,

30 North William Street, New York.



In These Dull Times

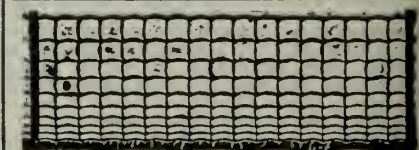
You Can Largely Increase

Your Income by buying an Incubator and engaging in the chicken business. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember, the best is the cheapest. PACIFIC INCUBATOR CO. 1317 Castro St., Oakland, Cal.



—THE—HALSTED INCUBATOR

COMPANY, 1813 Myrtle Street, Oakland, Cal. Send Stamp for Circular.



Elasticity

Having been proved indispensable in a good wire fence, our competitors are drawing on their imagination for a supply. We have a simple test, which will prove that ours has more elasticity than all others combined.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Treatise on the Horse and His Diseases.

By B. J. KENDALL, M. D.



35 Fine Engravings showing the positions and actions of sick horses. Gives the cause, symptoms and best treatment of diseases. Has a table giving the doses, effects and antidotes of all the principal medicines used for the horse, and a few pages on the action and uses of medicines. Rules for telling the age of a horse, with a fine engraving showing the appearance

of the teeth at each year. It is printed on fine paper and has nearly 100 pages, 7x5 inches. Price, only 50 cents, or five for \$1, on receipt of which we will send by mail to any address DEWEY PUBLISHING CO., 220 Market Street, San Francisco

Poultry and Stock Book

Niles's new manual and reference book on subjects connected with successful Poultry and Stock Raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated with handsome, life-like illustrations of the different varieties of Poultry and Live-Stock. Price, postpaid 50 cts. Address PACIFIC RURAL PRESS Office, San Francisco, Cal.

A Remarkable Dam.

One of the most remarkable dams in the world for height and construction is that by which the Vyrnwy river, northern Wales, is enabled to supply water to the city of Liverpool, some 70 miles distant. In building this dam a great trench was first excavated across the valley for a length of 1100 feet, a width of 120 and a maximum depth of 60. The masonry was started in this trench; it consists of immense irregular blocks of slate, wedged together and thoroughly bedded in Portland cement mortar, the faces being formed of cut-stone blocks, fitted together with great care, the greatest height of the dam being 161 feet.

Its most remarkable feature is the lack of any channel to carry off floods, the surplus in the lake flowing down the front of the dam, which is curved to permit as free a descent as possible and prevent the formation of eddies at the bottom. The lake formed by this dam covers an area $4\frac{3}{4}$ miles long, from one-quarter to five-eighths of a mile wide and holds largely over 12,000,000 gallons. The aqueduct leading from the intake tower to the distributing reservoir, about two miles from the city, is 68 miles long, and consists principally of a large cast iron pipe line from 39 to 42 inches in diameter. There are a number of reservoirs and tanks along the lines, and at one place is a great filtering plant.

Raw Silk from Abroad.

The value of the raw silk imported into the country annually is given as \$25,000,000. This is used in the manufacture of ribbons, fabrics, etc., in four States, one of which is Pennsylvania, which perhaps uses two-fifths of the whole—or to the value of \$10,000,000. The value of the silk manufactures of Pennsylvania, as given by Hon. Lorin Blodgett, than whom there is no better authority, is \$79,000,000. As 65 to 70 per cent of the cost of manufacture in this industry consists in the wages paid to labor, here we have an illustration of the number of families that are made comfortable by remunerative employment by an industry, the raw material for which comes from the other side of the world.

Delicious Mixed Pickles.

Let five dozen small cucumbers stand in strong brine for three days, writes Eliza R. Parker in the *Ladies' Home Journal*. Wash through cold water several times. Put half a gallon of strong vinegar in a kettle, with one ounce of mustard seed, one of juniper berries, one of celery seed, half a dozen pods of green peppers, two pounds of sugar, half dozen small onions and a lump of alum. Let come to a boil, and pour over the pickles for three mornings, heating the vinegar each time. Put the pickles in wide-mouthed bottles and seal.

The Business Continues.

Owing to the death of Mr. H. J. Philpott, of Niles, Cal., importer and breeder of Poland-China Swine, his son, Mr. M. G. Philpott, will henceforward manage the business. Inasmuch as Mr. M. G. Philpott has practically been manager for some time past, the business will proceed the same as ever, and the same extra-fine quality of stock will be bred. He intends replenishing the herd occasionally from the best Eastern herds, and will have a fine boar shipped out this fall.

Mr. Philpott has on hand at present some very fine pigs, which he offers at special prices to meet the everywhere prevailing stringency of the money market.

SPECIAL ANNOUNCEMENT.

We have made arrangements with Dr. B. J. Kendall Co., publishers of "A Treatise on the Horse and his Diseases," which will enable all our subscribers to obtain a copy of that valuable work free by sending their address (enclosing a two-cent stamp for mailing same) to Dr. B. J. KENDALL CO., ENOSBURGH FALLS, VT. This book is now recognized as standard authority upon all diseases of the horse, as its phenomenal sale attests, over four million copies having been sold in the past ten years, a sale never before reached by any publication in the same period of time. We feel confident that our patrons will appreciate the work, and be glad to avail themselves of this opportunity of obtaining a valuable book.

It is necessary that you mention this paper in sending for the "Treatise." This offer will remain open for only a short time.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 430 California street San Francisco.

An Unusual Opportunity.

Every reader of the PACIFIC RURAL PRESS has a photograph of himself or herself or some friend that, reproduced with life-like accuracy and handsomely framed, would be of pleasant value.

The beauty and permanence of crayon portraits commend them to all, but hitherto the high price has deterred many. People naturally dislike to pay from ten to fifteen dollars for even a good portrait.

The PACIFIC RURAL PRESS has made such arrangements that any of its subscribers can secure a handsome crayon portrait for a trifling outlay. The price is set at \$2, and is put at that extraordinarily low figure to subscribers only. It is an unusual offer. The portrait will be gotten up in excellent style, will be 11 inches by 14, will be finely framed, the frame being 24 inches by 27, will have glass, etc., complete. The \$2 also includes boxing and packing—in short, a complete life-like portrait for two dollars, all ready to hang.

Any one sending \$2.40 for 12 mos. in advance or \$3 for 15 mos. in advance for a new subscription for the PACIFIC RURAL PRESS, or, if a subscriber already, either of these amounts for renewal, and two dollars additional, with the photograph they wish enlarged, will receive in return a finely finished portrait in crayon, fit to appear anywhere.

The PACIFIC RURAL PRESS makes no profit in this; it is a gift to our subscribers, present and prospective, and is an unusual opportunity to get a good picture at a nominal cost. This offer holds good for a short time only. Send the photograph you wish enlarged to this office, 220 Market street, giving postoffice directions plainly. The two dollars is for the portrait complete in this city. The freight charges are to be paid by the recipients of the portraits. Where several send from one postoffice address, those charges would be very light. Any size or style photograph will do to send, but of course much of the beauty of the portrait will depend upon the clearness of outline of the photograph from which the crayon portrait is made.

Delicate Rain Gauge.

Professor Marvin, of the United States Weather Bureau, at Washington, has invented a rain gauge so delicate that it will measure the one-thousandth part of an inch of moisture. It is self-registering, moreover. Chief Harrington has distributed several of these instruments among observers in various parts of the country.

Hay Pressing.

If you are interested in pressing hay write Truman, Hooker & Co., San Francisco. They will save you money.

CALIFORNIA FRUITS

—AND—

HOW TO GROW THEM.

A MANUAL OF METHODS WHICH HAVE YIELDED GREATEST SUCCESS; WITH LISTS OF VARIETIES BEST ADAPTED TO THE DIFFERENT DISTRICTS OF THE STATE.

PRACTICAL, EXPLICIT, COMPREHENSIVE.

Embodying the Experience and Methods of Hundreds of Successful Growers, and Constituting a Trustworthy Guide by which the Inexperienced may Successfully Produce the Fruits for which California is Famous.

SECOND EDITION, REVISED AND ENLARGED.

BY EDWARD J. WICKSON, A. M.
Assoc. Prof. Agriculture, Horticulture and Entomology,
University of California; Horticultural Editor
PACIFIC RURAL PRESS, San Francisco; Sec'y
California State Horticultural Society;
Pres. California State Floral Society; Etc.

Large Octavo—599 Pages, Fully Illustrated.
PRICE \$3, POSTPAID.

FOR SALE BY

THE DEWEY PUBLISHING CO.,
PUBLISHERS PACIFIC RURAL PRESS,
220 Market Street, Elevator, 12 Front Street
SAN FRANCISCO, CAL.

HEALD'S

BUSINESS COLLEGE.

24 POST STREET.....SAN FRANCISCO.
FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Book keeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR. E. P. HEALD, Pres. O. S. HALEY, Sec.

GRANGERS' BUSINESS ASSOCIATION,
GENERAL COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

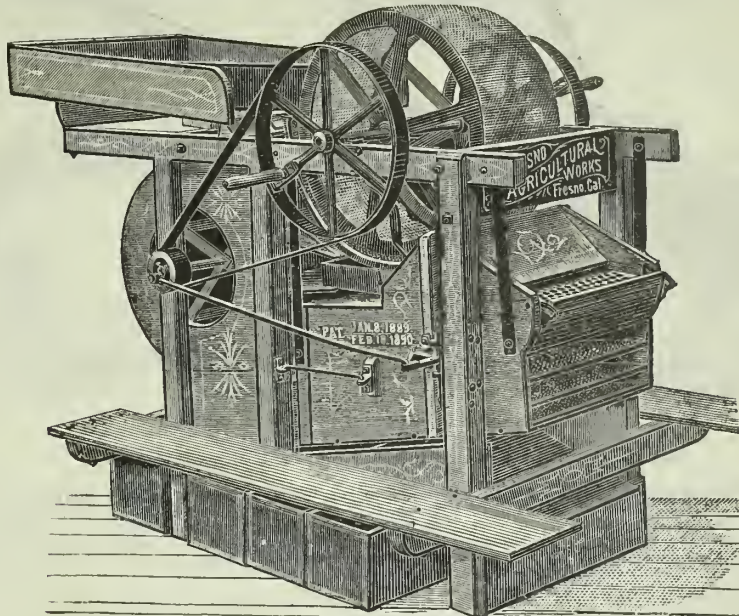
Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

T. R. BALLINGER, Grain Salesman.



SEND FOR CATALOGUE OF RAISIN MACHINERY TO
FRESNO AGRICULTURAL W'KS, FRESNO, CAL.

DEWEY & CO.
AMERICAN AND FOREIGN PATENT SOLICITORS
ESTABLISHED 1860.
OFFICE OF THE "Mining and Scientific Press" Pacific Rural Press
No 220 Market St.
TAKE ELEVATOR NO 12 FRONT ST.
SAN FRANCISCO, CAL.

FRANCIS SMITH & CO.,

MANUFACTURER OF



SHEET IRON & STEEL PIPE

FOR TOWN WATER WORKS.

Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes.
NO. 130 BEALE STREET, SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.

THE
RAISIN INDUSTRY.

A PRACTICAL TREATISE ON THE RAISIN GRAPES,
THEIR HISTORY, CULTURE AND CURING.

By GUSTAV EISEN.

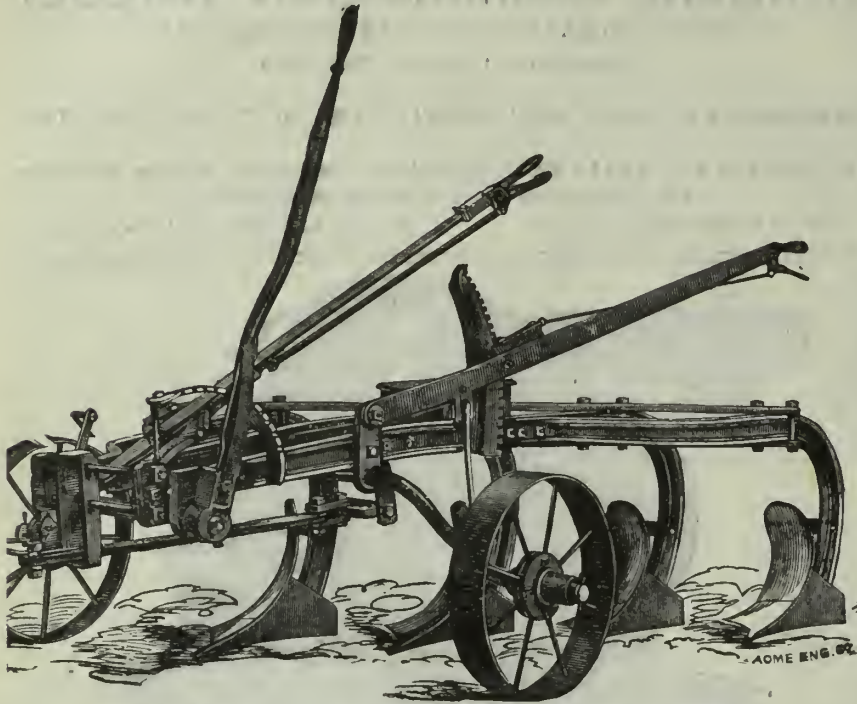
This is the Standard Work on the Raisin Industry in California. It has been approved by Prof. Hilgard, Prof. Wickson, Mr. Chas. A. Wetmore and a multitude of Practical Raisin Growers.

Sold only by the DEWEY PUBLISHING CO. or its Agents at the uniform price of \$3.00, postage prepaid. Orders should be addressed:

THE DEWEY PUBLISHING CO.,

220 Market St., San Francisco.

PEERLESS STEEL FRAME GANG PLOWS. 50% SAVED.



Manufactured by the Benicia Agricultural Works, Benicia.

THE PEERLESS has Stronger Beams, Stronger Wheels, Stronger Axles, a Better System of Levers and a Better Draft Attachment than any similar Plow in America. We furnish it with Steel or Chilled Iron Bottoms, adapted to every soil and condition on the Coast. We keep in stock Chilled Iron Shares for the Peerless Gangs. They are interchangeable with the Steel Shares and are in demand in many localities. When so ordered, we furnish our celebrated "Adobe Bottoms" on the Peerless Gang Plows. The Peerless has been Victorious in Every Field Contest.

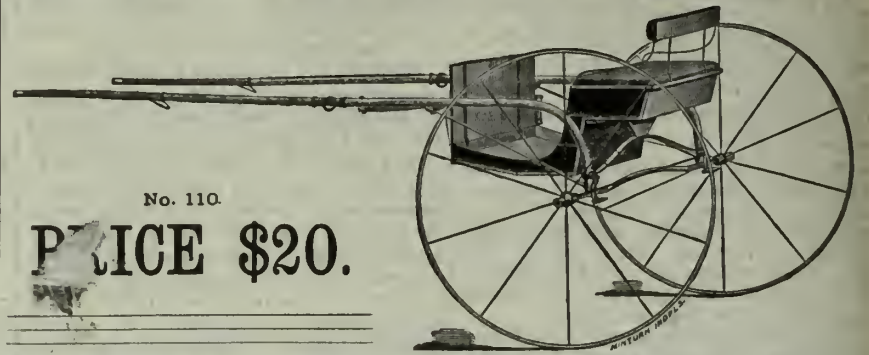
GANG PLOWS—Our line is the largest and best in the State. It includes the Eureka, Peerless, Granger and Reversible Mold Gangs, in all sizes.

SINGLE PLOWS—We furnish the Benicia, Star, Gale, Princess and a score of others. We guarantee their quality.

HARROWS—We have all the various styles, from a common Drag to a Steel Frame Spring Tooth Lever Harrow. Also the Climax and Tiger Disc Harrows.

SEEDERS—Our stock is not equalled; before purchasing some other kind examine our Gem, with Armstrong's patent force feed, Gorham, Triumph, Monarch, Climax and others, WRITE FOR OUR NO. 27 LATEST SPECIAL 140-PAGE CATALOGUE of Plows, Harrows, Seeders, Cultivators, etc.

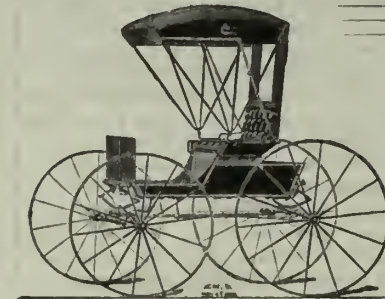
BAKER & HAMILTON,
SAN FRANCISCO AND SACRAMENTO.



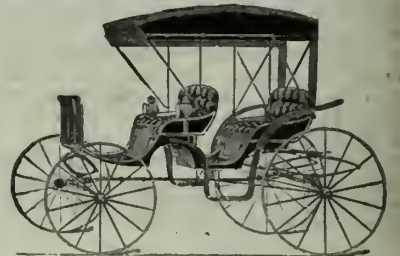
No. 110.

PRICE \$20.

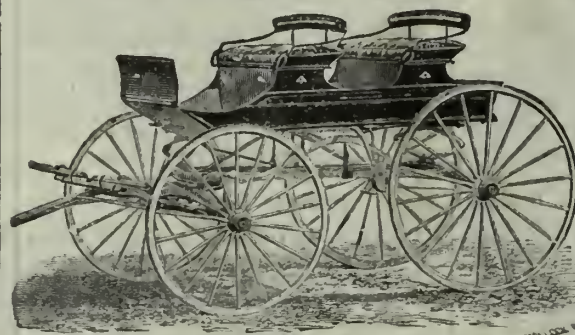
HARNESS, \$7. BUGGIES, \$75. SURREYS, \$130.



No. 60. Price \$80.



No. 201. Price \$195.



No. 10 Cal. 4 Spring,
1 1/2 Concord Axle,
1 1/2 Steel Tires,

This wagon is made here by us of Select Timber.

PRICE, \$110.
TOP, Extra, \$30.

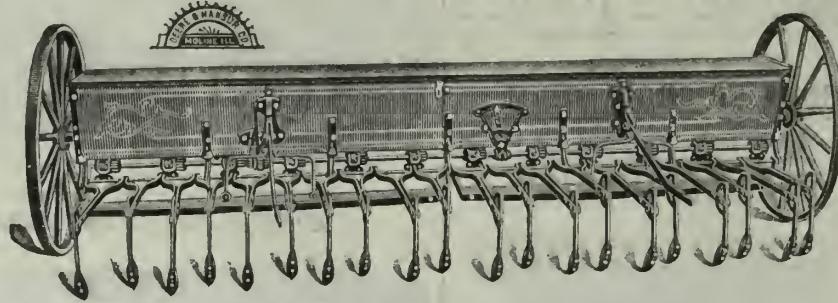
WRITE FOR
CATALOGUE
OR CALL.

CALIFORNIA WAGON & CARRIAGE CO.,

36 1/2 to 44 1/2 FREMONT STREET

SAN FRANCISCO, CAL.

FIRST : CLASS : SEEDERS!

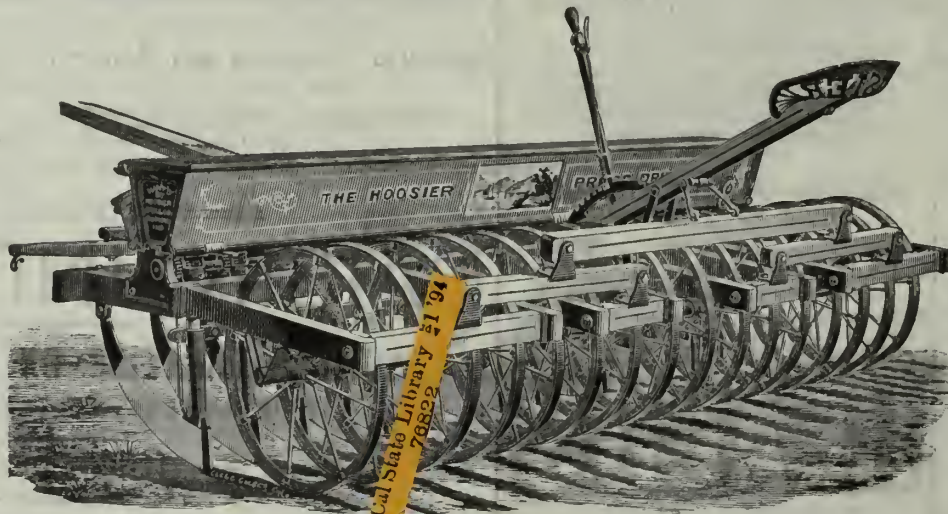


"DEERE" FORCE-FEED SEEDER.

THEY

... ARE ...

GOOD!



IMPROVED "HOOSIER" RUNNER PRESS DRILL.

WRITE FOR CIRCULARS AND PRICES!

DEERE IMPLEMENT CO., 305 & 307 Market St., San Francisco.

THEY

... ARE ...

CHEAP

PACIFIC RURAL PRESS

Vol. XLVI. No. 18.

SAN FRANCISCO, SATURDAY, OCTOBER 28, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market Street.

Pacific Coast Tobacco.

There is noticeable a decided revival of interest in the growing of tobacco on this coast. We discern this in the constant stream of inquiries addressed to us on the subject. Probably this is due to the stimulated interest in something else to grow, in view of the low prices which have prevailed for our usual field crops and for some fruit products as well. To find something which will better repay productive effort is eminently desirable and should always be present in the mind of the thinking agriculturist; at the same time there should not be too great a disposition to rush after untried products. California has something of a reputation for versatility in this respect, and many disappointments have resulted from undue devotion to novelties concerning which wrong conception of local adaptations or exaggerated notions of market demand have prevailed.

No doubt tobacco comes prominently forward at this time because of the very interesting statements of the pioneer grower, Mr. J. D. Culp of San Felipe, whose essay was published in the *RURAL PRESS* of September 2nd. Mr. Culp knows of what he writes and his opinion is entitled to full weight, but the one who is inclined to follow him must remember that Mr. Culp has had something like thirty-four years of experience with tobacco in California, and he has paid dearly for some of his experience, as have others who shared his enterprise. It is of great value to have his confidence and encouragement, and to know that he can now command a very satisfactory market for his product. What he has done others can do, but they cannot expect to learn in a year what he has learned in a third of a century, nor can he, though his disposition be most generous, communicate to others in a letter or at a sitting what he knows on the subject.

It is true that many of the old difficulties have been overcome. One of these is the value accorded to California tobacco by experts and manufacturers. Twenty years ago our leaf had the most unenviable reputation, although at the Centennial, in 1876, Mr. Culp secured an honorable reward for his exhibit. It was reported at the time that California tobacco was in such ill-repute that it could not be sold at the East in the redwood cases in which it was shipped, but had to be put in other packages so that purchasers could not get from the box a clue as to its origin. All this seems to have been swept away through Mr. Culp's persistent marketing, and it is said that he has produced, during his struggle with the problem, nearly five million pounds of tobacco. The grower who begins now enjoys a vast advantage in this respect, for if he can produce as good a sample as Mr. Culp does, the market is ready for it.

The question is, can the ordinary grower who under-

stands the crop, do this? Probably he cannot at first. All old Eastern and Southern tobacco-growers who have tried the crop here, agree that growing tobacco here is an altogether different thing from growing it in the old States, and that even experienced men have much to unlearn before they can succeed here. If this be so, the raw beginner can well conclude that he has a problem before him. The proper handling of the crop during growth is somewhat different from Eastern practices, and when it comes to curing, a radical difference prevails. To produce acceptable cured tobacco in the dry air of a California summer requires different handling from that given to curing in the humid summer air of the East and South. Various processes have been advanced for doing this work, and, if we are not mistaken, Mr. Culp has a patented process which he devised after years of experimenting.

small scale. The seed can be secured from dealers, and if sown in February in a hot bed, or at least in a "frame" which affords protection from frost, the plants will be of suitable size for planting out in May when the frost danger is over. About 6000 plants are usually set to the acre, and they are transplanted from the hot bed or frame as cabbage or tomato plants usually are. Topping and suckering must be carefully looked after, and the plants must be constantly cultivated to retain moisture. Irrigation will also be required where other summer crops require it.

It now seems likely that northern and southern local spirit will meet in conflict at the Midwinter Fair. Possibly two buildings will be erected by groups of counties from each end of the State. It is reported that the southern California building will be in Oriental style, 100 feet square and over 60 feet high. In every way an effort will be made to show the tropical character of the counties it is intended to represent. There will be palms in abundance, and within a great glass inclosure reaching to the height of the first story the building will stand. Plants of the tropics will be there in abundance, but the palm will be given the central place of prominence. The magnificent palm sent to the World's Fair will be returned, and will be set up in the rotunda of the building. It seems too bad to vex that poor palm any more with overland travels, but it is perhaps as kind to return



TOBACCO PLANTATION AT THE NEVADA AGRICULTURAL EXPERIMENT STATION.

Just how much of this process is now available to the public we do not know.

The beginner may take it for granted that tobacco will grow well here. It would be an ungrateful plant that did not recognize the climatic advantages which nearly all other plants put to such good account. There has been, however, evidence from time to time that even where the plant grows well, as for example upon some of the heavier soils of the State, there is a rankness of flavor which is intolerable to the smoker. On the lighter soils this does not necessarily occur and the long summer gives a possibility of two crops in the year, which cannot be had in the land of late and early frosts east of the Rocky mountains. Aside from the large acreage in the upper part of the Santa Clara valley there are plantations in the San Joaquin and in southern California which are favorably regarded by their owners.

The engraving on this page shows that the tobacco plant grows thriftily on the coast outside of California. The view is of a plat of tobacco on the grounds of the Nevada Experiment Station at Reno. It is, of course, a show plot and not a commercial plantation, for it has apparently not been topped, but shows the plant in its natural growth.

Those who wish to try this crop should begin on a

it to die on its native soil as to perish in the wreck at Jackson Park. The northern citrus belt committee has not developed its plans yet, but it is at work and courageous.

We read in a Chicago exchange that out of 21 varieties of Oregon wheat exhibited at the World's Fair, Supt. W. H. Savage of the agricultural department says the judges found that 19 averaged 62 pounds to the bushel, one weighed 63½ pounds and another (spring wheat) went 58 pounds. The judges said that not one-half the wheat exhibited by the other States was holding up to the standard weight—60 pounds. One sample of Oregon oats went 50 pounds and another went 51½. This is certainly a grand showing when it is remembered that the standard weight for oats is 36 pounds. Oregon barley went 51 pounds on the scales, being three pounds above the standard weight. Now we hope our Chicago exchange will get some statistics about the California cereals on exhibition.

THERE has been a looting of the Stockton warehouses, and it is said that many tons of wheat have been carried away and sold to a local mill at 75 cents per sack. On Sunday two men were arrested after they had loaded ten sacks in a boat and were casting off for an early morning cruise to the flour mill.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half Inch (1 square).....	1.00	2.50	6.50	22.00
One Inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, October 28, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—Tobacco Plantation at the Nevada Agricultural Experiment Station, 293.
EDITORIALS.—Pacific Coast Tobacco; Miscellaneous, 293. The Week; Russia's Way to Raise Wheat Values; Eastern Demand for Apples; Miscellaneous, 294. From an Independent Standpoint, 295.
POULTRY YARD.—The Chicken Business in California, 296.
FRUIT MARKETING.—Ill Effects of Poor Distribution, 296.
CORRESPONDENCE.—Albright's Late Free Peach; Prof. Husmann Prefers Thompson's Seedless, 296.
HORTICULTURE.—Cultivation and Soil Moisture; A Ponderous Early Pear, 297.
THE VINEYARD.—A French Expert's Opinion of California Viticulture, 297.
THE FIELD.—Hop-Growing, 297.
FRUIT PRESERVATION.—Notes in California Canneries, 298.
SHEEP AND WOOL.—The Shropshire and Merino Cross, 298.
THE VETERINARIAN.—Causes and Cure of Colic in Horses, 299.
THE STOCK YARD.—The Value of Breeds and Varieties, 299.
THE HOME CIRCLE.—Miscellaneous, 300.
YOUNG FOLKS' COLUMN.—Miscellaneous, 301.
PATRONS OF HUSBANDRY.—Editorial Observation; The National Grange; From Grass Valley; The Secretary's Column, 302.
AGRICULTURAL NOTES.—302-303.
MISCELLANEOUS.—A Frolic of Lightning; For What is Lumber Used? 302. Electrical Magic; Scientific Facts; Killed by Ice Water, 304. The Fruit-Growers' Convention in Los Angeles; Our Veterinary Department, 296. The Annual Ring in Trees, 306.

BUSINESS ANNOUNCEMENTS.

(NEW THIS ISSUE.)

	PAGE
Agricultural Implements—Truman, Hooker & Co.....	308
Agricultural Implements—Baker & Hamilton.....	308
Nursery Stock—Leonard Coates, Napa.....	307
Fertilizers—H. M. Newhall & Co.....	307
Berkshire Hogs—Monroe Miller, Elsie. Ventura Co.....	304
Ladies' Wearing Apparel—Mrs. M. H. Ober.....	301

See Advertising Columns.

The Week.

The south is getting the heavy end of the early rain cloud this year. It often happens that way. While the central and upper parts of the State have hardly had dust-downers the south as far up as San Luis Obispo county has had something like an inch of water. It has caught some raisins and dried fruit and some beans too and did more harm than good on the whole as October rains usually do. If, however, the beginning can be taken to signify a long winter of warm and well-distributed rains the benefit will more than compensate for the small losses thus far occasioned.

The great event of the year the World's Fair will formally close with the end of October but arrangements have been made to have posthumous days, so long perhaps as the traffic will bear it. Beginning November 4th there is to be the greatest chrysanthemum show ever held in this country. Perhaps the next greatest floral event will be a rose show next May at the Midwinter Fair in San Francisco. We hope to see such a thing.

It is pleasant that some one can find comfort and encouragement in the low prices and forced sales of produce this season. Railroad men are often put up as agricultural teachers, and we find in one of the dailies the following accredited to such an oracle: "After all, it will be better for the farmers that they had to sell rather than pay interest and wait for a rise in prices that might never come. It is bringing much ready money into the State and it is introducing California dried fruits and other things of that kind into territory where such articles were never known before. This is a kind of educating that pays, for when a demand for the goods has once been established in those places the demands of the market will inevitably grow." The conclusion is so good and encouraging that perhaps we do not need to notice that the farmer is the only chap who pays for the lesson. The commission man and the railway man get the lesson tuition free, for they never lose a fraction of their returns. The producer ought to be glad. Why doesn't he smile a little?

It is proposed by the Santa Cruz County Midwinter Fair Commissioners to erect a cold-storage building to preserve the fruit at the local fair for exhibition at the Midwinter Fair.

Russia's Way to Raise Wheat Values.

Probably the most magnificent contribution to the world's boon literature, and we endeavor to use the term without disrespect, is the publication prepared by the Russian Government for the World's Fair at Chicago. We have not seen this masterpiece of industrial exaltation, but a London exchange speaks of it as a polished literary work and one well worthy of the handsome way in which it has been produced by the imperial printers. In order that our county boards of trade and other agencies of subdivision and multiplication may have an idea of this acme of industrial glorification we quote the following description from the *Mark Lane Express*:

In all there are five large octavo volumes, beautifully printed and containing 1,600 pages, together with numerous colored maps and diagrams. The first two volumes deal with manufactures and trade; the third with agriculture and forestry; the fourth with mining and metallurgy; and the fifth with Siberia and the great Siberian railway. The reports throughout have been prepared by experts under the direction of Mr. V. I. Kovalevsky, the director of the Department of Trade and Manufactures, Imperial Ministry of Finance, and the Russian edition was edited and prepared by Dr. D. I. Mendeleeff, the Emeritus Professor at the St. Petersburg University, "whose literary services are well known in both the old and the new world." The English translation has been made by Mr. J. M. Crawford, the Consul-General of the United States to Russia.

This contribution to industrial literature is apparently worthy of so great a nation and we imagine from the brief quotations we have seen from the text that it speaks of an aspiration on the part of the Russian government more laudable and progressive than it is usually credited with. During the last week there has come about an alliance between France and Russia which is proclaimed to be for peace purposes, and though this claim is greeted with a smile by the incredulous, it may be after all that putting the World's Fair performance and the French alliance together we get an intimation of a peace policy which is to be followed for the purpose of magnificent internal development of the empire. The special feature of this development to which we would allude is one which involves wheat values, and the way Russia is affected by wheat values is described in this paragraph quoted from the great publication for the World's Fair:

For the solution of the problem confronting Russia, namely, how to improve the exchange and at the same time increase the wages and wealth of the whole population, there are two methods and their combinations suggested. These are, first, to increase the price of the grain exported from Russia; and, secondly, to enlarge the other earnings of its inhabitants. But the first method is not within the power of the people, and does not satisfy all interests, because part of Russia are buyers and not sellers of grain. At the same time, the rise of prices of grain all over the world must come of itself in the natural course of commerce; it is only necessary to wait. Therefore there remains the second way, that is the development in Russia of the industrial treatment of its other natural resources under the conviction that it will lead not only to the increase of the national earnings, but to the export from Russia of various productions of its mining and manufacturing industry. With its cheap grain, with the existing preparation, and the variety of the natural resources of the country this is possible for Russia more than for many other countries. This explains the increased protection during the present reign, and the transitory economical condition from purely agricultural to industrial agricultural in which the country now is.

We would note the confidence of these wise Russians in the coming advance in the world's value for wheat. One can but smile at the characteristically Russian first thought of doing it by imperial ukase, which it has to acknowledge is impossible. The second method is more significant and more feasible, and that is by the contrivance and expansion of a protective system which it says has prevailed during the present reign. The great Siberian railway project, and the development of mining and manufacturing, are apparently undertaken not merely for imperial gratification, but to increase and disseminate popular prosperity. Russia proposes then to raise wheat values and to elevate wheat-growers by increasing the purchasing ability of other classes of the population, and, having done that, it will make much less difference to Russia what the outside world's value of wheat is.

It has been claimed in years that are gone that such a future awaited the United States; that by protection and internal improvement, prosperity would be enhanced and all producers made rich. Then, as the poet has said, we could let the old world wag as it will; we'd be free and easy still. But, alas, how great the mistake! It was after all merely an old Russian notion made to exhibit at a Yankee fair.

SPEAKING of the presence of 713,646 people on the grounds of the World's Fair in a single day an exchange remarks that reviews of great armies offer no parallels to such figures. They stand alone in the majesty of their pre-eminence. On the very day of this vast concourse the last of the \$5,400,000 bonded debt of the Fair was paid, and it was announced that the cost of the exposition had aggregated \$30,261,480 or three times the wildest of the original estimates. It represented exhibits worth more than \$200,000,000. It created buildings that broke all records in architecture. It is, in fact, the biggest and the grandest and the costliest and the best show the world has ever seen.

Eastern Demand for Apples.

This year's apple famine at the East is causing shippers to look up supplies in their State for Eastern shipment. It is reported that the Southern Pacific has ascertained from its agents throughout the apple-growing districts of the State that there will be a surplus of at least 500 carloads of apples after the needs of the Pacific Coast have been supplied, and have taken steps to secure a rate that will permit of their transfer to Eastern markets. The Southern Pacific is seeking to establish a figure of a cent a pound from California points to Chicago. The connecting roads east of Ogden have been asked to consent to operate on the basis proposed by the Southern Pacific, and it is believed that they will do so. If this be true, it will pay those who have good winter apples to take good care of them this year.

Some commenters on these statements argue for a larger production of apples in this State to meet such a trade. We have always claimed that we ought to do more and better work in apple-growing in proper soils and localities, but we trust people will not attach too great importance to any apple movement which may take place this winter. The Eastern crop has practically failed, and that is the mainspring of the movement. Such a thing need not be expected again for no one knows how long. On the present situation, the *Chicago Tribune* says:

Apples will be high-priced articles this winter, as the Michigan, Missouri and Illinois crops are failures. A few apples are coming in from Wisconsin, but the fruit is still scarce and already commands from \$3.50 to \$5 a barrel. The supply as estimated now is about 50 per cent of what a normal demand will be. The result of this is felt, too, in the advance in evaporated apples and the scarcity of sun-dried fruit. Chicago merchants will get their largest supply from New York, Maine and Colorado. Some apples are coming from Idaho.

In ordinary years the East not only grows its own apples, but shiploads them to Great Britain. It is only occasionally that she has any use for a western apple either fresh or dried. This year it is probable that even our dried apples could earn freight money for the railway and perhaps give the grower something too.

STATISTICS explaining this year's high hop values are of interest. It seems that the greatest deficiency in this year's crop occurred in the German Empire, where Consul-General F. H. Mason, in his report to our Department of State, says there is an estimated deficiency equal to fully half of an ordinary crop. Instead of exporting, Germany must this year import largely to meet her own necessities, and already the markets of Bohemia are filled with German buyers, whose purchases will exhaust most of the available surplus in that country. Russia has a better crop than usual, but Germany is not doing much business with Russia these days. The following review of the crop in the world's supply countries shows where the high price has come from, this year's estimates being placed against the actual returns for last year:

Country.	1892. Pounds.	1893. Pounds.
Germany.....	49,029,200	24,800,000
France.....	4,705,000	2,400,000
Bohemia.....	9,000,000	11,500,000
Remainder of Austria.....	3,000,000	3,000,000
Belgium and Holland.....	7,400,000	8,000,000
Russia and all other countries.....	4,500,000	6,500,000
Continent of Europe.....	77,629,200	56,500,000
Great Britain.....	41,000,000	35,000,000
America.....	36,500,000	38,500,000
Australia.....	1,600,000	1,500,000

World's product.....156,729,200 181,200,000

It is also shown that Germany's deficiency came from weather disasters to the crop, and may therefore be counted temporary. Put 25,000,000 pounds back into the supply column and where would the price go? People who are rushing into hops this year should remember that short crops abroad do not come every year.

It has been decided to entrust Col. John P. Irish with the representation at Washington of California's fruit interests which need protection. Secretary Maslin of the State Board of Trade says that the fruit-growers seem to be apathetic in the matter. He sent out a large number of circulars asking for contributions to the fund of \$1000 that the Board had undertaken to raise to defray the expenses of the special mission to Washington, but only \$35 has been received. Further effort will be made to raise \$500, which sum, it is thought, may be made to suffice for the purpose.

L. F. MOULTON of Colusa reports a total yield this year of 40,000 pounds of prunes to an acre from six-year-old trees and that the fruit was sold at 1½ cents per pound, yielding about \$600 per acre gross returns. Mr. Moulton ought to be head and shoulders out of the financial stringency which other people are in up to the ears.

THE lemon-growers of Ontario and Oucamonga have decided to organize and incorporate for co-operation in curing and marketing the lemon crop. The following directors were elected: C. E. Harwood, E. M. Hatch, J. W. Freeman, Ontario; G. R. Thayer, W. L. Stroud, Oucamonga.

From an Independent Standpoint.

The reports of mercantile agencies and newspapers that times are relatively better in California than in any other section of the country is confirmed by many of our own people recently returned from beyond the Mississippi river. Here we suffer, indeed, from the stringency in the money supply and from the low price of our staples; but the earth yields her fruits in abundance, and if we can't sell them for full price we can at least get something. Every farmer, business man and mechanic finds plenty of work and some profit in his usual employment; and, though times are hard, nobody need be hungry or without hope. But it is very different on the other side of the continent. There the basic industry is manufacture. The men who own and manage the mills, the men who work in them and the men who supply these classes, make up the bulk of the population; and when the mills shut down everything is flat. The failure of the mills to put out money for the materials of manufacture and for labor is in effect failure of the streams which fertilize and water the land. With the mills shut down the workman is without means to buy, the merchant is without his customary patronage, and the farmer is without a market. It means hardship and poverty all along the line; and, sadder still, to many it means pitiful suffering.

The cause of it all rests mainly upon the tariff situation. The party in power is pledged to the policy of eliminating the Protective principle from our tariff laws; and since nobody can know just what will be done, everybody fears the worst. The manufacturer cannot, as matters stand, know what future conditions of the market will be, either as to the things which he must buy or the things which he must sell. The price of wool and the price of cloth are alike subject to revolution through prospective change in the tariff; and since the present situation affords no basis for estimate, the manufacturer shuts down his mill, and waits for things to settle. As with the woolen manufacturer, so with the manufacturer in iron and in everything else. From the Merrimac to the Ohio river two mills out of three are shut down, half the population is idle, business is at a standstill and poverty is universal.

This situation gives an intense significance to the pending political campaign in Ohio. Major McKinley, on the Republican side, is the chief representative of the principle of Protection. His Democratic opponent, Neal, is scarcely less identified with the cause of Tariff Reform. It was he who at Chicago last year led the fight against the moderate tariff plank first introduced and forced the substitution of the radical expression which finally went forth as the doctrine and pledge of the Democratic party. The battle, therefore, is a royal one between the foremost champions of opposite theories as to our tariff policy. If McKinley wins it will be a triumph for Protection; it will make Protection the leading issue in the next Presidential campaign and it will probably make McKinley the nominee. If Neal wins it will wonderfully strengthen the Democratic party; it will kill Protection as a fighting issue and force the Republicans to find both new themes and new leaders. But more immediate and equally important will be the effect of the election upon pending tariff legislation. If McKinley should be elected by a large vote—say 40,000 or upward—it will signify to Congress that the people of Ohio, and presumably of the whole country, are not in sympathy with tariff revolution; and it is not to be doubted that the effect will be a radical modification of the Democratic tariff policy. The Democratic party has no wish to butt against a stone wall and if it can be convinced that the people want the tariff let alone it will be let alone in spite of the party pledges. Judging by indications—especially from the desperate conditions of business in Ohio—we believe that McKinley will win and by an emphatic majority.

From the beginning we have not believed, and still do not believe, that there will be any serious or immediate change in the tariff. The business conditions of the country are not such as to warrant it, and the revenue requirements of the Government will not allow it to be done at this time. There will be a pretense of tariff legislation, or the politicians will feel it necessary to make a show of working toward the party pledges, but nothing will be accomplished.

By this time everybody should be able to see that the prospect of changes in our financial and tariff systems is as bad in its effect upon public prosperity as actual changes. We have just had, and are not yet through with, a financial panic founded upon a general feeling that we were in danger of falling from a gold to a silver basis; we are in the midst of industrial paralysis growing out of repidity as to our future tariff policy. Uncertainty is the worst possible disease that can attack our business life; the events of the present year abundantly demonstrate it; and from now on more than ever before it becomes the

duty of our men of affairs to guard against it. The legislative methods that have been well enough in simpler times will not do for a nation of vast and complicated interests. If in the future we are to avoid frequent panics and convulsions, we must so guard and regulate our economic enactments as to give them fixed periods of operation. If changes are to be made, times relatively far ahead should be named for their coming into effect. Our economic systems must not be left subject to sudden political changes, for we see how disastrous the prospect of such changes may be.

It is not to be doubted that the tariff would be better for rational modification. In time, no doubt, as our industrial conditions change, it will need to be revolutionized. But for every change the country ought to have at least three years' notice. This much time is needed to allow one condition to glide into another without jolt or disaster to our current business life. It is too much to expect such a legislative reform as this at once, but it will come in time as repeated experiences of disaster give us better sense. Our present political practice fully justifies the grotesquely wise remark of Bill Nye that our elections are the "most idiotic feature of a grown-up Government; that we put all kinds of business in jeopardy every four years by threatening a revolution and scaring every trade and manufacturer to death with platforms which nobody afterward pays any attention to."

The chief interest at Washington during the week has been an attempt on the part of the Democratic members of the Senate to come to unity of action with reference to the pending financial question. On Friday a compromise proposition was formulated, and the general expectation was that a sufficient number of Democratic Senators would agree to put it through; but after three days of persistent drumming only thirty-six—six less than the necessary forty-two—could be brought to sign the agreement; and it looks to-day (Tuesday) as if the scheme had failed. Those who refuse point blank to co-operate in the compromise plan are Mills, Mitchell of Wisconsin, Vilas, McPherson, Voorhees, Caffrey and Irby. Briefly stated, the plan of compromise was to extend the operation of the purchasing Act to Oct. 1, 1894, and to command the coinage of the bar silver now in the treasury vaults. Nobody was wholly satisfied with these projects, but it was hoped that they would serve to bring the Democrats together and so assure a settlement of the vexed question. The compromise was opposed by the repeal Republicans on the ground that it continues the evils of silver purchase; and as earnestly by the silver Senators because it would ultimately accomplish what the repealers are contending for. Speaking of the matter last night (Monday) Senator Palmer, an ardent repealer, declared that "it had become a question whether a minority shall rule. This issue is now even more important than the financial question. We shall have to fight it out." This remark was made immediately after conference with the President and is supposed to be a reflection of his views. Thus the matter stands where it did a week ago; with this difference, that the effort to create party division has failed.

The party aspect of this great contest is now a very serious thing. It is clearly seen by every leading Democrat at Washington that a terrible strain is being put on the party and that its very existence is in the balance. The National Democratic convention denounced the purchase law as a "cowardly makeshift" and pledged the party faith that it should be wiped from the statute books. The election gave them the Government. They have a clear majority in the Senate, but are unable to carry out the promise of the platform or to come to any other result. It is this situation which gave bitter significance to the taunt thrown at the Democratic side of the Senate last week by Senator Sherman, that they were unfaithful to their party pledges; that they could not agree upon any policy, and that they were a set of political incapables.

As to the compromise plan itself, apart from its party aspects, it is better, far better, that it should fail. Its success would have turned an economic question into a political one; it would have left the issue raised by the minority obstruction unsettled; it would have accomplished nothing in the way of wholesome readjustment of our financial system. To coin the large heap of silver bars now in the treasury vaults and to continue the purchase of 4,500,000 ounces per month even for another year would involve one of two consequences; namely, the fall to a silver basis, or the issue of a new series of gold bonds to keep up the gold reserve, now only \$85,000,000 and rapidly declining. Since it is the universal wish of the country to maintain "every dollar as the equal in value of every other dollar," the latter course would be inevitable. Thus we should have to increase the interest-bearing national debt to keep up the payments for a commodity of silver which we don't want and can't use.

If the compromise propositions to continue the

operation of the silver purchase law and to coin the silver now on hand were in promotion of the bimetallic principle, it would be quite another thing. But the silver purchase law is not bimetallic in principle; it does not lead toward bimetalism. Instead of regarding silver as a money metal, it treats it as a commodity whose value is regulated by the gold standard. Those who deny this forget that the law commanding monthly purchases requires that such purchases shall be made at the market value. Now, let us ask, what is the market value? It is simply the gold value. What we contend for is legislation looking toward the restoration of silver to its old-time money character, to a regulated correspondence and to equal dignity with gold; and we hold that the principle of the purchase law is against this; that its only object is to take money out of the National Treasury and put it into the pockets of the mining communities of Nevada, Colorado, Montana and Idaho. We believe profoundly that this law, fatal in its effects as it is false in principle, stands in the way of a wholesome readjustment of our finances on a bimetallic basis; and we hold it to be the first duty of Congress to wipe the statute-book clean of it.

The metal in a silver dollar is now worth about fifty-three cents. The silver money of the country is maintained on a par with gold only because the Government tacitly agrees to interchange the different forms of coinage. To the extent of forty-seven cents each silver dollar is credit currency—that is, it goes for a dollar not because it is worth a dollar but because the holder can send it to any United States depository and get a gold dollar for it. Its position is closely related to that of the paper dollar, the only difference being that the value of the latter rests wholly upon the credit of the Government, while the value of the former rests in part on the credit of the Government. Now since the Government must by the use of its own credit hold the silver dollar up to its currency character, where is the sense of putting fifty-three cents worth of real value in it? Since it must be a credit currency, why not make it of paper which costs relatively nothing? In the name of common sense, let us ask, why should we pay \$50,000,000 in gold per year to buy silver to coin into a credit currency, when the same quantity of credit currency can be made of paper costing little or nothing? We do not argue for a credit currency—we would in fact rather see every credit dollar retired and its place supplied by good gold and silver under a bimetallic system—but since just now it seems inevitable that we should have a credit currency, let it be made of some material that costs less than fifty-three cents for every dollar of it that is issued. Let there be an end to taxing the industry of the farmer and the mechanic to support the industry of the miner.

LATER—Wednesday—As we go to press there comes information that the obstructionists in the Senate have knocked under, and that they will make no further effort to delay a ballot on the repeal bill. This news puts a new face on the whole matter above discussed, but it does not alter the principles under review, and we will, therefore, let what has been written stand. The right of the majority to rule is vindicated by the surrender of the minority; and the immediate result will be the repeal of the silver purchase law accompanied by a definite re-binding of the Government to the policy of bimetalism.

The surrender of the anti-repeal forces is due to the fact that they could not stand before the storm of public criticism. Under it their strength persistently melted away, and when, last night, they were informed by Senator Harris that the Southern Democrats would no longer act with them in obstructing the proceedings they gave up the fight. The party whip, no doubt, had much to do in calling off Harris and his Democratic associates. The party had been put in a desperate position, and it was felt by the leaders that it would suffer loss of public respect and hazard its very existence if the deadlock were not brought to an instant conclusion.

The thing now to be done is to provide for an increase in the currency; and, after that, to create a new and comprehensive plan of national finance on the bimetallic basis. The wiping out of the purchase law puts the country in shape to begin at the beginning and in the right way and to create a financial system upon correct principles: The people demand and must have such a system, Congress is pledged to it, the President is pledged to it. We must have a currency sufficient in volume for the business of the country, and so balanced that its volume cannot be curtailed by speculative arts. We must have a currency so regulated that it will not with changing times and circumstances grow either dearer or cheaper. We are now practically on the gold standard. Under it there is, as we have often pointed out, persistent discrimination in favor of the creditor as against the debtor, in favor of the buyer as against the seller, in favor of the consumer as against the producer. All this must be reformed. In our

judgment it can be reformed by a policy leading to a comprehensive system of bimetalism; and we know of no other way.

The dispatch which brings news of the surrender of the anti-repealers reports that there is talk at Washington of adjournment until December. This ought not to be. There is much to be done, and there ought to be no congressional vacation until business is in a more settled condition. There is much for Congress to do in the matters of financial and tariff legislation before it should think of adjournment.

The Fruit-Growers' Convention in Los Angeles.

The Seventeenth State Convention of Fruit-Growers of California, under the auspices of the State Board of Horticulture, will convene at Los Angeles on Tuesday, November 21, 1893, and will continue in session four days. The citizens of Los Angeles and the members of the State Board of Horticulture cordially invite fruit-growers, shippers, packers, nurserymen and others interested in horticulture and kindred pursuits to be present at said convention and to participate in its deliberations. Every effort will be made to insure a large attendance, and it is hoped the meeting will be of interest and profit to all.

The Southern Pacific Company will allow return tickets at reduced rates from all points on their lines to Los Angeles; provided, not less than 50 persons make the trip, and a receipt for the ticket purchased to be taken at starting point. This will be countersigned by the secretary at the convention, and will entitle the holder to a return ticket (allowing 48 hours after adjournment to start for home), at one-third the regular rate. Hotel accommodations are ample and reduced rates will be allowed.

Many valuable essays will be read and will be followed by general discussions of the wide and diversified field of horticulture. The following, among other subjects, will come up for consideration:

Annual address by President Ellwood Cooper.

The best varieties of different kinds of fruits to meet the wants of consumers.

Co-operation among fruit-growers. Sale of fruit by auction, and how to distribute and manage the sales of fruit in the Eastern and other markets.

Transportation facilities and rates of freight on green and dried fruits.

The selecting, grading and care of fruit.

The proper time to thin the different kinds of fruits; gathering, processing, etc.

Insect pests and tree diseases. Remedies for their destruction. Most effective and cheapest formulas; time to apply, etc.

The best means to secure effective quarantine against the introduction into the State of foreign tree pests and diseases.

Pruning, cultivation, fertilization and irrigation.

Floral and forest culture.

Protection to fruit.

How to prevent depredations of fruit.

The meeting will be one of the most important ever held in the State and should be largely attended.

Albright's Late Free Peach.

TO THE EDITOR:—I send you a box of late freestone peaches—the same kind as those sent you on October 5th last year. Owing to cold weather and rain, the peaches have not attained the size or color that they would have done under more favorable conditions. It is a chance seedling five years from the pit and has borne fruit for the last three years. The first year there were but a few peaches, last year about 80 pounds, and this year fully 150 pounds, of which the box I send you is but an average sample. I have just sent two boxes to Chicago to see how they carry. The tree is an exceptionally strong grower, and has thus far never curled, though trees adjoining it curled this year. C. W. ALBRIGHT.

Placerville, Oct. 18th.

[This year's fruit justifies the good opinion we formed of the variety last year. It is good in size and color, a little irregular in form, but not enough to constitute a valid objection. In fineness of flesh, high flavor and lusciousness it is strong. We doubt if there is a better late yellow freestone. It should certainly be propagated.—ED.]

Prof. Husmann Prefers Thompson's Seedless.

TO THE EDITOR:—You ask for correspondence about the Thompson Seedless and Sultana grapes. I have grown both and my experience is decidedly in favor of the first; so is that of Mr. R. B. Blowers, of Woodland, Yolo county, who has done as much to promote the raisin industry of this State and bring the Sultana into notice as any other man, and whose opinion as a raisin-grower I value more than that of most men, not even excepting Dr. Eisen, who makes two very serious mistakes in his description of Thompson's Seedless. The berry is not greenish yellow, but pale yellow when ripe; is larger than Sultana, as it is fully as large in circumference, and being oval, makes it at least one-third larger. He also errs in saying that it has less acid than the Sultana. It has more, and this makes it more desirable as a raisin and wine grape, as the Sultana lacks in sprightliness just because of its want of acid. The Thompson makes the most delightful raisins I have yet tasted, just because of its sprightliness and proper mingling of acid and sweet.

I have grown the Sultana for ten years, and obtained my stock from Mr. Blowers, who first introduced and propagated it. I found it a productive grape, with long pruning, but have found Thompson's Seedless more productive under the same treatment. I have watched the latter for over six years, when I first saw it, and believed it to possess just the points of excellence which the Sultana lacks, viz., sprightliness, acid, and adaptation to different localities. Mr. Onstott kindly furnished me a few scions for grafting, four years ago, and I am now fully convinced of its value in our northern locality, in Chiles valley, the northwest corner of Napa county. It bears enormously even there; the bunches are loose enough to dry naturally, the berries

are of even size, and every one who sees it thinks it is perfection. I shall make wine of it this season, and also believe that it will make one of the finest wines ever produced on this coast, without the offensive flavor of the Muscat and more sprightly than the Sultana, although that also makes a fine wine of the Spanish type. I will report to you about this next spring. GEORGE HUSMANN.

Napa, October 21.

Our Veterinary Department.

We print this week the first of a series of practical articles from Dr. E. J. Creely, D. V. S., of this city, who with the current issue takes charge of the RURAL'S veterinary department. Respecting his work to be done through our columns Dr. Creely says:

When my advice is given I intend it shall be the best that hard study and scientific research can make it. I intend to hold nothing a secret. I will write all my prescriptions in English in preference to Latin, so it will not be necessary to run to a druggist for every simple thing which in many cases can be obtained in well-regulated stables. When I prescribe through the RURAL for an animal, it will be the best I can write, irrespective of who benefits by it. I want the readers of this journal to lend me all the aid in their power in conducting this department and I will agree to teach all that the latest veterinary schools teach about our practice. I want all communications written plainly and to describe all symptoms as near as possible. A veterinary surgeon treats all domesticated animals, in fact all below the human race, and even that in an emergency. The horse is subject to the same diseases as the human race and the medicines used in the same diseases for man are used for like diseases in the horse; only the drug used must be given in ten times larger quantity than to man. So if a person is familiar with human medicine he will have no trouble in treating the brute creation. The answers to all questions will be given promptly and willingly, and the writer will feel that he is doing an act of charity to the poor dumb brutes who are unable to complain of feeling unfit to perform duty.

DR. E. J. CREELY, D. V. S.

Under such administration we hope to make the RURAL'S veterinary department of greater interest and value than ever before. Our readers will, we trust, feel free to apply for any information desired as to the treatment of domestic animals. As Dr. Creely states above all communications will be candidly, freely and promptly given.

POULTRY YARD.

The Chicken Business in California.

"Cochin-Leghorn" writes to the Fresno Republican racy of his experience and faith in the California chicken business as follows:

After an unsuccessful venture in another line of agricultural pursuits, in a county then next to this one, I was left no other opportunity but to go into the chicken business. I started with two dozen hens and an old, faithful rooster and a capital of \$50. After a great and bitter struggle, working out at intervals at many hard and tedious kinds of work, I won for myself and family a comfortable independency, and after one year and a half more owned a stock, all paid for, worth over \$2000, bringing in a net income of over \$1200 per annum, going constantly crescendo. Circumstances over which I had no control compelled me, very reluctantly, to abandon this business, and I engaged, I am sorry to say, in a far less profitable and more disagreeable one. But that is another story! Coming back to the question, three conditions are necessary to success.

First—The hens require to be fed plentifully—all they can eat—the same as a horse or any other domestic animal, and they must not be expected to lay if they are made to look incessantly, without finding it, after a problematic worm or insect, suffering and scratching under the cruel pangs of hunger. Just fancy a farmer working and toiling from sunrise till noon, coming home weary, tired and hungry, his better half presenting him with a pick and a shovel and telling him, "I have buried your dinner six feet under this mound; dig it out and eat it." Or else fancy the farmer turning out his horses after a few days plowing into a dry pasture! It is exactly the same thing. I have now a flock of 150 very profitable chickens, and give them every morning a bountiful early breakfast, after eating which they seek a commodious place to rest or dust themselves in the sun or in the shade, as the temperature commands, and they manufacture eggs. A hen scratching all day without any peace of mind or rest, handicapped by a constant hunger, cannot and does not lay well; hence complaints. I do the same thing an hour before sundown, and always see that there is grain or food on the ground in the barnyard.

Second—The housing. This is very important. You cannot possibly knock into the head of the average farmer of California that the fowls want to be warmly housed, at any time during the night, protected from cold draughts which afflict chickens with colds, sore eyes, swelled heads, roup, diphtheria, etc. Every one knows of and praises the cool nights in this valley; still the farmer, in spite of common sense and humanity, will have his hens sleep in a house made of laths opened to all cardinal points and rain and storm in order to keep away the lice, which precaution, by the way, does not incommode the lice in the least. On the contrary, as I will show further on. Then at daylight in the cold, foggy mornings of the winter the fowls begin the weary search for worms and insects; therefore, I repeat, the fowls must be at rest at night in a good house, bottomed, free from draught, and during cold weather be let out after sunrise.

A simple comparison will show the folly of the farmer. A fowl is an agricultural animal and must be treated ac-

cordingly. When a horse has done a hard day's plowing, is he shut up in an open barn of laths where the wind comes in at four sides to freeze his bones to the marrow? Not a bit of it. He is put into a warm barn with a plentiful supply of fragrant hay to munch at leisure until satisfied and to rest his weary limbs so as to be ready for the toil of the morrow. The above does not need any comment. Now about lice. It is next to an impossibility to keep lice away in an open lath chicken-house, as the only remedy to destroy this pest lies in frequent and cheap fumigation with carbolic acid, smoldering sulphur or any other disinfecting substance, and you cannot any more fumigate such a house than you can hold water in a sieve.

Third—This point pertains to the care of the fowls. This business is a difficult one. It requires hard work and very particular attention to details, and takes more work and more brains than to be a doctor, a lawyer, a merchant or anything else, as one has to be all combined. A farmer has a horse temporarily sick or distempered. Does he chop its head off? No; he doctors it. If he has a sick hen, does he doctor it? Not a bit of it. Down goes the tomahawk. That is all the difference they see. I don't see any. That hen, worth 50 cents, brings from \$2 to \$2.50 in eggs and chickens—it is hardly worth looking after, but if you have from 1 to 100,000, then it may matter. Keep fowls well with healthy food and pure, fresh water; fumigate them, keep their quarters clean, and you will have success.

Now, to close this rather lengthy communication, I will say briefly that a capital of \$2500 to \$5000 properly invested by a competent man will duplicate itself inside of two years. There is a constant market for eggs—cash, mind you—almost the only product which is not a drug in the market. It is pretty hard at all times to sell fruit, wheat, raisins, stock, wool, sheep and horses. But eggs and chickens sell like hot cakes. No need soliciting orders; there are never enough of them to supply the demand, and you need not fear reckless competition. And do you know why it is? Because of the hard work attached to the industry. The day is very far off when there will be very many chicken ranches in California, because one cannot raise them with an eight-horse team and walk behind with an occasional "gee and haw."

FRUIT MARKETING.

Ill Effects of Poor Distribution.

We have endeavored to emphasize the fact that far more intelligent, systematic and wide-reaching distribution of our fruits at the East must be had. The following statement of Frederick Schwan, a shipper, to the Pomona Progress, illustrates the need we have previously described:

"The season of 1893 has been the most disastrous yet known for shippers and dealers in deciduous fruits. The market has been ruined by consignments of fruit, in the same way that the orange market was utterly demoralized last winter by consignments of that fruit. The great financial depression in the East has had much to do with the woefully poor returns from shipments of pears, peaches, apricots and plums. Some firms have lost thousands of dollars.

"Let me relate a single instance of the way money is lost in the placing of our fruits in the Eastern market under the present order of doing business. A few weeks ago we learned, after a good deal of telegraphing and studying the markets, that green fruit was in very good demand in a certain large New England city. We had a carload of fruit then on the way East. We telegraphed and had the car diverted from its original destination and sent to that city as fast as possible. The very day it reached there 20 other carloads of fruit arrived at the same place. All were consigned, and the shippers had had the same news we had and sent their fruit there at the same time. The result was the market was glutted; all the fruit sold at a loss, and we were out over \$200 in cash right there. The grower lost his fruit; we lost our time, labor and money. But this is one sample out of many. We pocketed our loss and said nothing.

"Now, is there any one who can tell how such a loss could have been avoided? How could that carload of fruit have been disposed of to better advantage, with the information that we had about the markets at that time?

"We have spent months of labor and capital in getting accurate information about the fruit commission men in the East. We have done all we could to learn the markets there, but so long as men will consign their fruit, just so long will the shipping business in that line be a matter of chance. No dealer dares buy fruit when he will have to put his product in the Eastern market alongside of that which has been consigned. If all California will join together and vow never to consign another pound of fruit, buyers in this State will have some chance to buy at a good price and know where to dispose of their products.

"I observe hints in the Progress article concerning the freight and other expenses charged. Now, the railroad companies have a fixed rate of \$400 a car and for the ice in it from here to Missouri river points and Chicago. It is about 20 per cent more to points beyond Chicago. If any one can tell us how to get lower rates, we want that information. The Interstate Commerce law prohibits rebates from railroads to shippers, and any company found in that business will have a lawsuit on its hands. There are about 500 cases of pears in the average car, and the freight and ice on each case to Chicago is, therefore, 80 cents. When we take into consideration the cost of handling the fruit, hauling and getting it out of the car in the East and paying a firm for handling and selling it there, the expenses on a case of pears run up to about \$1.40. Thousands of cases of fruit have been consigned to the East this year, and have brought less than \$1 a case. The fruit journals are full of such facts. Consignments of fruit must stop, or this condition of affairs will continue."

HORTICULTURE.

Cultivation and Soil Moisture.

We have often set forth our views and observations on this most important subject. Plainly, good, thorough and frequent surface cultivation is the secret of success in California orchard management. Other practices may locally succeed but the general practice must be such. We desire to present to our readers the conclusions of a distant doctor in support of views we have previously advanced. *Garden and Forest* of October 4th has this interesting article:

In our issue of July 5th it was stated that the approved modern practice among farmers and gardeners is to stir the surface of the soil in order to preserve the soil-moisture to be used by the roots of the crops. The theory upon which this practice is based is, that water rises freely through a well-compacted soil by capillary action, and when it reaches the surface it passes off into the air in the form of vapor. When that surface is stirred, the capillary connection with the moist soil below is measurably broken, and although the layer of soil which has been stirred gives off its vapor more rapidly at first because the surface exposed to the air is increased, this layer becomes an effective mulch when fairly dry, and thus checks the evaporation of the water which rises from below.

Since the publication of this article we have observed in some agricultural papers that, while the practice is not condemned, the theory is disputed. It is argued that if one wants to dry soil for any purpose he naturally keeps stirring it, and that the more any soil is stirred the more quickly it dries out. The fact that a certain layer of the soil is called a mulch does not make any material difference between that portion and the part that lies under it. That surface tillage prevents the waste of moisture is said to be a fallacy which common observation disproves; for if a man walks across a piece of plowed ground it is well known that his foot-prints will remain moist long after the surface of loose soil around them is dust-dry. Now, this illustration rather corroborates than disproves the theory. The moisture in the foot-prints plainly comes from water below the surface. Plainly, too, as soon as the water reaches the surface it begins to evaporate. The foot-prints remain damp, therefore, because the water rises there faster than it passes off in invisible vapor; that is, the foot-prints are damp because the soil-water is being more rapidly lost at that point than in the surrounding field. In some most interesting experiments made in the Wisconsin Station two years ago it was shown, among other things, that where a heavy roller is passed over plowed ground the rolled ground contains less water than that which is not rolled, the difference in percentage of moisture being greater when three or four feet of soil are included in the sample tested than when a depth of but two feet is examined.

But, as we stated in the article alluded to at the outset, some of the most difficult problems in physics are involved in the movements of water in the soil, and we have much to learn. The first practical question which demands a decisive answer is, How deeply should the surface be disturbed? Plainly, the mulch can be too thin; that is, cultivation can be too shallow to produce the best effect. The consideration of this point is suggested by the Report of the Wisconsin Experiment Station for 1892, which has just come to hand. In an experiment there recorded one cultivator was set so as to slice off and lay back upon the surface rather less than an inch of earth at each cultivation. Another one was made to penetrate to a depth of three inches. The soil experimented on was a well-drained clayey loam, and at planting time the water-table was four feet below the surface, and when the corn was cut it was from five to six feet below the surface. Corn was planted in rows three and a half feet apart, and strips three rows wide were cultivated with the two implements alternately. On August 27th the result showed considerably more water in the samples of soil taken from the plats which had been cultivated three inches deep than from those which had been cultivated less than one inch deep, and a still greater difference was found in similar samples taken September 16th. This seems to prove that while cultivation to the depth of one inch may do some good, it does not preserve as much water in the soil as if the field was cultivated to a depth of three inches. It is possible that for many crops three inches would be too deep, because of the danger of excessive root-cutting, and the actual depth to which the ground should be stirred in any case should vary to meet different conditions.

What we wish to call attention to particularly, however, is the fact that the difference of the quality of moisture under the two kinds of treatment was greater in the fourth foot than at any point above it. This shows the important truth that different ways of cultivating the surface affects the quantity of water to and beyond the depth of five feet—that is, throughout the entire depth occupied by the roots of cultivated crops. In another part of the same report it is shown that the ground-water oscillates every day apparently in sympathy with the changes of temperature. It had already been demonstrated at this station that when a plowed surface is compacted by rolling, the ground warms more rapidly and more deeply than it does when it is covered with a mulch like that produced by surface-tillage. It is also shown that when the soil becomes warm its water-holding power decreases and the capillary water drops to a lower level. When the temperature falls the water is lifted higher, so that even the tile drains on the farms of the Wisconsin Experiment Station discharge water faster or slower as the soil warms or cools. In addition to the fact, then, that by surface-tillage evaporation is diminished, we have the other important one that this cultivation keeps the soil below the surface cooler, and in this way strengthens its capillary power, so that less water which falls as rain percolates downward out of the reach of root-action. Besides this, the stronger capillary force helps the movement of

deep soil-water upward and through longer distances, so that more water in a dry season becomes available for growing crops.

As to the practical use of experiments of this sort there can be no question. We have before stated that in most of our agricultural lands throughout the entire season evaporation from any given area is about as great as the rainfall, so that it is probable that during the growing season of most crops evaporation largely exceeds the rainfall. Professor King, in the report to which we have just alluded, states that we rarely have water enough in our soil under natural conditions to realize even approximate possible returns from our lands. This shows why irrigation, wherever practicable, should be attempted. But where this is not possible, the proper husbanding of soil-water is a matter of commanding importance in the practice of agriculture or horticulture. Inasmuch as no food can be taken by the roots of a plant until it is dissolved in water, we cannot study the subject too closely, and before we can adopt a thoroughly rational basis for different methods of cultivation, we have much to learn on such points as the amount of water needed to produce a pound of dry matter in any crop, the storage capacity of different soils, the laws controlling the movement of ground water, the root systems of different crops, and the lateral and vertical extent through which they feed.

A Ponderous Early Pear.

TO THE EDITOR:—As I know that you are fond of looking at samples of newly-introduced varieties of fruit of any kind, provided that the samples are worth looking at, I send you samples of a *new early pear* that I have just fruited this summer. Several years ago I hunted in France for *new and early* varieties of pears and procured five new varieties, one of which is claimed to be the earliest pear yet originated. I grafted some of them on large trees to obtain fruit sooner, and this year one of the five varieties bore half a dozen of magnificent pears which I find are ripening just with the Bartlett. I was a little late in picking them and found the largest one of the two that I send you dropped on the ground and was somewhat bruised. That pear weighs two pounds less two ounces; the other, two pounds less five ounces. I put two of these new pears in my fruit house, with Bartlett and Assumption pears, to ripen. I find that the Assumption is the first to ripen, and that this new pear ripens exactly with the Bartlett. Its grain is much like that of the Duchesse d'Angouleme, and not buttery like the Bartlett. It is quite juicy; in fact, I find it sweeter than the Bartlett and certainly as nicely flavored as the latter. On account of its tremendous size, beauty and superiority, it may prove to be quite an acquisition for our State. I obtained this pear from the south of France.

FELIX GILLET.

Nevada City.

[We exhibited the pears, so well described by Mr. Gillet, at the last meeting of the Horticultural Society, where they were greatly admired. The fruit certainly has some notable points, and we shall look with interest for further observations by Mr. Gillet. Next year's crop should give enough fruit for safe judgment.—ED.]

THE VINEYARD.

A French Expert's Opinion of California Viticulture.

Commissioner Francois Jos, who is inspecting the California vineyards in the interest of the French Government and preparing a report to be made when he returns to Europe, has, according to an interview in the *Call*, met with some surprises in California.

He has been down in the "bay district," traveling with Arthur P. Hayne of the viticultural department at Berkeley, and they were in the city on their way to the vineyards farther north.

"Tuesday we spent at Menlo Park and in that vicinity," said Mr. Jos, "and I made a very thorough examination of the vines at the various plats at the university and in the neighboring vineyards, and I also went through John T. Doyle's cellar, and I can only say to you that I am amazed, and the wonder which was excited in me by what I saw the first day has only been increased at the things I have since seen and learned.

"The people of France and of Europe have not the slightest conception of the magnitude of the wine industry in California, nor of the rapid progress you have made in the quality of your wines. Such methods as you have developed here I never saw before, and while your wines have not yet all the characteristics of 'grand vin,' yet you have accomplished so much in that direction that I am positive you will soon be making as fine wines as the world can boast."

Mr. Jos, in addition to being the head of the viticultural college at Antibes, France, is recognized as one of the first men of Europe in this line of study, and there is probably but one other man on the continent whose judgment on wine matters is taken as quickly as Jos'. The commissioner looks at everything from a scientific standpoint, and his opinions are all on that basis.

"Next we visited Cupertino and San Jose," continued Mr. Jos. "At the latter place I went through Paul Masson's champagne factory, and observed the processes there very carefully. We paid a trip to El Quito farm and saw the Goodrich olive orchard and his oil mill, and found that they had adopted the right methods for the manufacture of the finest qualities of oil.

"Next we came to Los Gatos, and then to Mission San Jose, and let me say that I am wonderfully impressed with the way I find the orchards kept. Your organization of the work seems well nigh perfect. Your methods of cultivation and management of the wineries are in advance of

anything I have ever seen, and we think we know a great deal about wine-making in France.

"And the qualities of your wine surprise me too. Of course that is a part of my business to study the products as well as the vines, and the samples that I have tasted indicate that we Europeans have not given you credit for what you could do.

"Now, to-day we visited, among other places, Gallagos' winery, where 160 tons are being pressed daily, and I could only express my astonishment. I had not expected to find viticulture in California conducted with so much method, nor on such a scale. As I say, the wines that I have tasted, while they give evidence of having been made with care, have not all the qualities for grand vin, but this is probably due to a difficulty in adapting California climate and conditions to European methods. But, from the spirit manifested, I have no doubt but that you will soon be able to produce what is known in Europe as 'grand vin.'

"Our methods are the results of centuries of experience, while your success is that of a few years only. Your progress has been remarkable.

"One of the objects of my visit was to see if you have really the same vines here that we have in France. I am making a very careful study of the leaves and every part of the vine, and must say that I am more than pleased with what I have found, and, when my examination is completed, I shall be able to tell the people of France some startling news."

When Mr. Jos returns to Europe, he expects to publish the results of his investigation in book form, and also in all the viticultural journals of the continent. By this means European consumers will learn of our wines through a man whose reputation is well known, and whose opinions will be taken without question.

THE FIELD.

Hop-Growing.

There is again quite a disposition to plant hops, as is always the case during a period of high market rates. Heretofore many who have gone into the business at such times have gone out again as soon as general good crops on the extension of hop acreage brought market values down again. We always caution people against such ventures. The hop business is in the long run a good one for those who stay in through thick and thin and have good hop land to work on. However, as this is a taking subject now with many, we publish the following from the *Oroville Mercury* of last week:

The attention of many in this county at the present time is turning to the production of hops on a more extensive scale. There are many thousands of acres in the county that may be devoted to this industry that will produce better returns than they now do. Along the Feather river are many hundreds of acres that will realize more in hops than if planted in anything else. Along the foothills and in the mountains are favored spots where hops can be grown to great advantage. This has been conclusively proved by Mr. Caleb Scott at Concow, who has this year produced a large crop of extra fine hops. For the interest of those who have an idea of entering into this industry, we give the following extracts taken from an article in the *Sutter Independent* by Mr. P. Carroll, a Sutter county grower of many years' experience. Among other things, Mr. Carroll says:

"I will consider the conditions existing in the countries where hops are produced. Take England first: Her lands must be fertilized, and climatic conditions are favorable to lice and other pests and spraying must be resorted to. Germany the same. New York is often troubled with pests and must spray to get her 547 pounds per acre. Washington has a rich soil and needs no fertilizers, but her climate breeds pests and she must spray. The same conditions exist in Oregon. Next comes California; her soil is fertile and a warm, dry atmosphere produces no pests. She has no rains in the picking season, and the skillful grower can produce good hops for the market, which are held in high favor by the English brewers, and they import extensively of Pacific Coast hops. So now let us consider where California would be in a fight for existence with other hop-growing countries. California would stay while the others would have to go out. Give California labor for the same price that New York pays, and New York would have to go out in the end. The acreage of the coast has been increased in the last few years, while other places remain about the same. California has 3974 acres, producing on an average of 1648 pounds to the acre.

"And, as the hop has got a footing in Sutter county, I will give some information for the benefit of those who contemplate going into business. First, the character of land and other requisites. Any land that will produce three crops of alfalfa will do for the hop. It must be free from alkali, with no sipage to trouble after the first of March, as the land will need to be worked during the growing season, and cultivation should be kept up to the first of July. On good land and with proper cultivation a ton of dried hops can be relied on, but I say to new beginners, if you have no experience don't go into the business without first securing the services of an experienced person for the first year at least, for it costs money and a good marketable hop should be produced, and then you have the best business that can be engaged in. The present prices of hops at Sacramento are 17 cents per pound and for choice lots 17½ cents. The average price at Sacramento since the dollar-pound year has been about 15 cents.

"Ten cents a pound will cover all expenses, counting interest on capital invested in the land, kiln, cooling house, tools and implements of every kind and labor to make the crop ready for market; so all over that is clear profit. The first year of planting, if taken care of, from 1000 to 1200 pounds can be safely counted on. The next year a full crop can be relied on, as the roots have a deep hold in the ground."

FRUIT PRESERVATION.

Notes in California Canneries.

The following very interesting communication is one of the series sent by Mr. Fred C. Smith to the Australian press. It contains much that will be news even to Californians who are uninitiated into our canning methods:

My letter this time will have special reference to matters of interest to canners, and my next to fruit driers, etc. In one of my visits to San Jose, the great prune center of California, I went through the San Jose Fruit Packing Company's premises with Mr. Plato, the manager. This is claimed to be the largest fruit cannery in the world, its output being over 400,000 cases per year. In the height of the season from 700 to 1000 hands are employed; several hundred young ladies from the State Normal School of San Jose make considerably more than pin money, during the two months holiday allowed, packing fruit, etc.

This company makes all its own cans, as well it might, considering that it uses nearly ten million per annum. The very latest can-making machinery only is used. At a machine in one building a man may be seen feeding sheet tin into the jaws of a big guillotine. Another feeds the machine that stamps out the tops and bottoms. From the guillotine all the operations of curving, crimping, fitting, brushing on the soldering fluid, soldering, brushing the acid from the inside of the can are automatically done, and when the long string of cans, running along the endless iron belt or chain, reaches a certain stage, a man feeds tops and bottoms into a machine which fits them on perfectly to the cans. Then the chain catches the cans again and away they go past the fluid brushes and into the solder bath; from there another chain catches and takes them upstairs, holding tightly while it carries them through a hot-water bath, and if a leak is disclosed in any can, by the bubble from the escaping cold air, it is seized by an attendant and the chain goes along into another building, and from there again downstairs to a still more distant storehouse where the cans are deposited in cases, and a man packs them up till they are wanted for use. The company saves about three cents on every dozen cans it makes, by doing its own work.

Chinamen do all the processing or cooking, and Mr. Plato explained that they were more to be relied upon at that particular work than white men. I found that several of the very largest canneries employed Chinese processors.

No soldering by hand is done in any of the California fruit factories to-day except, of course, in the closing.

The cans of fruit are placed on trays, submerged in boiling water, cooked for three to five minutes, taken out, the vents closed, and again cooked from three or four up to fifteen minutes.

Some of the large factories use a device for lifting the processed cans out of the cooking bath, and, by very simple but effective machinery, stack the whole lot on wooden trays in piles where wanted and they are left to cool, so that no cold water is necessary and there is no handling of hot cans.

The irons for automatically soldering on the caps are heated by gasoline jets in most places, it being a cleaner and less expensive fuel.

At the San Jose cannery the cans are all stacked in blocks of four dozen, pieces of wood separating the blocks from each other and so strengthening the support or hold of the mass that they carry the stacks as high as the roof where necessary, without danger of them falling. Being packed in this way, stock-taking becomes a perfectly simple and rapid process.

The same company is beginning to put up large quantities of jams, jellies and marmalade, all in glass jars. The Americans, like the British, do not care for those things in cans, and there is probably more canned jam eaten in Australasia than in the United States.

On the Sacramento Canning Company's premises, Mr. Bentley, the very courteous manager, showed Mr. Brooker of Adelaide and the writer some machinery that had been developed and adapted by himself, and which no other factory in the country can show. One was a tomato peeling and carrying machine. An endless belt with cleats big enough to hold medium-sized tomatoes was running. At the lower end of the affair the belt passed through cold water in which tomatoes were placed. These, catching on the cleats as they passed up through them, were carried into and through a partially open steam chest, from the pipes of which scalding steam struck the cold fruit, causing the skins to crack and peel. From this belt they were rolled on to another, which ran along slowly for 40 or 50 feet, carrying the now nearly peeled tomatoes before a row of girls, who filled cans with them as fast as they could. Then they were packed in dozen lots in trays, which were taken to a table where was a belt sloping till it passed through a syrup bath. The cans in the tray, being carried through the bath, would fill evenly and be carried up a slope steep enough to empty the surplus syrup. Then they passed under a pair of brushes that ran through clear water, and, by a peculiar sideward and backward motion, washed all the syrup out of the top of the cans. Caps were then placed on the tops of the cans and fluid brushed over them, and the automatic capping machine doing its work would leave the cans ready to be processed—all this work being done in just a fraction of the time I have taken to tell of it.

Clever as Mr. Bentley is he confesses to have been unable to buy or invent a labeling machine, and that labor I saw being done everywhere by hand. Numbers of patents in connection with this particular work of labeling have been brought out, but none have proved satisfactory.

Mr. Bentley has also perfected an improvement upon the San Jose factory's plan of lifting the cans from the cooking bath and leaving to cool in the stacks, without handling them. Chinamen test the cans, striking the tops with the head of a wire nail or a tiny hammer. That plan is about ten times as rapid as testing them by a stroke of the palm, and apparently as sure, or it would soon be given up.

In some factories I found that peaches were still peeled by hand. It was claimed that the peeling machine never completes its work, but leaves that to be done by hand, and taking into consideration the occasional spoiling of a soft peach, etc., a girl, with practice, can do better and more work than can be done by a machine. In the case of cling peaches, however, I am inclined to favor the work of a machine. I found that in some places where peaches were being dried the plan of dipping them in quite cold water and then in scalding water was being used to loosen the skin, in order to remove it.

At San Jose I went through the J. H. Flickinger bottling and canning factory. I found that here the fruit in the jars was cooked by live steam in steam chests that looked like iron safes. The questions that I asked as to the time of cooking, etc., in regard to this were the only questions to which I could get no answer in the whole 4½ months that I spent in California.

These glass jars are packed in envelopes made from tule reeds instead of straw, and a square mat of the same tule is placed upon the bottom of the case and upon the top; so that the risk of breakage to the 12 bottles or jars in each case is very small. The jars are of the "Putnam Lightning" brand, and made in New York.

The San Jose cannery claimed to make less than one per cent of leaks, only a small percentage of which could not be safely reprocessed.

In grading peaches for both canning and drying, Mr. Pratt of the Sutter Canning Co., and other canners, too, use the Jones adjustable grader. Mr. Pratt says that three girls use this machine and do as much work as six formerly did without it. He claims that it will not bruise ripe fruit, while I found that many others would not allow it to be used except for the fruit that was to be dried, as they complain of its bruising the fruit. It grades to five sizes of peaches or apples.

At nearly every cannery piece work is the rule and a system of tallies is used, which shows at the end of the day the amount of work got through, how many thousand cans have been made, how much each separate operation costs, etc. The cost of cans there was 35 cents per dozen and 14½ cents per pound for solder.

The Bay State peeling machine is the one most favored by canners. It is made in two sizes.

Mr. Green of the Napa Cannery told me that he had sent away Green Gage plums canned but only half processed, to England, in order to prevent them being smashed up en route; at the other side they were reprocessed. I noticed how careful the hands peeling the Bartlett pears were to drop them into buckets of cold, clean water, to keep them from becoming brown by contact with the atmosphere, and Mr. Green assured me that that was quite necessary to be done to put up a first-class article.

The Sacramento Canning Company pack 75,000 cases per year. They can put up tomatoes to pay at less than six cents per 2½-lb can.

Here are a few recipes given me by Mr. Marsales of Oakland, a canner of some years practical experience. His tins are similar to those of hundreds of other processors throughout the country. He allows four minutes as a general rule for the first processing, the great variation being in the after cooking; pears, before closing, four minutes; after closing, twelve minutes. For medium ripe fruit, three and nine or two and ten minutes, varying according to the degree of ripeness. Peaches he would vary from three and two to four and ten up to fifteen; apricots, according to condition, three and three to four and eight; Green Gage and Egg plums, three and two to three and three; Napoleon Bigarreau cherries, from three and two to four and five up to fifteen. The strength of syrup by the saccharometer for standards is 25° and for extras 40° to 50°. The riper the fruit the slower and longer the cooking.

At the Sorosis Canning Company, near San Jose, I noticed a special feature about the get-up of their cans; not only were their labels the most artistic that I have seen, but before their extras are labeled a sheet of white tissue paper is wrapped round the can, then the label is put on over that, after which another sheet of tissue paper is wrapped round the whole and twisted neatly at the ends. The first is to protect the can and the label from rust and the second is to protect the label from friction. This firm have been well repaid for their enterprise and for their expense in this respect by splendid orders from England at high prices. The Sorosis Company use the Canton capper for soldering the tops of their cans. FRED C. SMITH.

SHEEP AND WOOL.

The Shropshire and Merino Cross.

As many of our flock-masters are contemplating a cross upon their common Merino stock, the results of accurate observation of the Shropshire cross upon such foundation, as made at the Wisconsin Experiment Station, will be of interest. Mr. J. A. Craig of that station writes as follows:

It is apparent that whatever changes might be required in the direction of our sheep-breeding operations should be made with the Merino as a starting point. They are the common sheep of our State, having the additional advantage of being thoroughly acclimated; and it was readily supposed, aside from the matter of economy, that it would be advisable to use them as foundation stock. The Merino stands second to none in those attributes for which they have long been bred. Upon no other breed of sheep have so much skill and enterprise joined in the endeavor to produce and augment special qualities. As a sheep they have been subjected to all climates and managements, and this has made them the most cosmopolitan of the sheep tribe. Activity, vigor and the ability to be almost self-sustaining are among their qualities. In addition the Merino possesses a fleece that in the two qualities, fineness and

density, is hardly surpassed. On a mutton sheep the condition and quality of the fleece cannot be overlooked, but it is largely to the production of the most protective fleece that the breeders give consideration. These qualities, together with a number of minor ones, endorsed the selection of the Merino as foundation stock; while the condition of the sheep-breeding interest of the State enforced it.

The Shropshires have bred characteristics that justified their use in this work. They have been bred for a number of years past as a mutton sheep, and at the time this work was undertaken their wool was in demand and continues to be at the time of this writing. They had been undisturbed for some time in our State, and the climatic conditions that were common here seem to be suitable to their nature. The country being of about the same elevation and aspect as that of the "downs" of England, it was surmised that the sheep of this breed would satisfy our needs in this investigation.

The rams that have been used were registered sheep. They have been, in most instances, animals of considerable merit, but in no way may they be considered exceptional for this breed. The first ram used was only of ordinary merit. But more than this can be said of the ram that has been used during the past two years, and which is the sire of the second cross ewe lambs.

THE FIRST CROSS.

The first lambs of this cross were born in the spring of 1889. The first record of the weights of these crosses was made April 11, 1891, at the same time that the Merinos were weighed, and it was found that the six first-cross ewes averaged 140 pounds each. They were then two years old and in moderate breeding condition. They were in lamb and unshorn. The last weights were obtained February 7, 1893, and the four ewes that were four years old at this time averaged 161.6 pounds, and the three-year-old ewes averaged 145 pounds.

These weights are merely chronicled as matters of interest, for they tell nothing of the improvement in form and fleece that has resulted. The best of them are small sheep of smooth contour and as a rule symmetrical. They are of medium length and compactly built. The head in appearance approaches nearest to that of the Merino, being somewhat thick through the muzzle; and the face has the expression so peculiar to the Merino. The resemblance holds good in the poll, for this is higher than it is in the Shropshire. The ear seems to be similar to that of the Merino, as it does not come so near the center of the poll as in the Shropshire. The neck retains the attitude of the Merino and also has some loose skin characteristic of that breed. The shoulder lies close on the body, giving it smoothness, and there is no drop behind it. There is much of the narrowness in front so strikingly seen in the ewe of Merino type. The brisket in the front cross stands out somewhat more from the body, making the form squarer from a side view. The body of the sheep shows marked improvement towards a mutton type from that of the Merino. The back is straighter and wider and the ribs more rounded though not deeper, and the loin is heavier fleshed. The hips of the typical first cross are smooth, not in the least ragged as is so with the Merino, while the rump is slightly longer and much smoother. In the twist there is a vast difference, the Merino being very light in the thigh and slack between the hind legs, where the first cross carries considerable flesh.

As evidence of inherent constitution it may be noted that the first crosses are invariably of large girth and the skin is of a very clear rose tint. As further evidence of this the fleece is surprisingly dense and even, there being no bareness observable in any region.

Of the changes that have been due to the cross none are more striking than those that the fleeces have undergone. The fleece of the first cross decidedly surpasses that possessed by either of its ancestors. It is much better because of its evenness and its density. Though fleeces of the first crosses never were trimmed, yet they always had the appearance of being so treated. The evenness is carried all over the body with striking precision. In a fleece the matter of density is one of great importance, whether the point of view be that of the wool-grower or that of the breeder of mutton sheep. The latter looks to it. He knows that the thrift of his sheep depends greatly on it; while the wool-grower considers it a valuable merit, for he realizes that it is a source of weight. It may be that the heaviest-fleeced sheep are not those that make the most rapid progress in fattening, but it may be noted that those with dense fine fleeces are, as a rule, the sheep that make rapid and economical gains. This combination of density and evenness of fleeces is likely accountable for the fact that the first-cross ewes were notably exempt from the snuffles.

As to the quantity of wool shorn by the first crosses it may be stated that during the first fortnight of May, 1891, the 12 two-year-old ewes that were then in the flock were shorn and the average weight of the fleeces was 8.9 pounds. This is slightly more than the average of the Merinos of the same year. A representative fleece of this shearing was washed and was found to shrink 33.3 per cent, which is slightly less than that of the Merino fleece treated in the same way. In the spring of 1892, from May 16th to the 25th, the six first-cross three year-old ewes sheared an average of 10.1 pounds. Three first-cross ewe lambs, at this time about two weeks over a year old, sheared an average of 9.4 pounds. In the spring of 1893 the five four-year-old first-cross ewes then in the flock sheared 8.9 pounds on an average, and the two ewes that were then two years old sheared an average of 9.5 pounds. From these weights it is evident that the differences in the fleeces of the Merinos and the first crosses are very slight.

In quality the wool of the first cross is slightly inferior to the Merino, and much superior to that of the Shropshire. It is finer, softer and purer than that of the Shropshire, while it is only inferior to the wool of the Merino in fineness.

In condition the first-cross wool is bright and owing to the density of the fleece it keeps clean. The wool might be improved somewhat in respect to its strength, for it ap-

pears to have lost some of the elasticity and strength of fiber that is noticeable in the Merino wool.

THE SECOND CROSS.

It will be understood that this term is applied to the lambs that are out of first-cross ewes and by a pure-bred Shropshire ram. Those that are now in the flock were born in the spring of 1891. When weighed February 7, 1893, at the same time the first-cross Merinos were weighed, the three then in the flock averaged 132.3 pounds. The age of these has to be considered in making a comparison with the others. While the second-cross lambs were somewhat uniform in appearance, yet they showed slightly more variation in form and fleece than could be found among first crosses.

In regard to the weights of the fleeces when shorn for the first time the third week in May, 1892, the four then in the flock averaged 8.2 pounds, while three of the same shorn this spring, 1893, in the second week of April, sheared 7 pounds of unwashed wool. The fleeces are somewhat lighter than those of the first cross at a corresponding age.

The wool of the second-cross ewes is longer than that of either the Merino or the first cross, but it is not equal to them in density or evenness. It is inferior in fineness, softness and purity, but in these respects it is superior to typical Shropshire wool. It is a bright, strong and long wool that would bring a high price in present markets.

In critically examining the appearance of the second cross it is evident that the Shropshire type is closely approached. In form the sheep of this cross are long and possessed of the rotundity of form that is a Shropshire characteristic. The head in shape, thickness of muzzle and expression of the face retains an inkling of the Merino ancestry, while the darker face comes from the extra infusion of Down blood. There is a general fullness of the fore-quarter that does not appear in the first cross. The body sinks deeper between the fore legs and the latter stand farther apart. The shoulder is better fleshed, the back broader and the ribs spring out still better than in the first cross. The thigh is fleshed much better toward the hocks. A marked improvement has been made over the first cross, particularly in the plumpness of the thigh and fullness between the hind legs. There appears to be no evidence of a decrease in constitution.

In regard to the general appearance of the second cross it would be a hard matter for a novice to distinguish between them and pure-bred Shropshires. It is fair to remind the reader that there were some that did not show much more of the Shropshire features than the first cross. Another cross will bring these up to those of the more advanced type.

As the third crosses are the lambs of this year, it would be attempting too great a forecast to place an estimate on them based on their present appearance. They do not, however, show many of the loose folds of skin that have been observable in the lambs of the first cross at their ages. It seems that they will be very similar to the second cross in type and fleece. We have, however, sufficient data from the previous crosses to believe that they point the way to those who wish to supplant their Merino flocks with sheep of mutton qualities.

THE VETERINARIAN.

Causes and Cure of Colic in Horses.

TO THE EDITOR:—Colic is a very frequent intestinal disease, which, if treated in time, is easily cured, but if permitted to go on without treatment is more apt to be fatal than any disease the horse is heir to. Of colic we have two kinds: First, flatulent or wind colic, properly called tympanites; second, spasmodic colic.

Flatulent colic is the more fatal of the two and is caused by fermentation of food in the intestines. Some kinds of food leave an animal predisposed to this form of colic, as green clover, potatoes, brewers grain, wheat and boiled food. In this form of colic the expression of pain, though not so acute, is more constant. The abdominal walls are distended, and, if remedies are not given to stop gas forming and allow it to pass off, the intestines will swell larger and larger and it is only a question of time until an intestine ruptures and then there is no relief but death.

Spasmodic colic is caused by some intestinal irritant, such as a drink of cold water, unmaasticated food or any foreign substance. This form of colic will cause a horse to rant and tear around, pitch and toss and roll, almost breaking the stable down; but, with all its pain and agony, it is not so dangerous as the wind colic. Symptoms of colic are sudden pain, pawing, kicking at belly, looking around at flank, lying down, rolling, struggling in a variety of ways, or lying outstretched, then suddenly rising, shaking the body and remaining for a short time free from pain. After a short interval, pain returns sometimes in a modified form, but more times aggravated. This occurs again and again until the animal is relieved or dies from exhaustion or *enteritis*. During paroxysms of pain, breathing is quick sighing or panting and the pulse is quickened full and hard. At the commencement of attack there is generally an evacuation of small quantities of feces. This symptom has caused many a good horseman to remark that the horse is now all right, and they pay no more attention to him, only to return at a later period and find his horse dead. Urine may also be passed in small quantities, or the horse may strain and not pass anything.

TREATMENT.

If a horse is greatly swollen, as in flatulent or wind colic, you get instant relief by tapping, but drugs must be given to prevent more gas forming. The operation in itself is very simple. Measure on the right side from the point of the hip to a level spot on the last rib and right in center of the line; tap by running trocar downward and forward, striking the cœcum. By removing the trocar, and leaving

the canula, the gas will escape with a great roar. If a light is applied to the gas, it will burn with a beautiful peach-blue flame. This operation is very simple and common in cow practice except that a cow is tapped on the left side in place of the right, as in the horse.

Medicine used in both flatulent colic and spasmodic colic is much alike. 1, as a rule, give three pills or balls; first ball is one ounce to a small horse and one and a half ounce to a large horse of chloral hydrate wrapped in toilet tissue paper; pill No. 2 contains one ounce to ten drachms of Barbadoes aloes. Remember we have Cape aloes, horse aloes, Socotrine aloes and a number of others, but the only aloes that are of any use for physicking horses are the Barbadoes. Pill No. 3 contains bicarbonate of soda about two ounces. After one hour, if the horse is still in pain, pill No. 1 is given again. I am very much opposed to drenching; it is not humane, and subjects a horse to too much unnecessary torture, whereas a pill or ball is given by just one push, and the ball glides over the base of the tongue and that ends it. All three pills can be given in one minute, whereas to drench it takes a long time.

Another method of giving the pills is to dissolve them in water and syringe over base of tongue. Still another method is to mix the drug with honey and spread over the tongue with a flat stick or paddle. Where it is unhandy to give pill No. 2 or the aloetic pill, a pint to a pint and one-half of raw linseed oil can be substituted. Pill No. 1 must be given without breaking, if possible, as it is apt to make the mouth sore. The use of drug No. 1 will stop all pain in a very few minutes and put the animal into a natural sleep. If the case is a very bad one, one-half pound of dry mustard mixed with water to a pasty mixture and rubbed briskly under the abdomen will cause much stamping and pawing for the time being but will greatly help in all cases. Also give warm soapsuds injections, about one-half bucketful every half hour. Don't force it much and insert gently. If you have no syringe one can be made by taking about three feet of ordinary rubber hose, round off the edges, soap or oil the end and insert about one foot. In the other end put a funnel, raise it up and pour in the soapsuds. Another method is to attach a hose to a barrel and put up higher than the horse when the soapsuds will run out of the barrel through the hose into the rectum.

A very old method for making a mare water is to insert a small lump of salt just inside the vagina. In a very few minutes the mare will have a free evacuation of the bladder. This can also be used in the horse by putting in fossa at the head of the penis. Many old horsemen still use a small piece of onion for the same purpose. Another old and very good method, when properly done, is to rub turpentine over the kidneys, using plenty of turpentine. This will set a horse wild for a few minutes and he is apt to kick the stable down, but by standing behind him with a whip you can prevent him doing damage. After the pain of the turpentine has passed the colic is gone, but the turpentine must be washed off and the skin greased afterward.

A very good remedy is, first 40 drops of aconite and 20 drops every half hour for about six doses. Another very good colic mixture and one greatly used by veterinary surgeons, and sold by some as a wonderful colic cure, is:

Chloroform.....	1/2 ounce
Laudanum.....	1 ounce
Sweet spirits niter.....	2 ounces
Linseed oil.....	1/2 pint

Mix and give at one dose. Another favorite remedy with some, particularly homeopathic veterinarians, is:

Tinct. veratrum veridi.....	2 drachms
Tinct. aconite root (Fleming's).....	2 drachms
Sweet spirits niter.....	4 ounces

Mix and give two tablespoonfuls first dose, one tablespoonful every half hour. Still another good remedy is:

Sulphuric ether.....	1 ounce
Laudanum.....	2 ounces
Peppermint.....	1/4 ounce
Best whiskey.....	4 ounces

Mix one half at once, the balance in one-half hour if no relief.

Depend on one course of treatment; don't get nervous and restless and use everything mentioned in this article, for if you do your horse will surely make good fertilizer. Under no circumstances must a horse be left after colic without giving a good physicking, as this is the principal treatment. Of all purgatives salts are the most worthless for horses.

DR. E. J. CREELY, D. V. S.

THE STOCK YARD.

The Value of Breeds and Varieties.

In judging of the value of breeds one should have some knowledge of how they are formed, if any distinction whatever is to be made in the quality of the breed or of individuals of it.

All breeds, so far as I have been able to discover, have been formed in a similar though not identical manner. First, environment produces variation for the better. A mild climate or rich herbage or barren land produced changes in some special localities which were quickly discovered by the most observing breeders.

As the wants of man multiplied and civilization advanced, knowledge was taken of the improvement which was due entirely to environment, and selection was added, and so the foundation of improved breeds was laid. The breeder saw clearly, if he was worthy of the name, that the improved conditions had improved the animals of the foundation stock which he had selected. So he was naturally led to make still further improvement, not only of the surroundings but in the food and care of the animals which he had selected.

As this improvement goes on, some individuals show the effect of it more than others, or they respond more quickly to their changed surroundings. Again, a few of the best are chosen and the work of forming a variety, and later the breed, is begun in earnest.

The value of the breed will be contingent upon two

things, the foundation stock and the skill of the breeder. One family of the breed may develop faster than others and become better, as also may the stock of one breeder become better than that of another, though not of the same family. So also may one family of the cattle of one breeder be far worse than another, and it is no uncommon thing to find pure bloods of less value than mixed bloods.

Soon the breeder writes the history or genealogy of his stock, and this we call a "pedigree," but usually this pedigree gives us no light as to the performances of the animal. It only tells of sires and dams, grandsires and granddams. We have done a little in the right direction recently by publishing the performances of individual animals and families. If the foundation stock has been well selected and the breeder has been skillful, then the breed becomes valuable, because the qualities desired have been secured and made reasonably prominent by causing these qualities to be constantly active. A pedigree a mile long won't make up for the want of these active qualities, for growth, it should be remembered, comes from the activity and multiplication of molecules of matter; the new replaces the old, and if the new particles are provided faster than the old are worn out, we have growth and surplus. We breed dairy cows to turn this surplus into milk and cream.

Let me repeat that the value of the breed or family is contingent upon the foundation stock and the skill of the breeder, in feed, care and selection. Selection alone does nothing. But if both feed and care have been correct, then the breed or variety has qualities which are wanted. If dairy cattle, then no dairyman can afford to spend a lifetime in trying to form a breed, but should avail himself of the results secured by the successful breeders who have preceded him. He may and should produce a variety, and may lay the foundation of a breed.

The strictly pure-blooded animals of the best quality are high priced. No breed can fit perfectly into every condition on but few farms. An infusion of the mixed blooded cattle of any locality is likely to give stamina and vigor to the pure-bred, and such stock can be preserved more cheaply and more easily; therefore it is safe to advise the farmer to breed a variety of animals to suit his particular locality and wants. He should start with the best of the animals on the dam side which he already has, because those of necessity have in time adapted themselves to the food they have received, the land upon which they have grazed, and the uses to which they have been put, and it is not good policy to introduce animals of different characteristics and qualities without very good and sufficient reasons.

Success lies always in improving that which is already at hand, and I know of no better way than to unite the successes of the plain farmer with his plain-bred cattle to those of the more skilled breeder of good-bred animals.

To the man who knows how to use them, the pure breeds are of inestimable value. To the man who is steadily improving his animals success comes quickly, and he finds that he is not only possessed of grades, but of valuable families of cattle, sheep, swine, etc. To this improver of domestic animals the pure-bred animal is a necessity, if he would accomplish his purpose quickly and cheaply.

But the pure-bred to the man who has plenty of money and little experience is a snare; to the man who has little money and little experience the grades and varieties of animals are better than pure bloods. Since all breeds and varieties have been formed by steady and slow advancement, so all valuable qualities in any breed, variety, family or mongrel animals must be secured by the same slow, painstaking process. The plebeian animal can easily be raised in a few generations to the dignity of a variety, and some of the best specimens will form as good foundation stock for new breeds as those which formed the beginning of the breeds which we already have.

The United States needs a far greater number of breeds; the farmer needs an infinite number of varieties; in fact, every farmer should have a variety of cattle all his own, suited to his pastures, his feed-bin, his skill, his climate and the purposes to which he desires to put them. The cattle should not be better than their owner—in time they will no be.

Writing and publishing a pedigree does not make a good breed or variety. It can best be formed by selecting the best, not only for the foundation stock, but of their progeny through many generations by weeding out all animals except the superior ones. These in turn are improved by improving their food and surroundings, and by better and more intelligent care and use. They are not formed quickly, but are the product of long and intelligent effort. There is no secret, no miracle performed, but all is governed by law. I am surprised there is no more thought given to the breeding of more varieties, breeds and sub-breeds, each adapted to its particular locality and conditions and owner. Success lies along these lines, and except in exceptional cases they cannot be well secured in any other.

Darwin says, that "of all the factors which produce variation in animals, food is the most potent." Food is the greatest factor we have in the production of variation, and if we desire to improve animals, we must of course try to produce variation, for if no variation occurs then there can be no advancement. Starting from these fundamental principles we may begin to treat of the methods of feeding and caring for the animals in order to produce variation for the better, or variation which shall result in adapting the animals more perfectly for some definite use or uses.

In order to illustrate, I take the improvement of dairy cattle. Start with the parents, at or just before the time of conception. If the parents are fed and cared for as we usually treat the best of our beef breeds, then we have taken one step toward variation for the worse, because a new quality beef has been introduced into the blood of the embryo, and we cannot hope to get as good a dairy calf as we would had the sire and dam, at the time of copulation, been in the condition in which all dairy cattle should be kept.—Prof. I. L. Roberts.

THE HOME CIRCLE.

'Tis the First One That Counts.

Beware of the first drink of liquor, my lad,
As that will lead on to the rest;
Turn away ere beginning a habit so bad,
For that way is surest and best;
Don't fancy you are strong and can stop at the first,
That one to a hundred amounts,
Refuse e'en to sip of this glass so accursed;
'Tis always the first drink that counts.

Beware of the very first smoke, my boy;
The cigar and the cigarette vile
Will multiply tenfold your health to destroy,
Your flesh and your blood to defile,
Then reject at the start this poisonous weed;
Remember your liberty's lost,
If once you allow this foe to succeed;
And here, too, the first step will cost.

Avoid the first act of deceit, my dear;
When once you have turned from the truth,
Retracing your steps is not easy, I fear—
'Tis impossible almost, forsooth.
Beware of beginning with falsehood to deal;
That act good intention surmounts,
And by it your weakness you clearly reveal,
For 'tis always the first lie that counts.

Look out for the very first theft, my love,
Though it seem but a trifle so small,
Yet when judged by our Father Who reigneth
above,
It's reckoned a terrible fall.
Dishonesty grows, till it brings forth the deed
Which to sorrow and ruin amounts;
Then beware when you're planting the very first
seed,
For that is the moment that counts.

Avoid the beginning of anything wrong;
Fight bravely to conquer the first,
As that of itself is sufficiently strong
To quickly lead on to the worst.
For don't you see, darling, without number one,
There never could be two and three,
Or a still higher number? For sin not begun
Can claim no existence, you see.

—S. Jennie Smith.

Miss Barmore's Ghost.

IT was the third day that Miss Barmore had visited the Real Estate Bureau, and to all appearances it would be the third useless attempt that she had made to secure a cheap, quiet room where she might prosecute her daily work.

"Are there no lodgings to be had in all this enormous city?" she said, in despair.

The real estate agent straightened the pens in his penrack, and nibbled the end of his ruler with a thoughtful air.

"I could let you have plenty of desirable brownstone residences, miss," said he, "or complete suites in flats. And there's no lack of business accommodation and desk-room down town. But as for cheap single rooms near the Mercantile Library, why, I must say, there's a scarcity of 'em just now. Unless—"

He put down the ruler and began turning over a drift of slips of paper on his desk. Miss Barmore stood gravely looking at him.

She was one of life's workers—a woman entirely dependent on herself for daily bread, and she had mastered the mysteries of type-writing and stenography to stand between herself and starvation. The clergyman to whose church she belonged had secured her a job of work—the compilation of a number of facts, historical and otherwise, for an old gentleman of literary proclivities in the West, who was writing a series of biographies. All day she sat in the Mercantile Library copying pages on pages out of ponderous and ancient tomes in short-hand; all the evenings she proposed to occupy herself in writing out and amplifying these notes ready for the use of her patron. And in order to do this it was absolutely necessary to obtain a quiet and reasonable room, say somewhere in the direct vicinity of her labors. Even the cheap boarding house where she was now staying had proved too much of a drain on her slender resources to be longer indulged in.

"Well?" said Miss Barmore. "Unless—"

"I did hear of a place this morning," said the real estate man, "but I ain't certain it would suit you."

"Why shouldn't it suit me?"

"It's just the location you want—two blocks or so from the library—a quiet, decent place; but it's very old-fashioned, and it overlooks—at least, the window of the room that is to let—overlooks an old graveyard."

Miss Barmore shrugged her shoulders.

"That is no objection," said she.

"Some folks find it so," observed the agent. "And there's a pawnbroker's shop down stairs."

"Well, I don't mind that, either."

"No? And it's very quiet and well conducted, and the side entrance is entirely disconnected with the store. There is a grate

and gas in the room, and plenty of fresh air; and the terms are extremely reasonable—two dollars a week."

"I will take it," said Miss Barmore, adding, with a sudden gleam of common sense: "That is if it suits me. You did not say upon what floor it was situated."

"Second floor," said the agent. "The house ain't but three stories high. It ain't modern built."

"Please write out the address for me," said Miss Barmore. "I'll go there at once."

A personal inspection of the premises convinced the little stenographer that they were as good as she could hope to obtain. A sober, elderly woman with a bunch of keys in her hand showed her the room. She glanced out of the window at a narrow enclosure where an evergreen hedge shut in a half dozen or so of mouldy old gray-stones, all learning one way.

"Some folks don't like the view," said the old woman with a sniff, Miss Barmore thought that she must have a permanent cold in her head, she sniffed so much.

"To me it is picturesque," said the stenographer. "I like it a great deal better than the noisy street. Two dollars a week? I will take it for a month."

"Gas extra," said the old woman.

"I use kerosene oil," explained Miss Barmore. "It is better for the eyes, and I cook my meals by a kerosene stove."

"Oh!" said the old woman, sniffing, not in contempt, but it understood, but simply out of habit. Her name was Nixon and she owned the premises.

"By the way," said Miss Barmore, "you have not mentioned whether there are any other lodgers in the house."

"Young man upstairs—wood engraver," said the old woman—"and his sister. Nice, quiet folks."

"Is that all?"

"Yes'm," assented Mrs. Nixon.

"Isn't there another and a larger room on this floor?"

"Yes'm but it ain't let," with a particularly impressive sniff; "and it hain't been let since the old gentleman got into the bath tub one night, three years ago, and cut his throat."

"Indeed!" said Miss Barmore, almost wishing she had not asked any questions. "Well, I will have my trunk sent here at once. Here is a week's rent in advance."

"Folks is fussy," said the old woman, rubbing her nose with one of the keys. "They fancy they hear the water runnin', just as it run that night all over the floor, and leaked down into the left-hand corner of the pawnbroker's shop. But you always hear them gurglin' sounds where there's the Croton. They're just as sartin as black beetles," with another sniff.

"Yes," said Miss Barmore, thinking within herself where she would have her table stand, and how often it would be necessary to build a fire in the little grate, as the cool October evenings came on. And she went away to pay her bill and have her small possessions removed at once from Miss Spruce's boarding house on Fourth avenue.

She had a great deal of type-writing to do that night. Her work had accumulated while she had been room-hunting, and she desired to mail a solid package the next morning to her employer out West.

Her little traveling clock on the table struck 11 before she knew it.

She rose from the type-writing.

"This won't do," said she. "I'll take my cup of milk and go to bed, or I shall have a headache to-morrow."

But as these words passed through her mind she heard a soft, steady sound like the running of water. She started. "It must be imagination," she thought, "I wish that absurd old woman had never repeated that silly story. I've worked too long, and tired my brain out. I'll go to bed."

But still the soft, trickling sound continued, low but persistent. Miss Barmore grew more and more nervous. Instead of retiring she remained up and listened with nervous intentness.

"There are certainly footsteps moving hack and forth," she thought. "Is it the ghost? Are there such things after all?"

She did not sleep much that night.

"But of course," she inwardly persisted, "it was all my imagination."

The next evening, however, as the hands of the little clock pointed to eleven, the same sound reasserted itself—the steady, monotonous trickling of water.

"I can't be mistaken this time," thought Miss Barmore.

She crept softly out into the hall. There was a light glimmering from under the door of the haunted room.

"I'll know what this means," said this resolute young woman; and summoning all her courage to the fore, she took hold of the knob of the door and opened it.

It was a large, gloomily room, with an

alcove at one end, containing a bath tub. On a shelf stood a lamp.

A girl, some years or so younger than herself, was standing at the bath tub, rinsing out a large article like a sheet, or a shirt, with sleeves rolled high above her elbows, and fair twany hair hanging about her face. She started violently at sight of Miss Barmore.

"You are the new lodger?" said she. "I—Oh, don't tell Mrs. Nixon! It's no harm, you know."

"Yes, I am the new lodger," said Miss Barmore. "But who are you? And why shouldn't I tell Mrs. Nixon?"

"I lodge upstairs," said the young girl, the color in her face varying from red to white under Miss Barmore's steady gaze. "I am Mr. Hood's sister—the wood engraver, you know—and we haven't the Croton in our rooms, and the laundress's hills are so heavy. So I run down here at nights, now and then, and wash out a few articles after everyone has gone to bed. John doesn't know about it. He would think I was trying to do too much. And, of course, the landlady wouldn't be pleased. She would think I ought to pay the water tax."

Miss Barmore smiled. Her ghost had turned out a very prosaic affair after all.

"My poor child!" said she, "you ought not to be working at this time of night. You are too slight and delicate looking."

"Oh, I am stronger than I seem to be!" said the girl. "And it cost so much to live, and I am able to help John in so few ways. And he's so good and thoughtful of me! Of course, I couldn't do this if the room was let, but while it stood vacant I thought there would be no harm. You will not betray my little economies, will you? Oh, please don't."

Miss Barmore cordially promised that she would not, and went back to her own little room, experiencing a sensation of relief that was certainly disproportionate to the occasion.

"Not that I'm at all inclined to be superstitious," said she; "but it was so strange. I was half inclined to give up my lodging at the week's end. Now, I shall certainly remain until I've completed this job of work, and it may take all winter."

She made occasion the next afternoon to go up to Miss Hood's little room. It was scantily furnished in the extreme, but scrupulously neat. The girl herself was preparing the evening meal of bread and tea. A young man, with magnifying glasses at his eyes, was working at a table in the corner—a young man whom the girl introduced with pride as "my brother John." And as the two women stood talking together, his deep and hollow cough recurring with painful iteration, revealed the secret of a coming doom.

"If I could only get anything to do," said Miss Hood; but my only accomplishment is music, and there are so many music-teachers in the city. Three, at least, to every scholar, I should think."

"Can you write?" said Miss Barmore.

"Write? Yes, of course. Everyone can do that."

"I mean a plain, legible, copper plate hand?" insisted Miss Barmore.

"I think so," wistfully.

"Then I can give you writing to do, at a fair price," said Miss Barmore. "It's in my line of business. You can help me with my stenographic notes. I need an amanuensis at times."

And so the melancholy water in the haunted apartment trickled no more.

The room was let a few days afterward to a portly English milliner, who feared neither dead men nor living, but who was business enough to make Mrs. Nixon deduct a good round percentage from the rent on account of those unfortunate rumors. And Mrs. Dohh's sewing machines kept time to Miss Barmore's type-writer, and poor little Miss Hood rejoiced in being able to help her hard-working brother along.

"Come," said Miss Barmore to herself, "humble and insignificant as I am, I've done some good in the world."

Gems.

Loving a woman for her beauty has as little merit as loving a man for his prosperity, both being equally subject to change.—Pope.

A woman who wants a charitable heart wants a pure mind.—Halliburton.

Trust him with little who without proofs trusts you with everything, or when he has proved you with nothing.—Lavater.

America is the home of the homeless all over the world.—Street.

Short absence quickens love; long absence kills it.—Mirabeau.

Adversity is the diamond dust heaven polishes its jewels with.—Leighton.

An able man shows his spirit by gentle words and resolute actions. He is neither hot nor timid.—Chesterfield.

There is not in nature a thing that makes man so deformed, so beastly, as doth intemperate anger.—John Webster.

Doing is the great thing; for if, resolutely, people do what is right, in time they come to like doing it.—Ruskin.

Have a purpose in life, and having it, throw into your work such strength of mind and muscle as God has given you.—Carlyle.

The happiest lot of a man, as far as birth is concerned, is that it should be such as to give him but little occasion to think much about it.—Whately.

Cheerfulness is health; its opposite, melancholy, is disease.—Halliburton.

Tell me with whom thou art found, and I will tell thee who thou art.—Goethe.

The more you speak of yourself, the more you are likely to lie.—Zimmerman.

Dreams full oft are found of real events the forms and shadows.—Joanna Bailie.

There is no genius in life like the genius of energy and activity.—D. G. Mitchell.

A fair test and measure of civilization is the influence of good women.—Emerson.

Allegories are fine ornaments and good illustrations, but not proof.—Luther.

Good company and good discourse are the very sinews of virtue.—Izaak Walton.

How easy to be amiable in the midst of happiness and success.—Mme. Swetchine.

Nothing is old but the mind.—Emerson.

The beautiful is beauty seen with the eye of the soul.—Joubert.

Happiness is not the end of life; character is.—Henry Ward Beecher.

The Vanishing Domestic.

Women servants, like men servants, prefer only one master. It is practically impossible, where there is a family of girls, to keep a servant long.

First one girl tells her to do something, then another wants something else done, another another thing, and so on, until the poor girl does not really know whom she is to obey. She goes to the mistress and complains. She is immediately looked upon as a discontented creature, and is given a month's notice, or the place is made so hot for her she is pleased to give notice on her own account.

Another reason why girls prefer factories is, they have their evenings to themselves; that is a great temptation to many, especially those who have swains. I do not mean to argue that these girls spend their evenings wisely—far from it; but they certainly enjoy themselves, in their own manner, which is more than one in a thousand is able to do in service. Again, the factory girl is able to purchase her own food. She, therefore, is at a great advantage over the poor domestic, who is very frequently ill-fed and overworked.

Should Married Women Teach?

The question comes to us from over the ocean, "Should married women teach?" Well, should married women preach? Should they work, sew, laugh, walk or do anything anybody else does? It takes a long time to get the idea out of the minds of the people that a married woman has no right to step outside the threshold of her own home. Let the question be settled at

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder
ABSOLUTELY PURE

home. If a woman can teach, and both husband and wife are agreed that she may teach, why shouldn't she teach?

In many respects a married woman is better fitted to teach than an unmarried woman. The general law made by some cities that no married woman can be employed in school is unjust. There are many such married persons, whom to remove from the schools would be a misfortune.

The Greater Intemperance.

We talk about temperance as though abstinence from alcohol were the fulfillment of the law, but there is a greater temperance yet to come, more in accordance with the dictates of an enlightened reason, says the *Journal of Hygiene*. There is more than one kind of intemperance, and a modicum of observation would show that disgraceful outward conduct by no means gives the full measure of danger that menaces society. The sin of overeating produces as much or more trouble to the community as that which comes from the use of alcoholic drinks. The use of tobacco is the occasion of harm second only to that of alcohol. The evil wrought by the excessive use of coffee is by no means one of the minor ones. The baneful effects of the coffee habit in Brazil are equal to that of the beer habit among the Germans. The use of opium and other narcotics is another fruitful source of injury to the community. The evils of overwork and worry do not fall far behind. In fact, we exhaust ourselves every day; in our work and in our play, in eating and drinking, and even in those athletic efforts that are supposed to be hygienic and recuperative. They are all made too intense, and therefore we do not live out more than half of our days, and that half we do not live either comfortably or with that fullness and richness of life which we might. Furthermore, these very excesses are the occasion for much of the demand for alcohol to drown the nervous rebellion that would otherwise shield us from the result of our own foolishness. In confirmation of this, look at the immense amount of disease that runs riot throughout our land.

Mental Kitchen Scales.

One pint of A coffee sugar weighs 12 ounces.

One pint of best brown sugar weighs 13 ounces.

Two teaspoons, level, of granulated sugar weighs one pound.

One and one-third pints of powdered sugar weighs one pound.

One pint, heaped, of granulated sugar weighs 14 ounces.

Two tablespoons of powdered sugar or flour weigh one ounce.

Two teaspoons of soft butter, well packed, weighs one pound.

One quart of sifted flour, well heaped, weighs one pound.

Four teaspoons are equal to one tablespoon.

Teaspoons vary in size and the new ones hold about twice as much as an old-fashioned spoon of 30 years ago. A medium-sized teaspoon contains about a drachm.

Miss Parloa says one generous pint of liquid, or one pint of finely-chopped meat, packed solidly, weighs one pound, which it would be very convenient to remember.

Early Chinese Civilization.

After making full allowance for the Chinese natural talent for exaggeration, Dr. Brewer, of Cambridge, allows them to have been acquainted with the properties of the magnetic needle B. C. 1715; while the early French Jesuit priests, who had no interest in supporting mythical stories in the land of their adoption, believe trade routes and canals to have been in existence about the same period; that a system of regular mariages had been introduced among the people; that weaving was understood; banks, bank notes and gunpowder were in existence; a regular calendar was reformed B. C. 1498; a knowledge of lunar eclipses evinced and the people divided into classes, distinguished from each other by different colored dresses.

Lemon Syrup.

Take one pint and a quart of juice, two pounds of sugar. Let the juice stand in a cool place to settle. When a thin film is formed on the top filter the juice, add the sugar, and finish in the bain-marie. If the flavor of the peel is desired with it, grate off the yellow rind of the lemons and mix with the juice to infuse, or rub it off on part of the sugar and add it to the remainder when you finish it. Orange syrup is made in precisely the same manner as lemon syrup.

YOUNG FOLKS' COLUMN.

Contentment.

I'm glad I am a little girl,
And have the afternoons for play;
For if I was a busy bee,
I s'pose I'd have to work all day.

And if I was an owl, I'd be
Afraid to keep awake all night;
And if I was an elephant,
How could I learn to be polite?

And if I was a Jersey calf,
I might forget my name and age;
And if I was a little dog,
I couldn't read the children's page.

My sakes! When I begin to count,
It makes my head go all awlirl,
There are so many reasons why
I'm glad I am a little girl.

—Anna M. Pratt in Youth's Companion.

The Farmer's Boy.

I know my face and hands are brown,
But I am young and spry;
You cannot find in all the town
A happier boy than I.
With health and hearty appetite,
With nothing to annoy,
It is a sweet and true delight
To be a farmer's boy.

My pants are patched, my cap is torn,
There's dirt upon my nose;
My muddy shoes are badly worn—
They laugh at both the toes.
My mother makes a suit for me
That I can soon destroy,
But it is always fun to be
A lively farmer's boy.

I love the mountains grand and steep,
They make me think of God;
The hillside pastures where the sheep
Browse on the fresh green sod.
The spreading beech and maple trees,
The squirrels, cute and coy,
The birds, the butterflies, the bees—
I am a farmer's boy.

I can with jack-knife carve a ship,
Or make a whistle shrill;
Can stones upon the river skip,
Down by the old red mill;
The tallest trees can nimbly climb,
Can sing, can shout with joy;
Can have a splendid, jolly time,
And be a farmer's boy.

Children of the Midway Plaisance.



THE day I spent among the children on the Plaisance will always be remembered with great pleasure, and I only wish all the little folks I know could see their queer

little neighbors, who are here from all quarters of the globe.

The Laplanders were busy putting their huts in order, so as to be ready for visitors. It was very amusing to see them laying down fresh, green boughs on the ground for carpets. There were two or three children playing around, and I know they think this must be a land of summer, for they have had no snow to play in for such a long time.

Inside the hut a dear baby was swinging in its cradle or "stock," as it is called. It was certainly the funniest cradle I ever saw; it looked for all the world like a scissors case, and the baby was laced in with only its head showing. In these stocks the mothers carry their babies on their backs, and the little creatures do not mind being laid down in a snow drift while their mothers are at work.

There were a number of reindeer grazing on the grass, and I am sure our children will acknowledge that old Santa Claus showed a great deal of discrimination when he selected them to draw his sleigh, for what but the tiny hoofs of the reindeer could ever go over the house-tops without waking the little sleepers who are anxiously listening for the coming of the dear old man, who always remembers them so bountifully.

In the Cairo street the boys are wonderfully bright. They look as if they had tumbled out of bed and forgotten to get dressed. They all wear the red fez. If it were not for it they might be taken for girls, but a girl is never allowed to wear the red cap. One little fellow wrote his name in my note-book, and such writing! He began backward. He said "Chickago," and seemed very proud of it.

The boys from Nubia have three deep scars on each cheek, showing that they belong to a slave tribe. It is a mark of servitude, and they are very sensitive about it. The children are learning to speak English and eagerly watch everything. When an Egyptian girl is married, she colors her hands red, black or blue, and the men stain their finger-nails yellow.

The donkeys and camels all came from Cairo, but they seem very well contented with America, and they are kept busy carrying boys and girls, who look with wonder at

these people from the far East. It makes them think of the colored pictures in their Bible story-books.

Near the street in Cairo I met a woman from Jerusalem. She was carrying her baby, which she always has with her. In her grand costume she made a picture never to be forgotten.

The diminutive people from Java are so pleasant that it is a pleasure to visit their curious village. During the coolest of our cool days the babies roll around outdoors with just a thin gown on and no shoes or stockings. We would think they would all die of croup. Two little boys had a long board on a piece of upright bamboo and were having a jolly see-saw. To my question, "How old are you?" one of them held up both hands, signifying ten years. The mothers carry their babies in a sort of scarf, which they put over their shoulders, and here the little one rests very comfortably. The pet of the village is a monstrous orang-outang, such as we find pictures of in our geographies.

The Turks have no children in their villages, but the Algerians have some of the cutest children imaginable.

In the Dahomey village the little folks look as if they might be carved out of chocolate, they are so brown; but they seem very much like other little negroes, and it is to be hoped that they will not grow up quite as fierce and warlike as their ancestors.

On the fair grounds there are some strange babies, but not many people know where to find them.

There are only three women from Ceylon in this country, and one of them has a little baby, which she guards with the greatest care. Through the influence of a friend, I had a peep at the little Ceylonese, who was lying on the floor sound asleep, utterly unconscious whether it was in Colombo or Chicago.

One day, by using all the arts I possessed, and with the addition of a coin, I persuaded an Indian mother to lift the cover off the cradle and let me see her baby. He certainly did not look unlike a little American boy. These Indians came from Vancouver Island, and they seemed homesick to get back to their country.

How often the thought has come to me that this year has brought to our children living examples of the people to whom they send money and missionaries.

I only hope that every child who reads this letter may come to the World's Fair and visit the Midway Plaisance.

I know that they will be glad that their homes are in this glorious land of ours, and that they will take new interest in saving their pennies to send to the thousands of little people who are still in darkness.

Only a glance at the hideous idols, which are found so plentiful in the India and Ceylon buildings, makes us shudder. But we feel that this year is going to make a great change for the better in our neighbors over the sea.

—Elije H. Glover.

A Lesson of Trust.

Some time ago a little boy was discovered in the streets, evidently very bright and intelligent, but sick. A man, who had the feeling of kindness strongly developed, went to him, shook him by the shoulder, and asked him what he was doing there.

"Waiting for God to come for me," said he, earnestly.

"What do you mean?" said the gentleman, touched by the pathetic tone of the answer and the condition of the boy, in whose eyes and flushed face he saw the evidence of fever.

"God sent for father and mother and little brother," said he, "and took them away to his home up in the sky, and mother told me when she was sick that God would take care of me. I have no home, nobody to give me anything, and I came out here and have been looking so long up in the sky for God to take me, as mother said he would. He will come, won't he? Mother never told a lie."

"Yes, my lad," said the man, greatly overcome with emotion. "He has sent me to take care of you."

You should have seen his eyes flash and the smile of triumph break over his face, as he said, "Mother never told a lie, sir; but you have been so long on the way."

How Quarrels Begin.

"I wish that pony was mine," said a little boy at a window, looking down the road.

"What would you do with him?" asked his brother.

"Ride him; that's what I'd do."

"All day long?"

"Yes, from morning until night."

"You'd have to let me ride him sometimes."

"Why would I? You'd have no right to him if he were mine."

"Father would make you let me have him a part of the time."

"No he wouldn't!"

"My children," said the mother, who now saw that they were beginning to get angry with each other, "let me tell you of a quarrel between two boys no bigger nor older than you are. They were going along a road, talking in a pleasant way, when one of them said: 'I wish I had all the pasture land in the world.' 'And I wish I had all the cattle in the world,' said the other. 'What would you do then?' asked the friend. 'Why, I would turn them into your pasture land.' 'No you wouldn't,' was the reply. 'Yes I would.' 'But I wouldn't let you. You shouldn't do it.' 'I should.' 'You shan't.' 'I will.' And with that they seized and pounded each other like two silly, wicked boys, as they were."

The children laughed, but their mother said: "You see in what trifles quarrels often begin."

Diseases Through the Skin.

Can the bacilli of infectious diseases find entrance through the skin? asks an English doctor, who adds: "I do not see that this is at all impossible, as the skin is to a considerable extent absorbent. That we catch diseases most frequently through the delicate mucous membrane of the lungs goes without saying, but that is no reason why perfect and daily ablution of the skin should not be the motto of every one who wants to keep well and free from danger. The matutinal tub, therefore, should be an institution in every family, quite as much as is the toothbrush. Cleanliness is next to godliness, and if King Cholera came to these shores, I think he would very likely pass over those who were sprinkled. By the way, I noticed the other day that a well-known London journal was calling attention to a new and simple plan of disinfecting rooms. Why, it is quite an old plan. Put a saucerful of salt in the middle of a room and pour on it a dram or two of sulphuric acid. The fumes that arise do the work of disinfection."

Language of the Visiting Card.

The custom of turning down the corners of the cards to signify different messages is not a very general one, as it is considered better form to have one's pasteboard representative as fresh in appearance as possible, writes Mrs. Hamilton Mott in the October *Ladies' Home Journal*. However, the fashion does obtain to a small extent, and its language is as follows: Turning the upper right-hand corner signifies that the single card is to include all the ladies of the household, and turning the upper left-hand corner, that the call was made personally. This latter is the more senseless custom, as except in Washington, where the visiting duties are so very onerous, it is very unusual in this country for ladies to call by proxy or to send their cards to a door by their maid or footman.

Little Money Pays Many Debts.

A to B—I owe you two dollars; here is one in part payment.

B to C—I owe you two dollars; here is one in part payment.

C to A—I owe you two dollars; here is one in part payment.

A to B—Here is that dollar I owe you.

B to C—Here is that dollar I owe you.

C to A—Here is that dollar I owe you.

Thus the movements of one dollar cancel indebtedness amounting to six times its value, and so ad infinitum. The morals are too obvious to need a diagram.—Pittsburg Post.

MRS. M. H. OBER,

Phelan Block, 816 Market, S. F.
Branch, 1236 San Pablo Avenue, Oakland.

All qualities Yelliant Union Suits for ladies and children. Headquarters for the Coast. JAKOS Hygienic Union Underwear.

Sample pieces and Catalogue sent free. TIGHTS.

Knee and ankle, open and closed seat, \$1.25 up. All qualities. Fine Black Hosiery for ladies and children.

Sponge Silk for underwear. Cleopatra and Delsarte Girdles. R. F. Sensible Waists for ladies and children.

MRS. MILLER'S PUBLICATIONS.

Book on mother and babe, a few hints for expectant mothers. Send for circular.

Also Physical Beauty. Treats on the care of the body. Monthly Magazine, \$1 a year.

Physical Culture by Mabel Jenness, 50 cents.

Only authorized agent for EQUIPOISE WAIST and JENNESS MILLER GOODS.



PATRONS OF HUSBANDRY.

Editorial Observation.

The absence of the Worthy Master of the State Grange, and the backwardness of grange writers in general, make the Grange Department a brief one this week. There is, we are told, an impression that communications for the RURAL are wanted only from the regularly appointed correspondents. This is wholly a mistaken notion. The purpose of asking the appointment of regular correspondents was merely to insure regular letters. Communications from members of the order upon matters of fraternal interest are always welcome. Don't wait for your correspondent to write, but if you know anything that other patrons would like to hear, let the RURAL have it. As somebody wisely remarked at the State Grange, what the Grange Department needs is for the grange to put itself into it.

It will interest many to know that the proceedings of the State Grange will soon be published in the usual complete form. The matter will, so we are informed by the secretary, be in shape for the printer by the end of the current week. When it is ready, bids will be asked for, and the work will be accorded to the best bidder. The matter of publication is in the hands of Messrs. Loncks and Jones, of the Executive Committee, and of Secretary Mills. The printed proceedings should be in the hands of the order at large by one month from now.

We are glad to announce that the Executive Committee has arranged with Secretary Mills to supply the Grange Department with a weekly letter reporting the transactions, etc., of his office at Santa Rosa, since it is of course impracticable for the editor of the RURAL to go to Santa Rosa each week to personally look over the files of official correspondence. The matter of compensation to Mr. Mills for this special service is as yet not adjusted, but will be fixed at the next meeting of the Executive Committee.

No word has been received from the Worthy Master since his departure last week for Syracuse, N. Y. He and his good wife had some visitations to make before the session (which begins November 15th) and expected to spend a few days at Chicago. A Californian just returned reports having met Mr. Walton of the Executive Committee at the grange headquarters on the fair grounds.

Nothing has been done with reference to maintaining a grange headquarters at the Midwinter Fair in this city. It would certainly be a proper thing. Wonders are being accomplished in the way of putting up the buildings. Four of the greater structures are already half built and hundreds of mechanics are working diligently to complete them. The fair is bound to be a great success.

The editor had the pleasure last week of attending as a visitor a regular meeting of San Jose Grange. There were but few present owing to its being an active season in the orchards; but there was no lack of spirit among the faithful ones and the meeting was thoroughly enjoyable. A proposition was made that the grange entertain the horticultural convention which meets at San Jose on Friday of this week to a midday luncheon and a committee was appointed to carry the plan into execution. It is by such wide-awake and hospitable enterprises that San Jose Grange has put itself to the front. It never misses a chance to make its presence and influence felt in the community and to borrow a slang phrase, it "never loses a trick."

A new official year has just begun and its policy is not yet outlined. The new administration ought to have the benefit of the experience and wisdom gained in the past. With this thought in mind, we call upon the veterans of the order and upon others to outline the course that should be pursued. A fraternal order like a political party or

like an individual must have a policy, a plan to work to. Now, the question is what should that policy be? We call upon patrons generally to answer the question through the RURAL and thus aid the new administration by their advice. There is wisdom in council and the order ought to have the benefit of it. We would like to hear from any member of the order who has an idea as to what should be done. The editor has some suggestions to offer but prefers to wait for somebody whose membership is of longer standing.

The National Grange.

To the Members of the Order of Patrons of Husbandry, Greeting:

The National Grange will assemble in annual session, at the city of Syracuse, N. Y., on the first Wednesday after the second Monday in November, being the 15th day of the month.

The indications point to one of the most important and interesting meetings ever held by that body. It is the privilege of every member of the Grange to bring whatever may seem to be important and for the "Good of the order" to the attention of the highest legislative body of the order. Such subjects should be reduced to writing and submitted through the State master. I hope all will feel free to avail themselves of this opportunity.

The Sixth and Seventh degrees of the order will be conferred in full form at this session. The Sixth on Thursday afternoon or evening, or both should the class be large. The Seventh will be conferred on the afternoon and evening of Friday, the 17th.

All members in good standing who have received the degree of Pomona are entitled to these degrees; if application is made in due form, accompanied by the fee. If there are Fourth-degree members in attendance who have not received the degree of Pomona and desire to obtain these beautiful and impressive degrees, arrangements will be made to accommodate them. All should, however, try to obtain the Fifth degree in the Pomona grange of the county or district in which they reside.

Patrons, come to Syracuse and visit us; we will be glad to see you. Reasonable railroad and hotel rates will be secured, and everything which the wide-awake Patrons of New York can do to make your stay pleasant and profitable will be done cheerfully. Fraternally yours, J. H. BRIGHAM, Master National Grange, P. of H.

Delta, O., Oct. 12, 1893.

From Grass Valley.

TO THE EDITOR:—The two last numbers of the RURAL PRESS have been read with more than the usual interest, as being the next best thing to being in attendance at the State Grange, when the last-mentioned was an impossibility. None but our worthy master attended this year, but we hope to do better next time. "Live in hope if you die in despair."

Grass Valley Grange met in regular meeting on October 7th, Worthy Overseer M. Thornton in the master's chair. The lecturer read the State Master's "Fare Thee Well" in the RURAL of September 30th, also his annual report at the State Grange. Both were listened to attentively, and were very interesting.

I have no news of importance to communicate, although our grange is increasing in numbers and in prosperity. As I look back now, the year seems to have been full of disappointments to your correspondent. Her pet scheme of helping out the Temple of Ceres fund came to naught, as some of the leading members opposed the idea of sending any money from the treasury of the Committee on Woman's Work when some others of us understood that that was what we were working for all the year. Some others—leading members also—offered to give a dollar each out of their individual pockets toward swelling the fund from California, said members having also done their full share of work when needed or called upon by the sisters. Some of the brothers who were not in attendance when the matter was talked over insisted upon our bringing it up again, as they think Grass Valley Grange ought to do her share and not wait until another year before sending any. When does the National Grange meet anyway, so we will know how much time we have? The lecturer made out a list of would-be "Little Grangers," but so far I have not seen that the State Grange took any action on the question.

MRS. R. S. TWITCHELL.

Grass Valley, Oct. 16, 1893.

The Secretary's Column.

The regular meeting of Sonoma County Pomona Grange was held at Hohman's hall, Santa Rosa, Cal., October 18th, 1893. Representatives from all the granges in the county were present.

The following were chosen to fill the chairs for the next year: Master, M. D. Houx, Two Rock; overseer, J. P. Whitaker, Bennett Valley; lecturer, S. T. Coulter, Santa Rosa; steward, C. H. W. Bruning, Glen Ellen; assistant steward, H. J. Schwobeda, Two Rock; treasurer, G. N. Whitaker, Bennett Valley; secretary, R. Andrews, Two Rock; chaplain, Mrs. S. Kelsey, Petaluma; gate-keeper, G. N. Sanborn, Sebastopol; pomona, Mrs. R. Andrews, Two Rock; cerea, Mrs. S. T. Coulter, Santa Rosa; flora, Mrs. Lawton, Sebastopol; lady assistant steward, Miss Mary Kelsey, Petaluma.

The following resolutions were adopted:

WHEREAS, It has come to pass that there are now more people in the United States than can find profitable employment; and whereas, there is a continuous and never ceasing tide of immigration pouring in on our shores, much of which is of an undesirable character; therefore be it

Resolved, by Sonoma County Pomona Grange, P. of H., that we heartily approve the proposition for the suspension of immigration for a period of five years, and we hereby respectfully urge the passage of such measures by Congress.

Resolved, That the Secretary be instructed to forward a copy of the foregoing resolution to our Senators and Representatives in Congress.

Resolved, That the worthy master of the State Grange be forwarded a copy of said preamble and resolutions, and we request him to ask its indorsement by the National Grange.

A resolution relating to property rights of aliens was adopted.

The next regular meeting will be a day and evening session. During the day the regular business of the Order will be transacted. The evening session will be devoted to the conferring of the fifth degree, and literary entertainment. A committee of three was appointed to secure a hall for the evening session and make other necessary arrangements.

THE SECRETARY'S OFFICE.

This office acknowledges receipt of letters from Department of Agriculture, Congressman Caminetti, Senator Perkins, and his Excellency the President (by his secretary), relating to the recommendation by the California State Grange of Bro. D. A. Ostrom as Assistant Secretary of Agriculture.

All communications for the worthy master, A. P. Roache, should be addressed to No. 555 Sixty-second street, Englewood, Ill., until November 10th; after that date to Syracuse, New York.

Quarterly reports from Vaca Valley and Temescal granges for the quarter ending September 30, 1893, have been received.

It is expected to have the journal of proceedings ready for the printer by the last of this week.

Masters of subordinate granges who have not yet sent in their reports, to be published in the journal of proceedings, 1893, will please take notice and govern themselves accordingly. I have received reports from only nineteen granges.

Address all communications for the California State Grange to

DON MILLS, Secretary.
Santa Rosa, Sonoma county, Cal.

A Frolic of Lightning.

A singular freak of lightning is reported in the vineyard of Mount St. Mary's College, near Emmitsburg, Md. The lightning first struck a tree and killed it; the apples hanging on the tree withered. It then passed to the roots of the tree and tore up the ground as if it had been plowed for a distance of about 20 feet. It then struck the end post of a grape arbor, knocking a large piece of the post that supported the vines a distance of 40 feet. It then ran along the lower wire that supports the vines, about 200 feet, to the opposite end of the grape arbor, where it pulled out the staple which was attached to the post, knocking a piece out of that post also. On the way, the grapes that hung near the wire were injured, so that they withered on the stem. The grapes that hung higher up were less damaged. The same effect, in a less degree, was produced on two adjacent arbors running parallel to the one just mentioned, one on each side of it, at a distance of about 30 feet.

For What Is Lumber Used?

For what is the greatest amount of lumber used? Nine people out of ten will say for houses and buildings. It is doubtful if 35 per cent of the lumber output goes into buildings. The railroads, farmers and miscellaneous purposes take about 40 per cent, and the other 20 per cent goes into boxes.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

The apple crop in the mountain districts seems abundant. Large invoices are being received daily by the merchants of Marysville.

Oroville Mercury: The orange crop is rapidly maturing in the groves about town. While it is not as heavy as last year, the quality of the fruit promises to be very fine.

Biggs Argus: We are informed by adobe farmers that, owing to the short wheat crop raised last season, a much greater amount of summer fallow has been prepared for the next crop, and as the ground was mostly plowed early, thereby cutting back and killing fowl growth, the ground is clear and in better condition than it has been for 10 or 15 years past. It is estimated that the proportion of summer fallow is considerably upward of three-fifths of all the wheat land in the county. With a favorable rainy season the next season's crop will be immense, and the farmers will be enabled to make up for past shortage and money stringency. There are bright prospects for the wheat-producer this year.

Oroville Register: The system of farming must change in this State if farmers hope to succeed, and this applies not only to farmers, but to fruit-growers and others who do business on a big scale. We must follow farming methods in New York, Ohio and other Atlantic States. There everything a man grows upon his farm counts during the year. He raises hay, grain, vegetables, fruit, and keeps hogs, sheep, cattle and horses. The farmers are prosperous and their homes would be considered very inviting to many California farmers. The single-crop system in this State has ruined many farmers, for if the price for their single product is low they lose heavily and it takes them years to recover from the blow. We are all interested in the success of the agriculturist and each one hopes to see him prosper. To do so he must drop his present system and diversify his crops and follow the example of successful farmers in the East.

Oroville Register: Last week a carload of Eastern eggs was received in San Francisco, yet fresh California eggs are worth 35 cents a dozen. What is the matter with California hens? It does not pay to sell wheat at 85 cents a hundred, but it does pay to feed it to chickens at that price. A hen well cared for will average 180 eggs in a year. At 25 cents a dozen she will earn for her owner \$3.75, and allowing it to cost \$2 per year to keep the hen, we have \$1.75 net profit. One hundred hens ought to clear \$175, or 500 hens \$875, enough for a small family to live upon. With 10 acres of land and 500 hens a man can make a better living and lay by more money than he can from 300 acres planted to wheat or barley. There are poultry-raisers in Sonoma county who keep as many as 1000 hens. The idea is a foolish one that only 50 or 100 hens will thrive on a place. Food and fresh water is all that is required to keep ten times the larger number. There is money in hens. It's cash down, too, for their product when it is delivered. There is not a fortune in poultry, but there is a good, safe living.

Fresno.

Fresno Express: If the Fresno county raisin people had the ordering of the weather they could scarcely have suited themselves better than they have been suited. The crop is fast being gathered, and the vineyardists generally will make some money, in spite of hard times and the general business depression.

Expositor: The Fresno county grape-growers ought to have cold-storage warehouses and put away for the winter months enough grapes to supply the markets of the East. Thousands of tons of second-crop Muscat grapes go to waste every season. These could be picked and kept in cold storage, and sold during the winter months. They could be shipped to market in barrels, using for packing tulle instead of cork dust, which is out of the question here. Tulle is abundant and easily secured. All that is wanted is some inventive genius who will devise a machine for reducing it to a condition suitable to be used as packing. Will not some of our packing establishments try the experiment of winter shipments of grapes from cold-storage warehouses?

Humboldt.

Rohnerville Herald: One thing can be asserted without fear of contradiction. It is that fruit grown in the belt which includes Garberville, Harris and Blocksburg, with their sister localities, has the benefit of a climate free from fog and severe north winds, a longer growing season, which permits the fruit to fully mature, and a range of thermometer which compels it to thoroughly ripen.

Kern.

It is stated that the Kern County Land Company will import upward of 20,000 head of cattle from Arizona. Stock is selling at a rather low figure on the southern ranges, and, since they are quickly fattened up on our alfalfa pastures, the industry offers very good profits to those engaged in it.

Kings.

Now that this season's grape crop is mostly on the trays or in the sweat-boxes, a representative of the Lemoore Leader has been interviewing the vineyardists of that section with regard to the relative merits of Chinese and white labor. The universal expression is that white labor is away ahead in all points but reliability. With the home labor the employers were perfectly satisfied; but the large vineyardists, who employed tramping white men, made many

complaints. The *Leader* says: "The investigation developed and emphasized the fact that the vagrant element, by its utter unreliability, intemperance habits and general incompetency, do not make satisfactory workers in the vineyard, and that our home labor rates the highest of all and is every way preferable."

Hanford Sentinel: Tular people buy potatoes grown in San Joaquin county, and Kings county citizens buy potatoes carted from the swamps of the Kaweah, and also shipped in from the coast, but this is not because potatoes will not grow and yield abundantly right here at home.

The *Lemoore Leader* says: "A young married man, who came to Lemoore less than two years ago, with nothing in the way of earthly possessions except a wife and three small children, informs us that he has made a living, has another baby, and has accumulated about \$1000 in property, and is now running a ranch on his own account. He is a rustler, and does not blow in his earnings over the card-table or over the saloon counter, neither does he loaf on the street corners. He has never had to wait long for a job, and has no difficulty in finding plenty to do."

Lemoore Leader: Dr. L. L. Moore had an eleven-year-old girl working for him last week who could make the average Chinese grape-picker hntle to keep up with her. The young girl, Miss Mattie Morris, picked 302 trays during the six working days. We think this a pretty good week's record for an eleven-year-old girl.

Hanford Journal: Several Kings county farmers have been bringing into Hanford recently big productions in the line of cashews. The weights range all the way from 50 to 65 pounds, one of the last-named weight being now on exhibition in the show window at J. T. Baker's drug store. It was raised on Harry Bernstein's farm, west of this city, and takes the lead thus far. We understand that he has another cashew maturing that will weigh 75 pounds. Nature is providing it expressly for exhibition among the Kings county products at the Midwinter Fair.

Hanford Sentinel: Make the dried-fruit and raisin divisions of the Midwinter exhibit strong. "It is the dried fruit that catches the eye and the interest of the man from the East," said a well-known Hanford rustler the other day. He is right. The dried peaches, apricots and prunes are the products that fill the sauce plates of the great mass of the people in the Eastern manufacturing centers and the non-fruit producing localities. The raisin is also important.

Porter Bros. & Co. shipped 80 carloads of raisins from Hanford last year, and this season they intend to ship 100 carloads or more.

Orange.

Santa Ana Blade: Some of the orange-growers of Anaheim, including William Koenig, J. Meredith and others, are topping off their orange trees or digging them out. There are three reasons for this: One is that the red scale is proving troublesome again, and the orchardist will find himself compelled to fumigate his trees at great expense; another is the unsatisfactory price realized for some crops last season, and the uncertainty of better prices the next, and the third is the fact that many of the trees are looking sickly and show considerable dead wood.

Santa Ana Blade: Apples are going forward from Santa Ana in considerable quantities, both by the Southern Pacific and the Santa Fe. K. E. Doyle of this city has shipped a large quantity to Phoenix, Arizona, by the Southern Pacific, and R. P. Selbidge is shipping to Riverside and Colton. Beans are being shipped East from Newport over the Santa Fe, coming mostly from Ventura county. Dealers are paying about three-quarters of a cent a pound for apples in this city.

Placer.

Messrs. H. E. Parker, J. Parker Whitney, Fred O. Miles, A. C. Short, L. L. Crocker, T. F. Hunter, G. H. Turner, P. W. Butler and Wallace Dewe have united in a call to their fellow fruit-growers of Penryn to "consider the formation of a fruit-growers' club."

Rocklin Representative: Ever since the commencement of the fruit season in Placer county there has been a demand for laborers in the fruit orchards and vineyards which has been, at times, very difficult to fill. This seems to have been general throughout the whole Western country. While men are howling in mad fury in cities, begging work with maniacal parades and riots and senseless threats, the broad farms about the West and Northwest are suffering for laborers. There is work and food and plenty of rest at night. The pity of people should not be wasted on any man, educated or ignorant, who in time of want is too elegant or too lazy to do even manual labor.

San Bernardino.

It is proposed by an irrigation company to reclaim a large area of the Mojave desert in the vicinity of Daggett by means of a dam across the Mojave river and a submerged flume for the purpose of tapping the underflow.

Pomona Progress: "The Chino Beet Sugar Company on Monday paid to Richard Gird at Chino the sum of \$57,649.17. He, in turn, has drawn checks in favor of the individual farmers for the amounts due them for sugar beets delivered at the factory in September. The average paid for the product is \$4.25 a ton, and the number of tons furnished last month was 14,404. Twice a day the narrow-gauge engine hauls a trainload of beet pulp to the Chino dairy, where part of it is fed to the milch stock, the residue being placed in the silo or huge storage excavation. The pulp when packed in these silos, of which there are two on the ranch (one at the stockyards and one at the dairy), goes through a process of fermentation

after which it becomes cured and possesses very great nutritive qualities. Several thousand head of Arizona cattle were fattened upon it last winter, and there will be enough for many more during the coming season."

A tract of 225 acres of land near San Bernardino, known as the Peter Tilanc farm, is reported to have been sold during the past week to a syndicate of Boston capitalists for \$62,000. The land is in an artemesian belt and has now 320 inches of water flowing on it. It is said to be the purpose of the purchasers to develop 5000 inches of artemesian water, and pipe it to Los Angeles to supply that city with pure water.

Ontario Record: Geo. S. Bisbee, who owns a ranch near the West Side schoolhouse, has picked and sold this year from two-fifths of an acre of strawberries 5333 boxes. He received \$365.10 for these, at the rate of a little over \$900 per acre. In addition to the berries sold, several hundred boxes were used by the family. Mr. Bisbee's ranch is a light, sandy loam, which seems well adapted to berries. We believe this is the largest yield of strawberries of which there is any record in southern California, and it simply shows the possibility of small fruits here.

San Diego.

San Jacinto Register: San Jacinto fruit-ranchers have had a successful year as far as the fruit is concerned. It has been an excellent season for everything. The small fruits which readily find a home market were more plentiful this year than usual, and of many choice varieties. The apricot yield of 20 tons was heavy and satisfactory in every way.

Frank Kimball will make a large olive-oil exhibit at the Midwinter Fair, and Julian apple-growers will exhibit several tons of fruit.

Santa Cruz.

Watsonville Rustler: W. V. Gaffay, at the Moro Cojo sugar-beet ranch, near Castroville, has this year practically solved the Chinese question. He has planted, tilled and harvested 700 acres of land in potatoes without the aid of a single Chinaman. If every one in these hard times would emulate Mr. Gaffay's example, the Chinese question would solve itself so far as this valley is concerned.

Castroville Enterprise: Next year promises to be an active one for Castroville and vicinity, for the beet industry will be run on the Cooper ranch in full blast. It is the intention of the beet company to lease all the ranches which are being farmed by the present lessees, into 80-acre tracts, so that where there is one family now that is on 160 acres of land or more there will be two or more. The present lessees have the first privilege of leasing where they are living and a great many are availing themselves of this privilege. We also have been informed that white help will be given the preference on the Moro Cojo beet ranch.

San Luis Obispo.

The manager of the San Miguel cannery reports to the *Courier* that during the season a total of 100,395 pounds of green fruit have been received, consisting of 13,602 pounds of apricots, 1062 pounds of peaches and 85,732 pounds of prunes. This weight when dried is reduced to 30,000 pounds of prunes, 2500 pounds of apricots and about 200 pounds of peaches.

Shasta.

Says the Anderson Valley News: One of the best proofs of the prosperity of California is that while the farmers in other sections of the Union are complaining of hard times and over-production, our orchardists are packing their fruit contentedly and making plans for planting more trees.

Solano.

Solano Republican: In Suisun township most of the roads have been graveled, and some method of keeping them in repair must now be decided upon. In Suisun valley during the fruit season an enormous amount of heavy teaming is done. Road sprinkling is the only means for the protection of our public highways; in fact, it has become a dire necessity. The residents and property-owners should not allow another season to pass, or even to begin, without fully preparing a general system of sprinkling.

Sonoma.

Sonoma Tribune: The acreage in hops in Sonoma county was considerably increased this year, but the yield per acre will not be quite as heavy as it was last year. Last year 8400 bales were produced, but the product this year will be fully 10,000 bales. The hops are generally of a very good quality, and in that regard they are above the average. The growers and buyers agree that they were picked in better shape this year than ever before, and that they are in better condition now. This they attribute to the fact that only white labor was employed in gathering the crop. Capt. Grosse, president of the Sonoma County Hop Growers' Association, says that 45 carloads had already been shipped to London from this county this year, and that more shipments would probably follow. He said that, one year with another, the farmers find the hop industry one of the best paying in the county, and he expects to see a very large increase in acreage next year. There are now over 2000 acres in cultivation, and this will undoubtedly be increased to nearly 1000 acres within a few years.

Index-Tribune: Wine-making is now under full headway in this valley, and every winery is busy crushing grapes. The weather and grapes are all that could be desired by our wine-makers, and the vintage of 1893 promises to be far superior in quality to that of former years. The yield will fall far short of previous vintages in this valley, owing to the many vineyards that have been uprooted the past five years to give place to fruit trees.

Santa Rosa Democrat: Victor Piezzi informs us that he is working up his grapes successfully

and will make about 12,000 gallons of wine. He has sold all his last year's vintage, and could easily have sold 2000 gallons more if he had had it. The quality of the grapes is very fine. They range from 21 to 22 per cent sugar, and fermentation so far is going on well. The vintage of 1893 will not be surpassed by any heretofore known in this county.

Sutter.

Sutter Farmer: The season so far has been very favorable for the curing of raisins, and the bulk of the crop is now past any damage that might result from wet weather, being under cover in the sweat-boxes or in the stemmers or graders. Our vineyardists have been making a wonderful advance in the handling of the raisins, most of them having the latest improved machinery for handling the grapes from the time they are picked until put in the sacks or boxes for shipping. Already several large lots have been disposed of at good profits. Some are making a specialty of fancy packages, which take more care in the packing, but bring a higher market price.

Tulare.

Porterville Enterprise: Farmers in this valley who wish to get stock hogs to put on their stubble, find them scarce. The porker is money this year, and, like it, hard to get. Farmers all over the country have, during the past few years, been getting rid of hogs, hence their present scarcity.

Three and a half tons of almonds were gathered from seven acres on the Eppinger ranch, southeast of town. The crop was shipped to San Francisco and brought a good price.

Tulare Times: J. Anlman sold 60 hogs at 54 cents a pound, realizing for the lot over \$700. The hogs were raised on alfalfa, but were fed wheat a short time before being sold.

Traver Advocate: Miss Walker, a young lady raisin-packer at the Armona packing-house, made a good record last Saturday. She packed 105 five-pound forms of raisins on that day. The rest of the packers do not nearly come up to this mark. The price per form is two cents. Miss Walker has worked in the packing-house several seasons and is an expert.

Tulare Register: It is true that raisins are not commanding a high price at all, but growers who have a good article are selling to advantage; that is, they are receiving prices which pay well for these times. In the Lucerne country raisins are being paid for in cash on delivery.

J. I. H. Owens brought into the Visalia *Delta* office on Saturday a tomato vine 14 feet long. From a tomato patch 10x20 feet he sold \$25 worth of tomatoes this season.

Ventura.

C. E. Hoar of the Simi writes to the *Hueneme Herald* as follows concerning a new variety of wheat: Last year I obtained some of the "White Tuscany," which was recommended as a good, white, milling wheat, and said to be rust-proof. Being rather a dry season on the Simi the yield was not large, but it gave 12 cents per acre when the Defiance," our old rust-proof standby, on similar land and under similar conditions, gave only 8 cents. This year I tried it on a larger scale. One tract of 60 acres, largely new land broken up for the first time this season, yielded 1154 sacks and weighing 142 pounds to the sack, or about 28 cents per acre. A tract of 50 acres of "Defiance" wheat, on similar mesa soil, but cropped for the first time the previous season, yielded 776 sacks and weighing 137 pounds to the sack, or about 21 cents per acre. This wheat did not turn out to be absolutely rust-proof, however, as in some spots the straw was more or less affected, but the rust did not affect the grain to any extent, as can be seen by the weight to the sack. If sown early and in proper locations it will undoubtedly prove a good wheat to raise.

Venturian: Thos. R. Bard will grade his walnuts. C. H. Wilson, the Hueneme contractor, has just built him a grader and the nuts will be put through it. It is rather a new idea in walnut handling, but it seems to be a good one.

A cocoanut tree brought from Central America by Mr. Knudson is growing at Dr. Pierpont's place in the upper end of the Lower Ojai valley.

Venturian: A. D. Barnard of the Avenue was at the Moraga ranch a few days ago and took a look at the big grape vine which covers an acre or more of ground. The trunk is over a foot in diameter, bright in color and as smooth as a gum tree when free of its old bark. Mr. Barnard says it would be a great attraction for the Midwinter Fair, as no other county could produce one. There is over a ton of grapes upon it. If it can be purchased Mr. Barnard says he will be one to contribute for that purpose.

Yolo.

A letter from Knight's Landing in the *Woodland Democrat* says: There seems to be no improvement in the price of potatoes. Many sacks will probably go to waste for want of a market.

Davisville letter in *Dixon Tribune*: Our fruit men are well satisfied with the experiment they made this year of employing white help. It will be the laborers' own fault if they do not work in the orchards and vineyards next year, to the exclusion of both Chinese and Japs.

GRANGERS' BANK

OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874.



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 800,000
Dividends paid to Stockholders.... 730,000

OFFICERS.

A. D. LOGAN.....President
I. O. STEELE.....Vice-President
ALBERT MONTELLIER.....Cashier and Manager
FRANK MUMFORD.....Secretary

General Banking. Deposits received, Gold and Silver.
Bills of Exchange bought and sold.
Loans on wheat and country produce a specialty.
January 1, 1893. A. MONTELLIER, Manager.

Nerve Tonic Blood Builder

DR. WILLIAMS' PINK PILLS FOR PALE PEOPLE

Send for descriptive pamphlet.

Dr. WILLIAMS' MEDICINE CO., Schenectady, N.Y. and Brockville, Ont.

50c. per box.
6 for \$2.50.



CHOPPERS ATTENTION!

ASK FOR THIS AXE. USE NO OTHER.

Wood-choppers, try the Kelly Perfect Axe. It will cut more wood than any other axe.

The scoop in the blade keeps it from sticking in the wood, and makes it cut deeper than any other axe. Ask your dealer for it. Send us his name if he don't keep it. It is the Anti-Trust Axe.

Kelly Axe Mfg. Co. LOUISVILLE, KY.

WE GUARANTEE

That one tablespoonful of

GOMBAULT'S CAUSTIC BALSAM

will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made. It is therefore the cheapest (as well as safest and best) external applicant known for man or beast.

THE LAWRENCE WILLIAMS CO., CLEVELAND, OHIO.

TREE WASH.

"Greenbank" Powdered Caustic Soda and Insecticide.

T. W. JACKSON & CO..

Sole Agents,

No. 5 Market Street, San Francisco, Cal

J.I.C. DRIVING BIT

IT WILL CONTROL THE MOST VICIOUS HORSE.

75,000 sold in 1891.
100,000 sold in 1892.

THEY ARE KING.

Sample mailed X C for \$1.00
Nickel, \$1.50.
Stallion Bits 50 cts. extra.

RACINE MALLEABLE IRON CO. RACINE, WIS.
J. P. Davies, Mgt.

With 23 years of experience in the Watch, Jewelry and Diamond Business, I am in a position to supply the public with goods in the above line at the very lowest figures. Shall be pleased to give estimates on anything appertaining to the line, especially American watches. Goods sent U. O. D. with privilege to examine on receipt of forwarding charges.

GEORGE FRANCIS,

126 Kearny Street, : : : : : San Francisco.

Electrical Magic.

In his autobiography the late Sir W. Siemens relates an amusing anecdote. An Arab called his attention to the fact that when at the top of the Pyramid of Cheops when he raised his hand with fingers outspread, an acute singing note was heard, the sound ceasing as soon as he let his hand fall. "I found his assertion," he writes, "to be true. As soon as I raised one of my own fingers above my head I felt a prickling in my fingers. That this could only be caused by an electrical phenomenon was proved by the slight electric shock felt on trying to drink out of a wine bottle. So I wrapped a full bottle of wine that I had with me in damp paper, and thus converted it into a Leyden bottle, which was soon strongly charged with electricity by the simple device of holding it high above my head. The Arabs had already become distrustful on seeing small lightnings, as it were, issue from the wine bottles held up by myself and companions, and now held a brief consultation.

"Suddenly, at a given signal, each of my companions were seized by the guide who led him up, who now tried to force him to go down again. I myself was standing at the very top of the pyramid when the sheikh of the Arabs came to me and told me, through my interpreter, that the Arabs had determined that we were at once to leave the pyramid, because we were practicing magic, and it might damage their chance of earning a living. On my refusing to obey orders, the sheikh caught hold of my left hand.

"I had awaited this moment, and held my right hand with the bottle in the attitude of a magician, afterward lowering it slowly toward the point of the sheikh's nose. When quite close to the feature I felt a violent shock run through the bottle to my own arm, and was certain that the sheikh must have received the equivalent. At any rate he fell speechless on the stones, and a few anxious moments passed before he rose suddenly with a loud cry, and sprang down the gigantic steps of the pyramid with long strides. The Arabs, seeing this, and excited by the sheikh's constant cries of 'Magic! magic!' released my companions, and followed their leader, leaving us complete masters of the pyramid."

Scientific Facts.

Clouds are on an average about 500 yards in thickness.

The largest apes have only 16 ounces of brain; the lowest men have 39.

All the glaciers in the Alps would not equal one of the largest in our Territory of Alaska.

The amount of air that a man will inhale in 24 hours will fill 78 hogsheads and weigh 53 pounds.

A scientist who has investigated the matter states that the men who are employed in the Paris sewers are as healthy as the average person, and no other 800 men in that city are so free from zymotic diseases.

Dr. Ernest Hart of the British Medical Journal declares that cholera will become extinct in the next 30 years, because of the rapid advance of sanitary science.

Naphthaline, which is a product of coal tar distillation, in appearance something like paraffin, has been found useful in England for the preservation of timber. The wood is soaked for two to twelve hours in the melted naphthaline at a temperature of about 200° F.

Killed by Ice Water.

Cases of death by drinking ice water when one is overheated have been reported. Great care should be taken in regard to this matter. The craving for cold water when the heat is great and a person has been exerting himself is sometimes almost irresistible. But the craving should be but sparingly indulged. In fact, it would be better at such times not to drink very cold water at all. Water of only moderate coolness would be a great deal better. One should exercise the restraints of common prudence in such matters. "Killed by ice water" is a verdict which no coroner's jury should have in their power to render.—N. Y. Ledger.

To Angora Goat Men.

MOHAIR We solicit consignments. Will give prompt personal attention to shipments, large or small. Have orders from manufacturers, therefore can promise full market prices and quick cash returns. Write us for quotations and shipping tags.

COLLEY & MARSHALL,
101 Gold St., N. Y.

W. R. PAYNE, Mgr. Mohair Dept.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

JERSEYS AND HOLSTEINS, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. William Niles & Co., Los Angeles, Cal., Breeders and Exporters. Established 1876.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER SAGE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS—The best A. J. C. C. Registered Prize Herd is owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

WM. NILES & CO., Los Angeles, Cal., Breeders of nearly all varieties of Poultry, Dairy Cattle and Hogs.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

R. H. ORAN, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

SWINE.

H. J. PHILPOTT, Niles, Cal., Importer and breeder of Teumseh and other choice strains of Registered Poland-China Hogs.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, new Prices.

CHAS. A. STOWE, Stockton, Cal., (Box 283). Breeder of Berkshire and Poland-China Hogs; Milking Strain of Durham Cattle, and M. B. Turkeys. Write for Prices.

BERKSHIRES & POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. William Niles & Co., Los Angeles, Cal. Established 1876.

MONROE MILLER, Elsieo, Ventura County, Cal., Breeder of Registered Berkshire Hogs.

P. H. MURPHY, Perkins, Sac. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.



OXFORD DOWN SHEEP FOR THE PACIFIC COAST.

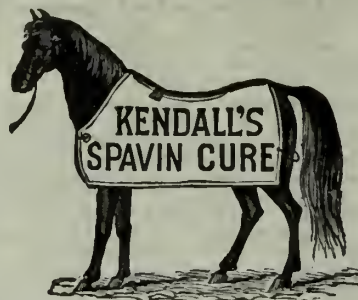
W. A. SHAFOR, Middletown, Ohio,
Largest American Importer of
O. D. Sheep,

Is prepared to quote prices on the best stock of Oxford Down Sheep to be had in England. Parties wanting first-class stock should write for particulars and induce their neighbors to join them. Import will arrive about August 1st. Write at once.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tanks, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STAR, LANE CO., OREGON, Feb. 8th, 1892.

DR. B. J. KENDALL CO.,
Dear Sirs:—I have used your KENDALL'S SPAVIN CURE for the last twelve years never being without it but a few weeks in that time and I have made several wonderful cures with it. I cured a Curb of long standing. Then I had a four year old colt badly spavined; tried every thing without any benefit, so I tried your liniment, and in a few weeks he was well and his shoulder filled up all right, and the other, a four year old that had a Thoroughpin and Blood Spavin on the same joint, and to-day no one can tell which leg it was on. These statements can be proven, if necessary; the four year olds are now seven and can be seen any day at Cottage Grove, Or. S. Z. FAXTON.

Price \$1.00 per bottle.

DR. B. J. KENDALL CO.,
Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

THE Porteous Improved Scraper

Patented April 8, 1883. Patented April 17, 1883.



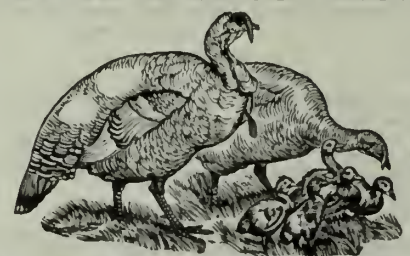
Manufactured by G. LISSENDEN.

The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making, etc.

This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

This Scraper is all steel—the only one manufactured in the State.
Price, all Steel, four-horse, \$40; Steel two-horse, \$21. Address all orders to G. LISSENDEN, Stockton, California.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular

E. FOUGERA & CO.,

30 North William Street, New York.

Short-Horn BULLS

Calves, Yearlings and 2-year-olds FOR SALE.

ROBERT ASHBURNER,

Baden Station, San Mateo County, Cal.

Only three-fourths mile from the terminus of the S. F. and San Mateo Electric Road.



In These Dull Times

You Can Largely Increase Your Income by buying an Incubator and engaging in the chicken business. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember, the best is the cheapest. **PACIFIC INCUBATOR CO.** 1317 Castro St., Oakland, Cal.



THE HALSTED INCUBATOR COMPANY.

1312 Myrtle Street, Oakland, Cal.

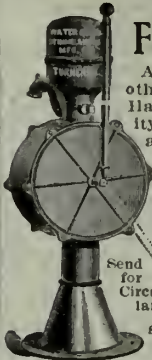
Send Stamp for Circular.

DOUBLE Breech-Loader \$6.00. RIFLES \$2.00. WATCHES

GUNS BICYCLES \$15. All kinds cheaper than elsewhere. Before you buy, send stamp for catalogue to **POWELL & CLEMENT CO.** 160 Main St., Cincinnati, O.

Water Queen

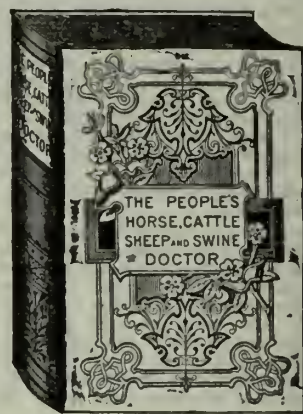
FORCE PUMP.



An improvement on all other methods of pumping. Has four times the capacity of these-called double-acting pumps. Costs less, weighs less, wears longer. Is easily operated and will not freeze. All attachments of the best material.

Adapted to hand, windmill or steam power. Every pump guaranteed for strength, durability and capacity. No charge if not as represented. (Our AERATOR Pump, pumps water and air at the same time.)
The Stimmel & Hook Mfg. Co.,
Turner, Illinois.

THE PEOPLE'S HORSE, CATTLE, SHEEP & SWINE DOCTOR



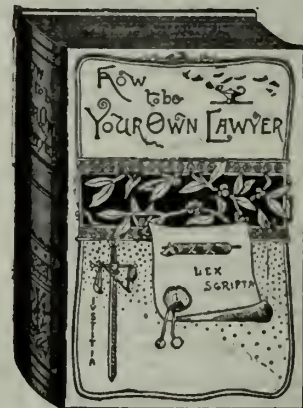
Containing in four parts clear and concise descriptions of the diseases of the respective animals, with the exact doses of medicine for each. A book on diseases of domestic animals, which should present a description of each disease and name the proper medicines for treatment in such condensed form as to be within the means of everybody, has long been recognized as a desideratum. This work covers the ground completely. The book embodies the best practice of the ablest Veterinarians in this country and Europe, and the information is arranged so as to be easily accessible—as important consideration. Each disease is first described, then follows the symptoms by which it may be recognized and lastly is given the proper remedies. The different medicines employed in all diseases are described and the doses required are given. The book is copiously illustrated, including engravings showing the shapes of horses' teeth at different ages. An elaborate index is a valuable feature. It will be sent to any address—postpaid—on receipt of the price, ONE DOLLAR.

Address **THE DEWEY PUBLISHING CO.,**

220 Market St., San Francisco, Cal.

\$1000 WORTH OF LAW

FOR \$1.50.



"How to Be Your Own Lawyer" is the title of a book of over 500 pages, adapted for the Territory in the Union, and is by far the best and most complete work of the kind ever published. It gives instruction on all the most important law points which a Farmer, Mechanic, Merchant or anybody else would want to know a hint, and is carefully studied and kept at hand for consultation when needed will save any man, in the course of an ordinary business career, hundreds, if not thousands of dollars. It is a lawyer whose retaining fee (the price of the book, \$1.50) has to be paid but once in lifetime. Plain and concise directions are given and forms furnished for the transaction of all kinds of business, and the preparation of every description of legal document in common use. A copy of this valuable work, handsomely bound in extra cloth with ink slide-stamp, will be mailed to any address on receipt of \$1.50.

Address **THE DEWEY PUBLISHING CO.,**

220 Market St., San Francisco, Cal.

FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank.)

Wants you all to write to him for prices on Young Stock.

MINORAS: White and Black.

LEGHORNS: White, Brown, Black, Buff.

B. P. ROCKS.

Mention the age desired and when shipped. Circular Free.

California Inventors

Should consult **DEWEY & CO.** AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as Journalists and large practice as Patent Attorneys enables them to offer Pacific Coast Inventors far better service than they can obtain elsewhere. Send for free circulars of information. No 220 Market St., San Francisco, Cal.

S. H. MARKET REPORT

Market Review.

WEDNESDAY MORNING, Oct. 25, 1893.

The wheat market has been steady but slow during the week, with small offerings and light business. Spot prices are firm at \$1.03 1/2 to \$1.05 for No. 1 shipping, with the usual premium for milling grades. The firmer tone observable is due largely to a slight easing up in charter rates.

The boom of last week in the local speculative market has subsided, though the quotations of last week's transactions on the Call Board have been fairly maintained. The following tables illustrate the range of the speculative markets during the week:

LIVERPOOL.

(Per cental.)	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Thursday	503 d	504 d	506 1/2 d	506 1/2 d	507 1/2 d	508 1/2 d
Friday	503 d	504 1/2 d	506 1/2 d	506 1/2 d	507 1/2 d	508 1/2 d
Saturday	503 d	504 1/2 d	506 1/2 d	506 1/2 d	507 1/2 d	508 1/2 d
Sunday	503 d	504 1/2 d	506 1/2 d	506 1/2 d	507 1/2 d	508 1/2 d
Tuesday	503 d	504 1/2 d	506 1/2 d	506 1/2 d	507 1/2 d	508 1/2 d

To-day's cablegram is as follows:

LIVERPOOL, Oct. 25.—Wheat—Firm, but not active. California spot lots, 5s 7 1/2; off coast, 2 1/2; just shipped, 2 1/2; nearly due, 2 1/2; cargoes off coast, quiet; on passage, firmer and held higher; Mark Lane wheat, quiet but steady; French country markets, very quiet.

NEW YORK.

Day	(Per bushel.)	Oct.	Dec.	May
Thursday	67 1/2	67 1/2	70 1/2	72 1/2
Friday	68 1/2	68 1/2	70 1/2	72 1/2
Saturday	68 1/2	68 1/2	70 1/2	72 1/2
Sunday	68 1/2	68 1/2	70 1/2	72 1/2
Tuesday	68 1/2	68 1/2	70 1/2	72 1/2

The following is to-day's telegram—per bushel:
New York, Oct. 25.—October, 68 1/2; December, 70 1/2; May, 72 1/2.

CHICAGO.

Day	(Per bushel.)	Oct.	Dec.	May
Thursday	62 1/2	62 1/2	64 1/2	67 1/2
Friday	62 1/2	62 1/2	64 1/2	67 1/2
Saturday	62 1/2	62 1/2	64 1/2	67 1/2
Sunday	62 1/2	62 1/2	64 1/2	67 1/2
Tuesday	62 1/2	62 1/2	64 1/2	67 1/2

The following is to-day's telegram—per bushel:
Chicago, Oct. 25.—October, 62 1/2; December, 64 1/2; May, 67 1/2.

SAN FRANCISCO.

Day	Seller's 93.	Dec.	May
Thursday, high st.	\$1.00 1/2	1 1/2	1 1/2
" lowest	1 1/2	1 1/2	1 1/2
Friday, high st.	1 1/2	1 1/2	1 1/2
" lowest	1 1/2	1 1/2	1 1/2
Saturday, high st.	1 1/2	1 1/2	1 1/2
" lowest	1 1/2	1 1/2	1 1/2
Sunday, high st.	1 1/2	1 1/2	1 1/2
" lowest	1 1/2	1 1/2	1 1/2
Monday, high st.	1 1/2	1 1/2	1 1/2
" lowest	1 1/2	1 1/2	1 1/2
Tuesday, high st.	1 1/2	1 1/2	1 1/2
" lowest	1 1/2	1 1/2	1 1/2

The following are to-day's recorded sales on Call:
Morning—Informal Session—May, 100 tons, \$1.25; 1000, \$1.24.

December, 100 tons, \$1.12 1/2; 100, \$1.12 1/2 per ctn.
Regular Session—May, 500 tons, \$1.24; 1700, \$1.24; 100, \$1.24.

December, 200 tons, \$1.12 1/2; 200, \$1.12 1/2; 300, \$1.12 per ctn.
Afternoon Session—May, 400 tons, \$1.24; 300, \$1.24; 100, \$1.24; 200, \$1.24; 100, \$1.24.

December, 100 tons, \$1.11 1/2; 100, \$1.11 1/2; 600, \$1.12; 300, \$1.12.

Seller 5 days, season's storage paid, 100 tons, \$1.11; 100, \$1.11 per ctn.

Barley.

There has been a dull market all week. We quote: Fair to good Feed, 65 to 67 1/2 cts; No. 1 Feed, 68 1/2 to 70 cts, and 70 to 72 1/2 cts for extra choice; Brewing, 80 to 85 cts. There were no Call sales yesterday. Sales for Friday and Saturday, and Monday of this week on Call were as follows:

Thursday, highest	Spot	May
" lowest	70	85
Friday, highest	70	85
" lowest	70	85
Saturday, highest	70	85
" lowest	70	85
Monday, highest	69 1/2	85
" lowest	69 1/2	85
Tuesday, highest	69 1/2	85
" lowest	69 1/2	85

The following are to-day's recorded sales on Call:
Regular Session—December, 200 tons, 74 cts per ctn.
Afternoon Session—December, 100 tons, 74 cts per ctn.

Wool.

The wool market is not quite so flat as it has recently been, but sales are hard to make, and in nearly every case upon concessions as compared with quotations. Several of the local scouring mills have started up and are opening upon both last spring's and this fall's clip. Upon a scoured basis, Oregon and California wools mixed are quotable at 30 to 35 cts. This brings values in the grease down to 4 to 7 cts for fall and 7 to 10 cts for spring. Good choice Eastern Oregon wool is quotable as low as 8 to 9 cts. Northern fall wools which are just now coming in fetch from 8 to 10 cts in the grease. While these prices are ruinous, there is a more hopeful feeling among wool men, as stocks are comparatively low in the East and there must soon be a renewal of manufacturing activity to meet the consumptive demand.

Dried Fruits.

There is absolutely nothing doing in dried fruits. All the large centers are, as usual at this time, fully stocked up, and nobody wants to buy. The outlook for the future is good, generally speaking, though it is considered doubtful if the prices of the last 30 days can be fully maintained. The quotations given in the bulletin of the Santa Clara Fruit Exchange are about right, but it should be explained that they are merely nominal, since there have not been transactions enough during the week to establish quotations. While prunes may be quoted nominally at 5 cts., as stated in the bulletin below, it is a fact that that price could not be got just now. A well-known commission man said this afternoon that he would not guarantee 4 1/2 cts. for a carload lot.

Raisins are moving freely, largely as direct consignments to the Atlantic seaboard. The best grades sell freely on arrival, at good prices, but no other grades are not wanted. Muscatels of strictly fine quality, 4-crown, loose in 50-lb boxes bring 6 to 6 1/2 cts. upon arrival.

SANTA CLARA FRUIT EXCHANGE BULLETIN.

Following is the bulletin of the Santa Clara Fruit Exchange for the current week:

SAN JOSE, CAL., Oct. 25, 1893.

So little had occurred to change market conditions it was deemed best not to issue a bulletin last week. For the past two weeks the stockholders have been giving the Exchange a full round of

labor in taking care of their deliveries. For the week ending Friday, the 20th, 697,000 pounds of prunes alone were delivered, and more limited quantities of nearly all other kinds of dried fruits. Peaches, pears, silver prunes and egg plums are in fair supply. There are many little lots of different kinds of fruits like cherries, nectarines, etc., that are so small in amount that it is only now and then an opportunity to dispose of it occurs, except by consignment. The writer has grafted out all such in his orchard and confines his product to the staples for which there is always a market at some price. Egg plums, for instance, are almost worthless before drying and but little better after, and his 10 trees are now bearing a heavy burden of prunes.

The sales of fruit by the Exchange for three weeks have been small owing to the fact that all had been sold that could be easily shipped in October and the assurances of growers for contributing their fruit were not sufficiently positive to warrant sales. However, some have been made, a few of which are to be shipped in November. So many of the stockholders are inclined to "try the market" before trusting the Exchange with their product, that a heavy list of sales without fruit in hand or under control would endanger the success of our enterprise. We are hopefully and confidently looking forward to the time when the patrons of the Exchange will all adopt the same plan now in use with the co-operative dryers, viz., deliver their fruit, call for reasonable advances as they need, and receive the balance at the close of the season, which shall cause all to share alike on corresponding qualities. It is hoped that financial conditions another year will make this the most feasible and desirable plan. Your management is happy to note that many new stockholders are being added to our list, not only from the county but remote parts of the State, the object of the latter being to obtain our publications. On Friday next the State Horticultural Society honor us with a visit and it is hoped the weather will be favorable and that our contributors will be in line with their loads of fruit as has been their custom for the past three weeks. They desire to know the processes and workings of the Exchange and a good object lesson will be to see it work. They are expected on the 10 A. M. train and will come from all parts of the State.

A few reports on shrinkage have been made in response to the call in the last bulletin. As soon as the facts are known, we hope to hear from many, and especially the co-operative dryers.

The market for the past two weeks has been inactive, but prices maintained. This is not unexpected, as the shipments have been large enough to meet the early demand and the large jobbing trade must have a little time to work off present supplies before purchasing more. A general urging of sales will necessarily cause a drop in prices, as also will consignments to any extent. A crop of this year's magnitude must be handled with much discretion. One individual grower cannot do much to make or break the market, but 50 can; and we have 1500 in the valley and twice that number in the State. The management is glad to meet any and all the stockholders, whether they are patrons or not, and counsel upon matters of interest to both. It often finds some who claim to do better than it does, and it is much gratified on receiving such information. It is not the man that gets more, but the man that takes less that troubles the Exchange.

Prunes are still held and sold at 5 cts., four sizes. Silver Prunes range from 5 to 6 1/2 cts. Peaches, unpeeled, 6 1/2 to 7 1/2 cts. Peaches, peeled, 11 1/2 to 13 1/2 cts. Pears 5 to 6 1/2 cts. Egg Plums, 3 to 4 cts.

The Canned Fruit Trade.

The following review of the condition of the canned fruit trade is taken from the monthly circular of the Cutting Fruit Packing Co.:

Packing for the season is practically over, excepting a few apples, grapes and quinces that cut but little figure in the aggregate quantity or result. Our previous advices that the total pack would approximate 50 to 60 per cent of previous years are still claimed by us to be as near correct as could be under existing circumstances. When there is added to this pack the "carry over" at prominent Eastern points, as well as in San Francisco, and the fact that the total stock to sell from has been reduced by the lightest sales, both domestic and export, known for years, it must readily be admitted that there is still an ample stock, either in first hands or those of the wholesalers, to supply all legitimate wants for the present. Under these conditions it would be strange if there be any considerable advance in prices under the most favorable circumstances, to say nothing of the unfavorable financial conditions. We have never felt that there would be the usual fall boom this year and have consistently advised our friends to that effect. The slight advance that held during the first half of September of course encouraged both packers and buyers, and considerable business was done for about two weeks. This was expected long before it came and was discounted in advance, so that the ultimate result was not near as encouraging as was expected. At the same time we understand that the cumulated stocks, both of old and new pack, at Eastern points are gradually working off at fair prices and seldom at a loss. Also that such stocks as were in the hands of weak canners here have been taken up and distributed, so that whatever trade may come between now and another packing season must be supplied from fairly new stocks and at reasonable prices. In a word, the choice bargains have been mostly picked up, and those packers in particular who have a good assortment either of extras or high grade standards, stand a fair chance of realizing a good price for their holdings, if they can afford to hold them long enough. The tomato market has been quite active for the past month, mainly reflecting the strong advance at all Eastern points. Most packers have been very busy filling contracts, and but few new sales have been made, the market for such ranging from 85 to 92 1/2 cts. Buyers who were in June desirous of reducing or canceling their contracts are now quite as eager to hasten deliveries. If reports from Eastern packing centers are to be believed, any surplus California stock can be readily worked off at \$1 and upward finally. Export trade and demand at all points is nominal.

Other Cereals, Etc.

OATS—Off grades of feed, 85 to 95 cts; good to choice, \$1.05 to \$1.10; fancy, \$1.15 to \$1.17 1/2; Sur-

prise, \$1.20 to \$1.25; milling, \$1.10 to \$1.20; black, 90c to \$1.30; red, 95c to \$1.05; gray, 95c to \$1.05.

CORN—Large yellow, 85c # ctn; small do, 85c; white, 85c to 90c.

BEANS—Peas, 2.00 to 2.20 # ctn; Pink, \$1.60 to \$1.70; Bayo, \$1.65 to \$1.70; Small White, \$1.90 to \$2.05; large do, \$1.75 to \$1.90; Butter, \$2.25 to \$2.40 for small; large do, \$2.50 to \$2.75; Red, \$2.00 to \$2.25; Lima, \$2.25 to \$2.30.

SEEDS—Rape, 2 to 2 1/2 # lb; Hemp, 3 1/4 to 4 1/4 c; Canary, 4 1/4 to 4 1/2 # lb; do California, nominal; Flaxseed, 2 to 2 1/2 c; Alfalfa, 8 1/2 to 9 1/2 c; Caraway, 7 1/2 c; Mustard, 2 1/2 to 2 1/2 c for yellow; brown do, 2 to 2 1/2 c.

HAY—Wild Oat, \$8.50 to \$11 # ton; Wheat and Oat, \$10.00 to \$12.50; Barley, \$9 to \$10.50; Wheat, \$10 to \$13.50; Clover, \$7 to \$10; Alfalfa, \$8 to \$10.00; Compressed, \$8 to \$12.

STRAW—Quotable at 35 to 45c # bale.

HOPS—Quotable from 16 to 19c # lb.

RYE—Quotable at 82 1/2 to 87 1/2 c # ctn.

DRIED PEAS—Green, 1 1/2 to 1.75 # ctn; Niles, \$1.50 to \$1.60; Blackeye, \$1.55 to \$1.70.

BUCKWHEAT—From \$1.45 to \$1.50 # ctn.

Mill Products.

The only change reported during the week was an advance of 50c # ton for Bran, this article having been in good demand and scarce.

BRAN—From \$17.50 to \$18.50 per ton.

MIDDLINGS—From \$19.00 to \$22.00 per ton.

GROUND BARLEY—From \$15.50 to \$16.50 per ton.

ROLLED BARLEY—From \$15.50 to \$16.50 per ton.

CHOPPED FEED—From \$17.50 to \$18.50 per ton.

FEED CORNMEAL—From \$22 to \$22.50 per ton.

CRACKED CORN—From \$23 to \$23.50 per ton.

OILCAKE MEAL—From \$32.50 to \$35 per ton.

FLOUR—Family Extras, \$3.65 to \$3.75 per bbl.; Bakers' Extra, \$3.50 to \$3.60; Shipping Superfine, \$2.60 to \$2.90.

VARIOUS—Cash prices per 10-lb. sks.: Cracked Wheat, 3 1/2 c per lb.; Rye Flour, 3 1/2 c; Rye Meal, 3c; Buckwheat Flour, 5 to 5 1/2 c; Oatmeal, 4 1/2 to 5c; Oat Groats, 5c; Hominy, 4 1/2 to 4 3/4 c; Rice Flour, 7 1/2 c; Farina, 4 1/2 c; Pearl Barley, 4 to 4 1/2 c; Split Pea, 5 1/2 to 5 3/4 c; Rolled Oats, 5c; Buckwheat Groats, 8 1/2 c; Graham Flour, 3c; Normal Nutriments, \$3 per case 1 doz. 1-lb. tin cans; Breakfast Delight, \$3.25 do. 2 doz. 4-lb. pkgs.

Vegetables.

The potato market was less active than for several days past. Some fancy Sweeties brought 10c per lb., but the market was within the range of the quotations. The light receipts of late under a steady demand has made Onions very firm, and some holders were asking as high as \$1.30 per ctn. yesterday. The arrivals yesterday were 4233 sks. Potatoes and 18 1/2 sks. Onions.

Vegetables were in fair demand. Corn was firm, most of the carried-over stock having been cleaned up. Cucumbers, Tomatoes and Peppers continued weak. Peas and String Beans were firm.

ONIONS—Sales on wharf from \$1.20 to \$1.25 # ctn.

POTATOES—Early Rose, \$1.20 to \$1.40 per ctn; Burbanks, 35 to 45c for river; do Salinas, 75 to 85c; Garnet Chile, 40 to 50c; Sweet, 65 to 75c.

VARIOUS—Green Peas, 2 to 2 1/2 # lb; String Beans, 2 to 2 1/2 # lb; Lima do, 2 to 3c; Cucumbers, 25 to 40c # bx; Summer Squash, 50 to 75c; Green Peppers, 15 to 25c for Bell and 25 to 40c for Chile; Green Corn, Alameda, 75c for small crates and \$1.25 to \$1.75 for large; do fks, 50 to 55c; Tomatoes, 20 to 30c # box; Garlic, 1 1/2 to 2c # lb; Green Okra, 50 to 75c # box; Eggplant, 20 to 30c; Marrowfat Squash, 50 to 60c # ton; Pumpkins, 20c.

Fruits and Nuts.

FRESH FRUITS—Strawberries, \$3 to 5 # chest for Sharpless; Raspberries, \$3.00 to 5; Huckleberries, 4 to 6c # lb.

Apples, 25 to \$1 # box; Plums, 25 to 50c # box as to kind; Pears, 50 to \$1.25 for Winter Nels, and 25 to 50c for other kinds; Peaches, 25 to 75c; fancy, \$1.

Cantaloupes, 50 to 75c per crate; Figs, 75c to \$1.50 # bx; Quinces, 35 to 60c; Pomegranates, 50 to 85c; Persimmons, nominal.

Grapes—From 15 to 30c per box for table varieties; fancy, 50 to 60c per crate; wine, Zinfandel, \$12 to \$14 per ton; Mission, \$10 to \$12; white, \$8 to \$12.

Citrus—Common to good California Lemons, \$1.00 to \$1.50 per box; fancy, Santa Barbara, \$3.00 to \$3.50; Santa Paula, \$3 to \$3.50; Limes, Mexican, \$3 to \$3.50; California Oranges, \$1.50 to \$2.25.

Various—Bananas, Honolulu, \$2 to \$2.50 per bunch; Pineapples, Honolulu, \$3.50 to \$4.50 per doz.

CRANBERRIES—From \$7 to \$8.50 # bbl.

NUTS—Jobbing prices: Almonds (new), soft-shell, 11 to 12c # lb; do papershell, 12 to 13c; do hardshell, 15 to 16c; standard, 9 to 10c; Walnuts, California (new), soft-shell, 8 to 9c; do papershell, 8 1/2 to 9c; do hardshell, 7 to 8c; do Chile (new), 8 to 9c; Chestnuts, California (new), 16 to 18c; Brazil, 10 to 11c; Filberts, 10 to 11c; Polished Pecans, Texas, 9 to 10c; Pinenuts, Mexican, 12 to 13c; Peanuts, California, 3 1/2 to 4 1/2 c; do Virginia, 6 to 7 1/2 c; Cocoanuts, \$5 to 6 # 100.

Butter, Cheese and Honey.

The butter market continues in its demoralized condition, with stocks accumulating and buyers holding off, expecting lower prices.

BUTTER—Creamery, 28 to 30c # lb; fancy dairy, 26 1/2 to 27 1/2 c; other grades of fresh, 18 to 25c; pickled roll, 20 to 22c; firkin, 18 to 20c; creamery, in tubs, 26 to 28c.

CHEESE—California, 9 to 11c # lb; fancy mild, new, 12 to 12 1/2 c; Young America, 9 to 11 1/2 c; New York cream, new, 14 1/2 to 15c; western, 12 to 13c.

HONEY—New: Comb. water white, 9 to 11c # lb in 1-lb frames; 2-lb do, 8 to 10c; extracted, 5 1/2 to 5 3/4 c for water white and 5 to 5 1/2 c for amber.

BEESWAX—From 22 to 24c # lb.

Poultry, Game and Eggs.

POULTRY—We quote Californian: Hens, \$5 to \$6.50 # doz; Broilers, 2.50 to 3 for small and \$3.00 to 3.50 for large; Roosters, \$4.00 to 4.50 for young and \$4.50 to 5.00 for old; Geese, pair, \$1.25 to 1.50; Goslings, \$1.50 to 1.75; Ducks, \$3.00 to 5.00 per doz; Turkeys, live, 14 to 16c # lb for Hens and 15 to 17c for Gobblers; Pigeons, old, \$1.25 to 1.50 # doz; do young, \$1.50 to 1.75.

GAME—Quail, 75c to \$1.00 # doz; Mallard Ducks, \$3.00 to 5.00; Teal, \$1.00 to 1.25; Sprig, \$1.75 to 2.50; Widgeon, \$1.25 to 1.75; Small Ducks, \$1.00 to 1.50; Gray Geese, \$2.50 to 3.00; White Geese, \$1.00 to 1.50;

Brant, \$1.25 to \$1.50; Snipe, English, \$1.50 to 1.75; do common, 75c to \$1.00; Hare, \$1.00 to 1.25; Rabbits, \$1.25 to 1.50.

EGGS—California, 25 to 27 1/2 c per doz for store, 30 to 35c for choice store, and ordinary ranch 37 1/2 to 42 1/2 c; choice and selected, 45 to 47 1/2 c; small sales reported higher; Eastern, 24 to 26c; extra, 27 to 28 1/2 c.

Provisions.

The overland receipts reported yesterday included 47,100 lbs hams and bacon. Mostly all descriptions of hog products have a ruling firmness.

CURED MEATS—Hams—Eastern, sugar-cured, 14 to 14 1/2 c # lb; A—1—C, 14 1/2 c; California, 13 1/2 c. Bacon—Eastern, extra light, sugar-cured, 19 to 20c # lb; medium, 15c; light do, 15 1/2 c; light, 17c; light clear, 17 1/2 c; light medium, boneless, 16 1/2 c.

Pork—Extra prime, \$14.00 to 14.50 # bbl; prime mess, \$15.00 to 16.00; mess, \$23.00 to 24.00; extra clear, \$26.00 to 27.00; clear, \$25.00 to 26.00; pigs' feet, \$12.50; hf bbls, \$6.50.

Beef—Mess, \$7.50 to 8.00 # bbl; extra mess, \$8.50 to 9.00; family, \$9.50 to 10.00; extra do, \$11.00 to 11.50; California smoked, 10 to 10 1/2 c.

Lard—California, 10-lb tins, 11c # lb; 5-lb, 11 1/2 c; kegs, 11 1/2 to 12c; 20-lb buckets, 12 1/2 c; California compound, 8 1/2 c for tierces; do hf bbls, 9 1/2 c; Eastern compound, 9 1/2 to 10 1/2 c for tierces; do prime steam, 12c; Eastern pure, 10-lb pails, 13c; 5-lb, 13 1/2 c; 3-lb, 13 1/2 c.

Wool, Hides, Etc.

The local Hide market shows a trifle better feeling for the heavy grades of salted. Tallow has stiffened up a little, the shipments last week having been liberal.

WOOL—Prices are quotable as follows: California—Spring, year's fleece, 7 to 9c # lb; 6 to 8 months, 7 to 10c; Foothill, 9 to 12c; Extra Humboldt and Mendocino, 12 to 14c. Fall—San Joaquin, plains, 3 to 4c; do mountain, free, 5 to 7c. Nevada—Choice and light, 12 to 14c; heavy, 8 to 10c. Oregon—Eastern, choice, 12 to 14c; poor, 7 to 9c; do Valley, 12 to 15c.

HIDES AND SKINS—Dry Hides, sound, 6c # lb; Kip and Cal, 6c. Heavy Salted Steer, sound, do, 4 1/2 to 4 3/4 c; medium, 4c; do light, 3c. Salted Cows, 3c. Salted Kip, 3 1/2 c. Salted Calf, 5 1/2 c. Salted Veal, 4 1/2 c (all culls 3c less). Long Wool Pelts, 75c each; medium do, 40 to 60c; short do, 25 to 40c; shearing, 10 to 20c. Deerskins, summer, 25c # lb; do medium, 15c; do winter and long-haired Skins, 5c. Goatskins, prime and perfect, 30 to 50c each

The Annual Ring in Trees.

The average rings in trees exist as such in all timber grown in the temperate zone, says the *Builders' Gazette*. Their structure is so different in different groups of timber that, from their appearance alone, the quality of the timber may be judged to some extent. For this purpose the absolute width of the rings in regularity in width from year to year, and the proportion of spring wood to the autumn wood must be taken into account. Spring wood is characterized by less substantial elements, the vessels of the thin-walled cells being in greater abundance, while autumn wood is formed of cells with thicker walls, which appear darker in color. In conifers and deciduous trees the annual rings are very distinct, while in trees like the birch, linden and maple the distinction is not so marked because the vessels are more evenly distributed. Sometimes the gradual change in appearance of the annual ring from spring to autumn wood, which is due to the difference in its component elements, is interrupted in such a manner that a more or less pronounced layer of autumn wood can apparently be recognized, which again gradually changes to spring or summer wood, and gradually finishes with the regular autumn wood. This irregularity may occur even more than once in the same ring, and this has led to the notion that the annual rings are not a true indication of age; but the double or counterfeit rings can be distinguished by a practical eye with the aid of a magnifying glass. These irregularities are due to some interruptions of the functions of the tree, caused by defoliation, extreme climatic conditions or sudden changes of temperature. The breadth of the ring depends on the length of the period of vegetation; also when the soil is deep and rich, and light has much influence on the tree, the rings will be broader. The amount of light and the consequent development of foliage, is perhaps the most powerful factor in wood formations, and it is upon the proper use of this that the forester depends for his means of regulating the development and quantity of his crop.

Guano Fertilizer!

PLAIN AND NITROGENOUS
SUPERPHOSPHATES.

GUANO FLOUR.

Complete and Special Fertilizers

FOR ALL KINDS OF

Fruit, Grain, Sugar Beets, Vegetables, Etc.

MANUFACTURED BY THE

MEXICAN PHOSPHATE & SULPHUR CO.

For circulars and other information address

H. M. NEWHALL & CO., Agents,
209 & 311 SANSOME STREET,
San Francisco.

UNION IRON WORKS,
SACRAMENTO.....CALIFORNIA.

ROOT, NEILSON & CO.

—MANUFACTURERS OF—

STEAM ENGINES, BOILERS

And all kinds of

MACHINERY FOR MINING PURPOSES.

FLOURING MILLS, SAW MILLS AND QUARTZ MILLS.
Machinery constructed, fitted up and repaired.

Front St., bet. N and O, Sacramento, Cal.

School of Practical, Civil, Mechanical,
Electrical and Mining Engineering,
Surveying, Architecture, Drawing and Assaying,
728 MARKET ST., SAN FRANCISCO, CAL.
Open All Year.

A. VAN DER NAILLEN, President.

Assaying of Ores, \$25; Bullion and Chlorination Assay,
\$26; Blowpipe Assay, \$10. Full course of assaying, \$50.
ESTABLISHED 1884. Send for circular.

Poultry and Stock Book

Niles's new manual and reference book on subjects connected with successful Poultry and Stock Raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated with handsome, life-like illustrations of the different varieties of Poultry and Live-Stock. Price, postpaid 50 cts. Address PACIFIC RURAL PRESS Office, San Francisco, Cal.



HAS DONE IT FOR others, will do it for you. Our BEARD ELIXIR will force a heavy mustache in 10 days! Full beard in 20. Never known to fail. Sample package, postpaid, 15c.; two for 25c.; one dozen, \$1.00. Agents wanted everywhere. Address WESSON MFG. CO., 6 E St., Providence, R. I.

LOOK FOR



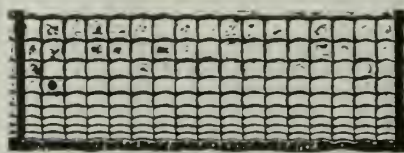
ON HORSE BLANKETS

It is a guarantee of quality.

250 STYLES.
ALL PRICES.



Your Grocer Has It. Ask For It.



Is it for Health
or Pleasure That
You Build Fence?

If neither, then you don't care to do it over right away and should use the Page Coiled Spring, which is permanent. If well put up, it will last as long as your life.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

The American Bee Journal,



(Established 1861.)
Is Oldest, Largest, Best,
I. Cheapest and Best.
Weekly Bee-Paper in all
America. 32 pages, \$1.00
a year. Send for Free Sample.
\$1.00 BEE-BOOK FREE

W. W. W. & CO., 52 Fifth St., Chicago, Ill.

CALIFORNIA If you want to know about California and the Pacific States, send for the PACIFIC RURAL PRESS, the best illustrated and leading Farming and Horticultural Weekly of the Far West. Trial, 5c for 3 mos. Two sample copies, 10 cents. Established 1870. DEWEY PUBLISHING CO., 1220 Market St., San Francisco.

A SUBSTITUTE

Advantages of this Paper for
a Drying Surface.

ABSOLUTELY ODORLESS.

WATER, ACID AND
ALKALI PROOF.

WILL IMPART NO TASTE
NOR ODOR TO FRUIT.

CHEAP AND DURABLE.

ITS BRILLIANT BLACK
SURFACE, which absorbs
the heat, drying both sides
of fruit at the same time,
and rendering the labor of
turning unnecessary.

E. G. JUDAH, Agent, 221 South Broadway St., Los Angeles.



FOR TRAYS!

Unequaled for
DRYING GRAPES.

Write for
SAMPLES AND CIRCULAR.

Paraffine Paint Co.

116 Battery St.

SAN FRANCISCO.



ONLY 25 YEARS OLD AND A GIANT!

THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG.

DEWEY & CO.'S

Scientific Press



Patent Agency.

ESTABLISHED 1863.

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class Agency. We have able and trustworthy Associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 220 Market St. S. F.

GRANGERS' BUSINESS ASSOCIATION, GENERAL COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

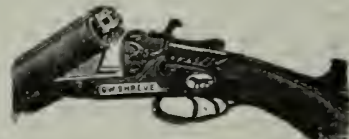
E. VAN EVERY, Manager.

T. R. BALLINGER, Grain Salesman.

Send for Price Lists

OF GUNS

And all Articles used
by Hunters and
Anglers.



GUNS SENT ON
TRIAL.

OLD GUNS TAKEN
IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.

Treatise on the Horse and His Diseases.

By R. J. KERRALL, M. D.



35 Fine Engravings showing the positions and actions of sick horses. Gives the cause, symptoms and best treatment of diseases. Has a table giving the doses, effects and antidotes of all the principal medicines used for the horse, and a few pages on the action and uses of medicines. Rules for telling the age of a horse, with a fine engraving showing the appearance of the teeth at each year. It is printed on fine paper and has nearly 100 pages, 7x15 inches. Price, only 25 cents, or five for \$1, on receipt of which we will send by mail to any address DEWEY PUBLISHING CO., 220 Market Street, San Francisco.

HEALD'S

BUSINESS COLLEGE.

24 POST STREET.....SAN FRANCISCO.

FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Book keeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR. E. F. HEALD, Pres. C. A. HALEY, Sec.

An Unusual Opportunity.

Every reader of the PACIFIC RURAL PRESS has a photograph of himself or herself or some friend that, reproduced with life-like accuracy and handsomely framed, would be of pleasant value.

The beauty and permanence of crayon portraits commend them to all, but hitherto the high price has deterred many. People naturally dislike to pay from ten to fifteen dollars for even a good portrait.

The PACIFIC RURAL PRESS has made such arrangements that any of its subscribers can secure a handsome crayon portrait for a trifling outlay. The price is set at \$2, and is put at that extraordinarily low figure to subscribers only. It is an unusual offer. The portrait will be gotten up in excellent style, will be 11 inches by 14, will be finely framed, the frame being 24 inches by 27, will have glass, etc., complete. The \$2 also includes boxing and packing—in short, a complete life-like portrait for two dollars, all ready to hang.

Any one sending \$2.40 for 12 mos. in advance or \$3 for 15 mos. in advance for a new subscription for the PACIFIC RURAL PRESS, or, if a subscriber already, either of these amounts for renewal, and two dollars additional, with the photograph they wish enlarged, will receive in return a finely finished portrait in crayon, fit to appear anywhere.

The PACIFIC RURAL PRESS makes no profit in this; it is a gift to our subscribers, present and prospective, and is an unusual opportunity to get a good picture at a nominal cost. This offer holds good for a short time only. Send the photograph you wish enlarged to this office, 220 Market street, giving postoffice directions plainly. The two dollars is for the portrait complete in this city. The freight charges are to be paid by the recipients of the portraits. Where several send from one postoffice address, those charges would be very light. Any size or style photograph will do to send, but of course much of the beauty of the portrait will depend upon the clearness of outline of the photograph from which the crayon portrait is made.

SPECIAL ANNOUNCEMENT.

We have made arrangements with Dr. B. J. Kendall Co., publishers of "A Treatise on the Horse and his Diseases," which will enable all our subscribers to obtain a copy of that valuable work free by sending their address (enclosing a two-cent stamp for mailing same) to Dr. B. J. KENDALL CO., ENOSBURGH FALLS, VT. This book is now recognized as standard authority upon all diseases of the horse, as its phenomenal sale attests, over four million copies having been sold in the past ten years, a sale never before reached by any publication in the same period of time. We feel confident that our patrons will appreciate the work, and be glad to avail themselves of this opportunity of obtaining a valuable book.

It is necessary that you mention this paper in sending for the "Treatise." This offer will remain open for only a short time.

Commission Merchants.**ALLISON, GRAY & CO.,**

501, 503, 505 507 & 509 Front St.,
And 300 Washington Street, SAN FRANCISCO.

— GENERAL —

Commission - Merchants,
GREEN and DRIED FRUITS,
Poultry, Eggs, Game, Grain, Produce and Wool.

P. STEINHAGEN & CO

404 & 406 DAVIS ST S.F.

MOORE, FERGUSON & CO.
WOOL, GRAIN, FLOUR**— AND —**

General Commission Merchants,
310 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

LINDSAY & CRAIG,

Orocker Building.....San Francisco.

Mortgages Bought, Loans Negotiated.

If you desire to sell your farm send us particulars.

Seeds, Plants, Etc.**TREES! TREES!**

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of that county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrabalan Plum Roots.

— ALSO —

Cherries, Peaches, Apricots, Apple, Almond Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

Santa Rosa Nurseries.

AN IMMENSE AND WELL ASSORTED STOCK.

TREE: TRUE TO NAME—Warranted clean and raised without irrigation.

PEARS AND PRUNES at about HALF USUAL PRICES till my surplus is sold.

Price List mailed free.

Address R. W. Bell, Santa Rosa, Cal.

GOLD DUST.

"Gold Dust Cling," says H. E. Van Deman, U. S. Pomologist, "is a yellow cling of medium size, round and regular in shape, and very firm in flesh. The color is very attractive, being dark yellow with a very red cheek. It bears heavily and carries to market with very little damage. Coming as it does before the main peach crop is gathered, it is about the first yellow cling of any special value and therefore finds a ready sale. Each year it gains in favor, but as it is a variety but recently originated the public know little of it. It is a very profitable variety." Price \$1 each, \$5 per half dozen. For sale by SACRAMENTO RIVER NURSERY COMPANY, Growers of HIGH-GRADE Fruit Trees, Walnut Grove, Sacramento County, California. Our Specialties—Genuine Tragedy Prunes, Olyman and Japan Plums—price 15 cents each; Sacramento River Bartlett and Peaches—price 10 cents each.

B. F. GODFREY & CO.,**NURSEYRYMEN,**

Davisville, Cal.

Write for Catalogue and Prices.

CALIFORNIA FRUITS

— AND —

HOW TO GROW THEM.

A MANUAL OF METHODS WHICH HAVE YIELDED GREATEST SUCCESS; WITH LISTS OF VARIETIES BEST ADAPTED TO THE DIFFERENT DISTRICTS OF THE STATE.

PRACTICAL, EXPLICIT, COMPREHENSIVE.

Embodying the Experience and Methods of Hundreds of Successful Growers, and Constituting a Trustworthy Guide by which the inexperienced may successfully produce the Fruits for which California is famous

SECOND EDITION, REVISED AND ENLARGED.

BY EDWARD J. WICKSON, A. M.

Assoc. Prof. Agriculture, Horticulture and Entomology, University of California; Horticultural Editor PACIFIC RURAL PRESS, San Francisco; Sec'y California State Horticultural Society; Pres. California State Floral Society; Etc.

Large Octavo—599 Pages, Fully Illustrated.
PRICE \$3, POSTPAID.

FOR SALE BY

THE DEWEY PUBLISHING CO.,
PUBLISHERS PACIFIC RURAL PRESS,
230 Market Street, Elevator, 12 Front Street
SAN FRANCISCO, CAL.

ORANGE CULTURE IN CALIFORNIA

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos. A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 230 Market St., San Francisco.

OLIVE TREES OLIVE TREES.

In Variety for Nurserymen,
Dealers and Planters.

Will also contract now to propagate Rooted Olive Cuttings for persons who wish to plant them in nursery spring of 1894.

OLIVE CULTURE IN CALIFORNIA,

Sixteen pages, mailed free.

Address:

JOHN S. CALKINS,

POMONA, LOS ANGELES COUNTY, CAL.

Trees, Vines and Plants,

— FOR 1893 and 1894. —

Terms on Application.

Address, L. D. BUTT,

Penryn, Placer Co., California.

ALL KINDS OF Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,

Pomona, Cal.

Pepper's Nurseries.

ESTABLISHED IN 1858.

For Sale at Low Rates, a General Assortment of Hardy Deciduous Fruit Trees.

I do not buy trees to sell; what is offered is grown in my own grounds and free from scale bugs. No scale bugs of any kind to be found in the Nursery. No agents employed. Order direct from the nursery and procure your trees true to label. Order early, as early planting is the most successful with deciduous trees. Prices furnished on application.

Address W. H. PEPPER, Petaluma, Cal.

STOCKTON NURSERIES,

— ESTABLISHED 1853. —

FRUIT TREES. FRUIT TREES.

— GRAPE VINES. —

Also Fine Stock of Shade and Ornamental Trees, Shrubs, Palms, Roses and Carnations.

PLANTS IN GREAT VARIETY.

Correspondence Solicited.

E. C. CLOWES, STOCKTON, CAL.

LOW PRICES ON

ALMOND TREES!

California Paper-Shell, Nonpareil, Ne Plus Ultra and I. X. L.

A pamphlet on Almonds mailed free of charge on application. A large supply of the GOLDEN PEACH and FRENCH PRUNE. All kinds of leading fruit trees for sale. No charges made for baling trees.

PRICES: 4 to 6 ft. Trees, 8c; 3 to 4 ft. Trees, 5c.

Address, PERCY W. TREAT,

Davisville Nurseries.....Concord, California.

NAPA VALLEY NURSERIES.

NEW CATALOGUES NOW READY.

Fruit, Nut and Shade Trees, Grape Vines, Etc., Citrus Fruits, Ornamental Shrubs, Flowering Plants, Roses, Palms, Bulbs, Seeds, Etc.

Fruit and Nut Trees propagated from bearing orchards at Sausal Fruit Farm; Unirrigated, Clean and Healthy. Do not fail to correspond before making purchases. Satisfaction guaranteed.

LEONARD COATES, - - - NAPA, CAL.

McKEVITT'S EARLY.

The New Yellow Freestone Peach!

— FIRST AND BEST OF EARLY YELLOW PEACHES. —

RIPENS IMMEDIATELY AFTER THE ALEXANDER (White Cling), which is the earliest peach in market.

Fruit is round, of medium size, VERY HIGHLY COLORED, flesh firm and sweet.

THIS PEACH HAS BEEN SUCCESSFULLY SHIPPED EAST FOR FIVE YEARS and is no new, untried variety.

Tree healthy, strong grower, and heavy bearer, never having missed a crop.

A limited number of yearling trees for sale this season. Apply early before stock is exhausted.

FRANK B. McKEVITT, : : : : VACAVILLE, CAL.

— THE —

RAISIN INDUSTRY.

A PRACTICAL TREATISE ON THE RAISIN GRAPES, THEIR HISTORY, CULTURE AND CURING.

— By GUSTAV EISEN. —

This is the Standard Work on the Raisin Industry in California. It has been approved by Prof. Hilgard, Prof. Wickson, Mr. Chas. A. Wetmore and a multitude of Practical Raisin Growers.

Sold only by the DEWEY PUBLISHING CO. or its Agents at the uniform price of \$3.00, postage prepaid. Orders should be addressed:

THE DEWEY PUBLISHING CO.,

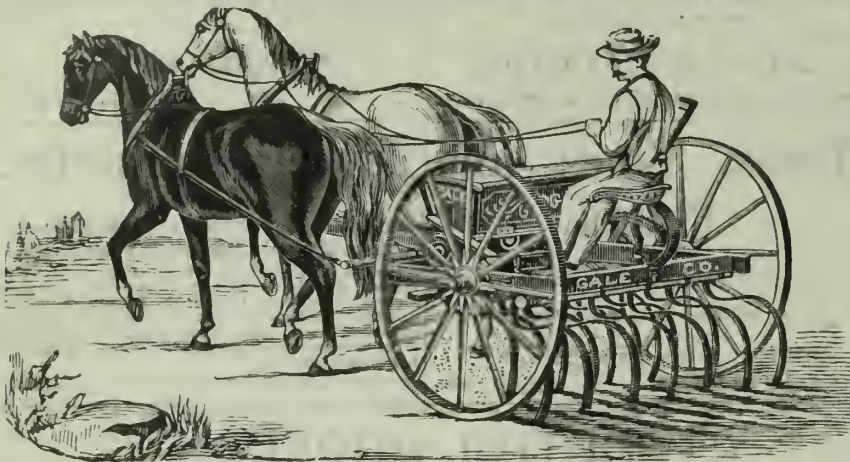
220 Market St., San Francisco.



GALE SEEDERS!

At Less Than Cost

Of any other First-class SEEDER that is sold on this Coast, and much less than the same style of machine cost us a few years ago.

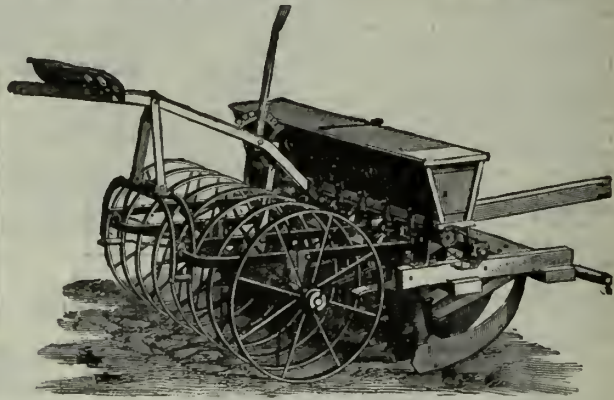


HAVANA PRESS DRILL

WILL SAVE THE COST OF ITSELF IN SOWING 1000 ACRES. NO FARMER CAN AFFORD TO BE WITHOUT ONE.

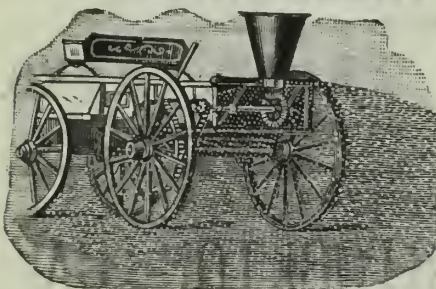


PRICE
OF
Gale Seeders,
5 1/2 FEET,
15 TEETH,
\$48.00.
6 1/2 FEET,
18 TEETH,
\$49.00.



HAVANA PRESS DRILL.

Send for Special Circular giving Testimonials of the Largest Farmers in the State that use the Havana Press Drill. You will be convinced.



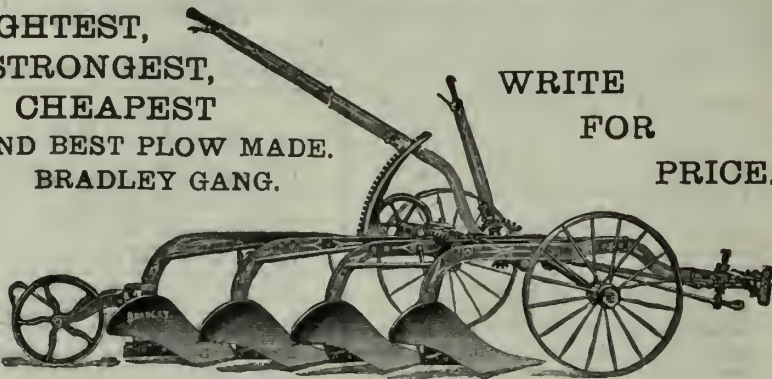
STROWBRIDGE SEEDERS.

Price Reduced!
—TO—
\$7.50.

BRADLEY FOUR GANG PLOW.

LIGHTEST,
STRONGEST,
CHEAPEST
AND BEST PLOW MADE.
BRADLEY GANG.

WRITE
FOR
PRICE.



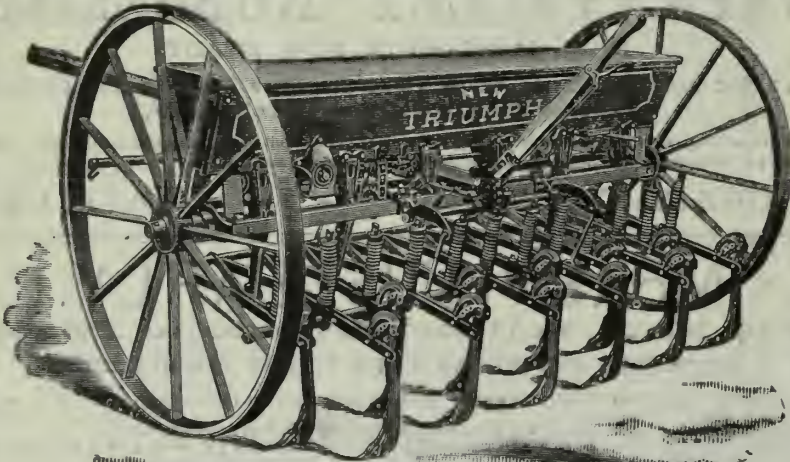
VEHICLES AND FARMING IMPLEMENTS OF EVERY DESCRIPTION.

SEND FOR CATALOGUE - FREE.

TRUMAN, HOOKER & CO. SAN FRANCISCO AND FRESNO.

THE NEW TRIUMPH FORCE FEED Broadcast Seeder and Cultivator.

STEEL FRAME. : CENTER LEVER.



SPRING PRESSURE. : EASY DRAFT.

The TRIUMPH is the Best Seeder Because it has the best positive force feed ever invented, which never bunches the grain, nor cracks it, nor gets out of order, and will sow more evenly than any other seeder made.

It is free from gear wheels, the entire mechanism being run by two sprocket wheels and a chain. It can be regulated to any desired quantity.

The TRIUMPH saves 10 to 20 per cent in seed over other seeders.

It has a strong, light frame, made of angle steel.

It is better balanced, and rests more lightly on the horses' necks, and is lighter draft.

It has high wheels (4 feet) and wide tire (2 1/2 inch), and will not sink in soft ground.

It has the best adjustable slip-tooth and pin-break Cultivator in use.

It has the best adjustable and wind-proof Scatterer in use, and scatters the seed more evenly than any seeder made.

A continuous wrought-steel Axle (1 1/4 inch) extends from one wheel to the other, and is firmly secured to the axle rail, thus effectually preventing the seeder from sagging down in the center.

It has the simplest and easiest SPRING PRESSURE arrangement in use.

The Cultivators are set more zig-zag than in other seeders, and will not clog in rough ground.

GANG PLOWS—Our line is the largest and best in the State. It includes the Eureka, Peerless, Granger and Reversible Mold Gangs, in all sizes.

SINGLE PLOWS—We furnish the Benicia, Star, Gale, Princess and a score of others. We guarantee their quality.

HARROWS—We have all the various styles, from a common Drag to a Steel Frame Spring Tooth Lever Harrow. Also the Climax and Tiger Disc Harrows.

SEEDERS—Our stock is not equalled; before purchasing some other kind examine our Gem, with Armstrong's patent force feed, Gorham, Triumph, Monarch, Climax and others.

WRITE FOR OUR NO. 27 LATEST SPECIAL 140-PAGE CATALOGUE of Plows, Harrows, Seeders, Cultivators, etc.

BAKER & HAMILTON,
SAN FRANCISCO AND SACRAMENTO.

WE GIVE ESPECIAL ATTENTION TO

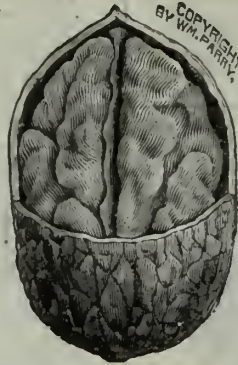
Fruit Trees! Deciduous Fruit Trees!

ALEXANDER & HAMMON'S

Rio Bonito Nurseries, Biggs, Butte Co., Cal.

KAGHAZI

:- SOFT SHELL :-



PERSIAN

:- WALNUT! :-

Our Stock of TREES and VINES is Most Complete in EVERY CLASS of Fruits.

A LARGE STOCK OF THOMPSON'S SEEDLESS GRAPES.

SHIPPING, CANNING and DRYING Fruits of all kinds.

Best Assortment of RAISIN and TABLE GRAPES in California.

Early Shipping Plums a Specialty.

SPECIAL PRICES FOR TREES IN LARGE QUANTITIES.

DURING the last three years, trees grown on the FEATHER RIVER BOTTOM LANDS, at RIO BONITO, BUTTE COUNTY, have been much sought after, and the demand for them is increasing all over the State where they have been planted. Owing to the peculiar adaptability of the soil and climate of this section for growing nursery stock, they are making a very large and well-furnished system of root growth, and maintaining a correspondingly strong and vigorous top, maturing the wood thoroughly, we are enabled to supply our patrons with the best of trees, heads in every respect, entirely free from insect pests, and in perfect condition for transplanting.

If You Are Going To Plant Trees, It Will Pay You To Correspond With Us Before Purchasing.

ALEXANDER & HAMMON,
BIGGS, BUTTE COUNTY, CALIFORNIA.



Vol. XLVI. No. 19.

SAN FRANCISCO, SATURDAY, NOVEMBER 4, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market Street.

California Foothill Orchards.

California's foothills constitute a most important and interesting portion of the productive area of the State. It is almost trite to speak of them as the first great arena of California's industrial activity, and to point to their vast gold output of pioneer days as likely to be outshone by the mass and brilliance of the gold which is accumulating from her fruit products. This is, however, as true as trite, and will bear repetition. There is, though, a marked difference in the old and new wealth-yielding eras of the foothills. The gold era was for the most part destructive and evanescent. Its progress was through disruption, desolation and abandonment. The fruit era is advancing through development, improvement and home-making. There can be no question as to the comparative values of the two eras to the State and to humanity.

Foothill scenery is most picturesquely varied. All foothill landscapes have some features in common, it is true, and they are characteristic, so that a well-informed Californian hardly needs a label upon a photograph or engraving of any foothill scene. He is not likely to mistake it for any other portion of the State or of the world so far as he has seen it. The

engraving which we give on this page is quite different from those which we have given in former issues, and yet it is clearly a foothill scene. Other scenes have greater variety, deeper depressions, sharper slopes, more abundant indigenous foliage, and would be considered more picturesque than this one, and yet its relation is unmistakable.

The foothill orchards have not the uniformity of the large fruit areas of the valleys. The fields are broken by irregular slopes and by untillable intervals or low bluffs. In laying off for planting, each section is usually considered by itself with reference to ease in cultivation and irrigation; and for this reason the rows, as one takes a wide view of the landscape, run at all angles to the line of sight. Even in a comparatively small ranch under a single ownership this variation will occur, and, as a camera shot in almost any foothill region will include the property of several owners, the lack of uniformity is more noticeable. Quite in contrast are the large orchards and vineyards of the valleys. There the most penetrating lens could strain its optic nerve in the effort to see beyond the vanishing points of all the parallel rows of trees, and the passing balloonist would gaze down in wonder upon the endless bars of the gridiron spread out beneath him.

The picture of the foothill orchards illustrates well the character of the dwellings and outbuildings which suffice for comfort of man and animal in the foothill climate. There are of course fine residences there, and they are desirable enough when the profits from the orchards warrant such expenditure; but the beginner can watch his trees grow as well from the shelter of a cabin as from a mansion, and his wife and babies will for the first few years be as contented under shakes as under parti-colored shingles. Afterward they will want something more elaborate and pretentious, and, fortunately, it is not often difficult to obtain it.

The picture represents one of the newer regions of the foothills. The trees are comparatively young and do not

bonds will be paid before the case is settled. There promises to be a very exciting and unfortunate local conflict over the matter. If the irrigation enterprise was too previous, other intending districts should take warning. Public irrigation undertakings should be wisely and cautiously pursued.

It looks as though the wine men might catch it from this Government in a way they will not like. It is said a bill will be introduced in the House as soon as the tariff bill is presented, providing for a moderate internal revenue tax on domestic wines, and an effort will be made to add it as an amendment to the revenue provisions of the tariff bill. Advocates of the scheme say that in the first

place it is a good way to raise a revenue, and that furthermore it would be only fair to tax domestic wines, inasmuch as wine producers are now permitted to use grape brandy without a tax to fortify their wines. This is about as unjust and unfair a proposition as could be put forward. Reduce the tariff on foreign wines and tax the domestic for revenue. Well there may be a cold comfort that such a measure will not yield revenue to the Government that contrives it, for there would not long be any domestic



ORCHARD VIEWS IN A NEWLY PLANTED FOOTHILL REGION OF CALIFORNIA.

yet occupy more than half the space allotted to them. The vineyards show that the misses have not yet been made good. A very few years' growth would show a very different picture from the same point of view. Nothing but the gables of the buildings and the top of the windmill can be seen. The red soil of the cultivated lands and the yellow of the pasture lots in the center of the scene will be submerged in a sea of emerald.

THERE is trouble brewing in the Central irrigation district of Colusa county because of high taxes for irrigation improvements. The protesting farmers claim that the district was not organized lawfully and that the bonds were not properly disposed of. They claim to be indignant because three-fourths of the lands concerned are naturally unfit for irrigation, being shallow clay with hardpan close to the surface. Under the Wright Act, residents of the district who owned no land at all had the right to vote as to the bonding, and they used it. The farmers were strongly against the irrigation project, but they were voted down. A suit will shortly be instituted to nullify the bonds issued for the carrying on of the irrigation project. If the courts proceed as slowly as usual with this issue, the

wine to hang the tax on. The obstacles this industry has had to contend with in the shape of adulterations, low prices and ruinous competition with imported products would seem to sufficiently tax endurance without any hint of a domestic impost.

OWING to the occurrence of the Midwinter Fair more than usual interest pertains to the times and places for the two citrus fairs for which provision is made by law. It has been the rule to hold one north and the other south of the center line of the State. This year both sections are arranging for extensive displays in separate buildings at the Midwinter Fair, and, so far as opinion has been expressed, there seems to be a desire that the State hold both of its citrus fairs in the new annex to San Francisco which is so fast rising among the sand hills of the new portion of Golden Gate Park. One fair could be held at the opening of the fair and the other toward spring, so as to suit the fruit from the two regions. To decide the time and place of these fairs the State Board of Agriculture will meet in Sacramento November 8th, at 10 A. M., and all interested in the matter are invited to be present and express their views on the subject.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING Co.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half Inch (1 square).....	1.00	2.50	6.50	22.00
One Inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALORAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, November 4, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—Orchard Views in a Newly-Planted Foothill Region of California, 309.
EDITORIALS.—California Foothill Orchards; Miscellaneous, 309. The Week; Secretary Morton and the Agricultural Orders; Growing and Marketing Fruit; Miscellaneous, 310. From an Independent Standpoint, 311. Farm Wages and Produce Prices, 312.
MISCELLANEOUS.—The World's Wheat Supply; A Ruined Wheat Harvest; Treatment for Insects and Fungi; How Is It Done?; Miscellaneous, 312. For the Elimination of the Middleman; Abuse of the Stomach; Healthy Bed Clothing, 322. Rest in Motion; Remedy for Toadstool Poisoning; Over Three Millions in a Day, 323.
HORTICULTURE.—The State Horticultural Society, 313-314.
THE DAIRY.—The Training of Helpers, 314.
SWINE YARD.—Dangerous Boars; Fattening Hogs; Roots for Hogs; Oilmeal for Pigs, 315.
POULTRY YARD.—Hints for Turkey Time; Kitchen Scraps; Buying Hens for Use; Needed It, 315.
THE FIELD.—Farm Wages Must Come Down; The Compost Heap, 315.
THE HOME CIRCLE.—Miscellaneous, 316.
YOUNG FOLKS' COLUMN.—Miscellaneous, 317.
PATRONS OF HUSBANDRY.—Editorial Observations; From New Hope; The Secretary's Column; American River Grange, 315.
AGRICULTURAL NOTES, 318-319.
MARKET REPORTS.—The Local Produce Market, 321.

BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

	PAGE
Harrows—Deere Implement Co.....	324
Agricultural Implements—Baker & Hamilton.....	324
Carriages and Wagons—California Wagon & Carriage Co.....	324
Red Seal Lye—P. C. Thomas & Co., Philadelphia, Pa.....	322
Poultry Journal—"Farm Poultry," Boston, Mass.....	323
Fencing—De Kalb Fence Co., De Kalb, Ill.....	323
Diamonds and Jewelry—John H. Drumgold.....	322
Cancer Cure—Dr. Eugene B. Bell.....	321
Nursery Stock—Thomas Meehan & Sons, Germantown, Pa.....	323
Nursery Stock—Rancho Chico Nurseries, Chico, Butte Co.....	321
Meyer's Slip Shares—David N. Hawley.....	322
Spraying Pumps—Field Force Pump Co., Lockport, N. Y.....	319
Swine—Sessions & Co., Los Angeles, Cal.....	320
Swine—Chas. A. Howe, Stockton, Cal.....	320
Hollenbeck Hotel, Los Angeles, Cal.....	317
Incubators—Geo. H. Stahl, Quincy, Ill.....	320
Well Machinery—American Well Works, Aurora, Ill.....	323

See Advertising Columns.

The Week.

Still the elements threaten but do nothing. The weather wise assure us that a storm is brewing, and estimate its volume from the extent of preparation. If they be right we shall soon have a soaker which will really mark the turn of the seasons. It is fortunate that it has not come earlier, for full time has been given for the ingathering of everything except the latest fruit, and probably the people as a whole are as ready for rain as they ever are. Still, it is still early and there is no great hurry about rain except among those who want to start plows and seeders and are eager to give the mules a chance to earn their feed.

The times seem to have a little kinder edge upon them and the feeling is more hopeful without any great change in the facts. The merchants evidently do not expect a very brisk holiday trade, for their orders for goods have been scaled down to suit the times. It will be just as well to draw the lines a little closer on nicknacks and gewgaws of the expensive kind, and still contrive that the little ones shall not miss their holiday pleasures. Fortunately it does not require large expenditure to produce a vast amount of happiness of this kind.

THE local apple market does not show that any great amount of the fruit has yet moved eastward as has been promised that it would. It is reported that there are over 20,000 boxes ready to come to Marysville from different points in Nevada county, but this year the commission men and shippers are not anxiously seeking apples or eagerly making consignments. From the Honey Lake and Lassen country, where some of the finest apples in the world are grown, nearly 40,000 boxes now want a market, and much of that supply is being offered to the Marysville commission men. The price at which it is offered to land the fruit there makes it enter into competition with that grown in Nevada county. The lower-grade apples in 50-pound boxes in that section are worth from 40 to 45 cents, while the latter varieties will run from 50 to 62½ cents. We are not informed as to what proportion of the alleged surplus at northern points is suitable for export. Upon that much depends. We believe sound, long-keepers, properly packed, will go profitably at the East, but there is no use sending low-grade apples. We believe there will be abundant demand for good fruit, well handled.

Secretary Morton and the Agricultural Orders.

The American farmer has foes to contend with. They are not the natural foes—not the weevil in wheat, nor the murrain in cattle, nor the cholera in swine, nor the drowth, nor the chinch-bug. The most insidious and destructive foe to the farmer is the "professional" farmer—the "promoter" of "granges" and "alliances," who—for political purposes—farms the farmer! It is true that American farm life is isolated, and that in the newer sections of the Union there is too little of social pleasure and festivity, and sometimes I think it would have been better if our lands had been surveyed so as to bring the owners into villages, rather than to make them half a mile apart, by quarter sections. A re-survey in the new States and Territories is not impossible, by which country villages may be established, and thus more charm and felicity given to the home life of the people by closer and more neighborly associations. But my hope for the future of the farmer is not based upon gregariousness. He will not succeed better by forming granges and alliances—which generally seek to attend to some other business than farming, and frequently propose to run railroads and banks, and even to establish new systems of coinage for the Government—than he will by individual investigation of economic questions. Humanity generally, and the farmer particularly, has no enemy equal, in efficiency for evil, to ignorance. Therefore, each tiller of the soil, each farmer, should, for himself individually, investigate the various methods of cultivating land, of producing good crops, and of securing remunerative markets.

Thus spake Mr. Secretary Sterling J. Morton, member of the Cabinet of President Cleveland and official representative of the agricultural interests of the United States, at an Agricultural Congress held at the World's Fair on October 16th. In a certain sense it is a valorous utterance. The Secretary cut himself loose at one stroke from all the traditional moorings of the agricultural orator; he shook out no sail to catch the breezy platitudes which usually give such impetus to the crafts of demagogism; he poured out no oil of flattery to smooth the raging billows into which such a course would carry him. To change the figure and bring the national farmer back upon the dry land where he should properly cavort himself, we can but add that he laid back his ears, sunk his teeth into the bit and rushed forward upon unknown and unsound ground. In a certain sense, we say, this was valorous. It was a bold stroke, but there are different kinds of boldness.

There is boldness born of courage, and courage comes from conviction of right. Singular as it may seem, such courage is attended by personal humility, by a most thorough knowledge of the wrongs of others and sympathy with them, and by the most absorbing tenderness and devotion. The greatest of the world's reformers have had courage thus inspired and envied, and their boldness has been sublime. But there is another kind of boldness which arises from ignorance or disregard of right, which is the offspring of personal conceit and prejudice, which lacks discernment and mistakes general denunciation for wholesome criticism. Such a course may be valorous, but it is indiscreet and idle. It awakens strife; it engenders harshness and enmity; it is subversive of progress.

Mr. Morton has missed perhaps the greatest opportunity of his life. The time was right for a careful review of the wonderful progress which this country has made in agricultural organization during the last twenty years. It would have been most encouraging to our own people and most instructive to the world at large to have had a calm and scholarly analysis of that progress and a description of the resultant benefits. It would have been most salutary to have had the personal greed and ambition of the demagogue impaled and the wild fallacies of the ignorant agitator exposed. Then there would be the grand and true conclusion set forth for the encouragement of progressive industrialists of the whole world, that in spite of the parasitic promoter and in spite of the false creations of the visionary, there is a true force and a grand accomplishment in agricultural organization, and that in it really lies the hope of the future of agriculture as a progressive and liberal art.

Some such contribution as this to industrial progress and true statesmanship might have been reasonably expected from the highest agriculturist in the greatest nation of the world. Instead of this what have we in the paragraph, which so far as it goes, seems to be a verbatim report? We have:

First—a gross misconception of the aims and the accomplishments of agricultural organization and the substitution of the evil which has been its weakness for the good which is its strength.

Second—a lament for a system of rural arrangement which is wholly impracticable and visionary.

Third—a plea for the degradation of farmers as citizens by refusing them the right to understand or participate in community interests for which they are as well fitted as any other class of citizens and by which their industry is affected almost to life and death limits. The attempt to discourage farmers from participation in financial and transportation affairs is nothing less than outrageous and disgraceful and a sorry action to throw into the eyes of the world which have come to picture the American farmer as the most advanced of his class in the world.

Fourth—the farmer is urged to forsake organization and devote himself to individual investigation of economic

questions; to lift himself up by his own boot-straps, so to speak. His enemy is ignorance and he should tackle this monster single-handed and alone. This is a shaft of gloom projected from some point far anterior to any era of civilization. It is hideous and repulsive beyond characterization.

Thus we have four barnacled piles rising from the mud of Misconception upon which the Secretary builds his ideal of agricultural progress: magnification of evils which are merely incidental and fleeting; approval of a dream of theorists; exclusion from the farmer's thought and action affairs which are most essential to his industrial success and the discharge of his duties as a citizen; the relegation of all efforts which require co-operation and association to slow, ineffective and barbaric individualism.

Naturally every believer in agricultural progress and the elevation of the farmer as a man and a citizen must be chagrined that such views should be promulgated by one who should be a fitting exponent of American industrial spirit and advancement. The views are narrow and unworthy—a collection of half truths which no statesman or person even of broad common sense would advance as bearing even the semblance of general principles.

Mr. Morton makes onslaught by name upon the Grange and the Farmers' Alliance. We do not attempt any specific defense of these organizations. Let those charged with their protection set these orders right in the public mind, if they see fit. It is, however, pertinent to remark that if it had not been for the persistent effort of the Grange, Mr. Morton would not have appeared as Secretary of Agriculture. It was the Grange which accomplished the elevation of the representative of the agricultural industry to a cabinet place and thus marked an era in the agricultural history of the country. And now, in the face of the assembled world, Secretary Morton strikes the Grange, his mother-in-law. Valorous again, truly, but ungrateful and indiscreet.

Growing and Marketing Fruit.

THE RURAL PRESS is distinctly not in accord with the position taken by Mr. Rowley, of the *Fruit Grower*, at the San Jose convention last week. While it is true enough, as Mr. Rowley remarked, that the "growing of fruit is one thing and the marketing of it is quite another," we see no reason why the intelligence, industry and business judgment essential to success in the one should not win equal success in the other. Indeed, the growing and selling of fruit are two branches of one trade, and the horticulturist can no better afford to neglect one branch than the other. It is the experience of every successful fruit-producer in this State that the market requires as close and constant attention as the orchard; and a thousand instances of failure prove the unwisdom of attempting to divorce one essential branch of the business from the other. With the Santa Clara Fruit Exchange in plain view, with the facts of the Yuba City co-operative work known to all men—not to mention other equally successful and widely-famed instances—we fail to see upon what basis Mr. Rowley founded his remark that "there has been no satisfactory result to all the talk about the grower marketing his own fruit." We maintain that there has been an eminently successful result to the talk about the grower marketing his product; and we see every reason to encourage the project for a California Fruit Exchange at Chicago in the interest and under the direct control of our fruit-growers. Until this project or something like it is carried into effect, our growers will lose an element of profit which legitimately belongs to the business of horticulture.

At the East they are coming to the California uses for wheat. *Hoard's Dairyman* has this injunction: Wheat is cheap, and soon eggs, in all likelihood, will bring a good price. Why not make an effort to sell that wheat at a good price by feeding it to the hens? Wheat is a grand food to promote egg-laying in hens and also for young chicks. There are more ways than one to get a better price than is going for wheat. Boil it and turn it into butter, nice, young pork or eggs.

THE Executive Committee of the Sacramento County Roads Association met Tuesday and took action looking to the success of the proposition to have the county issue \$250,000 in bonds for the immediate construction of macadamized roads throughout the county. The public sentiment throughout the county is growing in favor of the good-roads movement and there seems little doubt the people will vote for the bonds.

THE American Pomological Society has decided not to meet this winter, because of the short interval between such a meeting and its recent gathering at Chicago. It will hold its next meeting in San Francisco in the winter of 1895.

From an Independent Standpoint.

It is reported unofficially from Washington that the tariff bill now being formulated by the House Committee on Ways and Means puts wool on the free list. On the other hand, woolens—cloths, manufactured clothing, carpets, fillings, etc.—are subject to duty as under the present law. If this proposition shall be carried into effect, it will strike down one of the greatest of American industries and knock one of the strongest props from under the structure of American rural life. And in return for these evils, benefits will accrue to the growers of wool in South America and Australia and to the American manufacturers of woolen goods. Leaving the principle of Protection out of account, the proposition is utterly and grossly bad because it is partial and unfair. If to take the tariff from wool were to make cheaper woolens—that is, cheaper clothing, cheaper bedding, cheaper carpets, etc.—then something might be said in favor of the proposition. But this is not the plan; it is wholly one-sided, wholly in the interest of the foreign wool-producer and of the domestic manufacturer; wholly against the American wool-producer and against the American public. We say against the American public because wool-growing is a factor in our industrial life so great as to be related intimately to every other domestic industry and interest. A blow to it will affect not alone the wool-growers, but the whole mass of our people. Furthermore, it will make food in the form of mutton—one of the most universal and essential of our food staples—very dear, for when the farmer can gain no profit from the fleece, he must demand more for the flesh. The whole proposition is unequal and indefensible; it puts a new limitation upon American industry and a new burden upon American life. Of course, the judgment of the Ways and Means Committee is not the enactment of Congress. Six years ago a similar committee prompted by President Cleveland, and led by Mr. Mills of Texas, made a similar proposition, urged it with energy and earnestness, and supported it with every available political device. But the sense and will of the people were against it, and it was voted down at the polls and voted down in Congress. A similar expression of the public judgment will defeat the present plan; and we look for the first strong blow in opposition to come from Ohio next Tuesday.

While far the most important in a political sense, Ohio is not the only State that will speak at the polls on Tuesday. In Maryland, Virginia, Iowa, Massachusetts, New Jersey, Pennsylvania, West Virginia and New York, elections will be held; but in every case either the offices to be filled are subordinate and unimportant or the issues are chiefly local. Somewhat of the judgment of these several States as to national affairs may be reflected in their voting, but it will be little as compared with the voting in Ohio. There the contest will be a straight heat between Protection and Tariff Reform, and each side has mounted its best rider. Not because he is a Republican, but because he stands for a tariff policy which we believe to be essential to the well-being of the country in general and of California in particular, we hope McKinley will be elected. All the indications point to that result. The State is about even. McKinley's successor (Campbell), a Democrat, was elected four years ago by about ten thousand majority. McKinley himself won two years ago by twenty-one thousand. Such margins as these in a State of 900,000 voters afford no secure basis for political figuring. Ohio is, practically, evenly balanced between the two great parties, and a decided vote one way or the other is therefore of special and marked significance. If, as we believe, McKinley shall be elected by a majority ranging from twenty-five to forty thousand, it would put a good many tariff calculations to confusion, and, among others, the proposition of the Ways and Means Committee to put wool on the free list in the interest of the foreign wool-grower and the American manufacturer of woolens and against the interest of the American farmer and of the American public in general.

Noting the fact that the State Board of Trade is arranging to send Col. John P. Irish to Washington to work among Congressmen in California's interest in the matter of the new tariff measure, the Marysville Democrat utters a definite and positive protest. It says:

We do not concur in this action on the part of the Board of Trade in sending a lobbyist to Washington. This is a growing evil practice that should be checked, if not entirely discontinued, before we lose our influence at Washington. The people of California have seven Representatives in Congress and the State has two Senators, whose duties are defined by the constitution and law. Are they not competent and trustworthy, and can we not depend upon them to look out for the industries and interests of the people without sending citizens to Washington to act in the capacity of lobbyists whenever we desire knowledge of any importance? We denounce the system of lobbying in our State Legislature and cry out for reform in the growing evil, yet we sent men to the National Capital to lobby in the interest of river improvement and hydraulic mining, and now the demand is for protection. We

don't very much that the benefit in either case is equal to the cost, even if the transaction was strictly in the line of legitimate business.

All of which is strictly true and correct; but since it is the custom of the time to send special agents to Washington, and since we are likely to suffer if we don't do it, it would seem the part of wisdom to follow the fashion and have a man in the third as well as the other two houses to speak for California wool, California fruit, etc., etc. We do not so much question the policy of the Board of Trade in sending a special agent, as its discretion in sending Col. Irish. We urge no objection to Col. Irish on any personal ground, but claim that he will be at a moral disadvantage from the fact that he is personally hostile to Protection. In a recent campaign in Oregon he made a tour of the State, arguing everywhere against the Protective principle, and especially against protection for American wool. At various times and places in this State he has given expression to like views. Now, in sending a man to argue for Protection, we want a man who believes in Protection, and not merely a fluent attorney as ready to talk on one side of the question as another. Col. Irish excuses his demand for protection for our fruit products by the claim that they are luxuries, and that as luxuries the foreign products which compete with them should be taxed. This is not the California theory, it is not the true theory; it is a subterfuge, and, as we look at it, not a respectable one. It gives the lie to our claim that California fruits are necessities; that they should be classed and sold as staples for the million and not as luxuries for the rich. We demand Protection because we believe it to be our right; we do not seek it incidentally through a false or trumped-up classification of our products. Col. Irish's theory makes no protest against the principle of free trade; it makes no demand in the name of Protection; it proposes to gain an incidental advantage by the abandonment of a just principle and the renunciation of old and honest claims. The way to gain Protection for our products is to stand by the principle of Protection, and to stand by the claims we have always put forth in favor of California fruit as a staple food.

On Saturday of last week the country was profoundly shocked by the assassination of Hon. Carter Harrison, the mayor of Chicago. Saturday was "Mayor's Day" at the Fair, and Mr. Harrison's duties had so wearied him that immediately after dinner he fell into a light slumber, from which he was aroused by a stranger who had forced his way into the house and intruded unannounced into the mayor's presence. "Well, what do you want with me?" asked Mr. Harrison. The answer was three shots from a pistol fired in rapid succession. One passed through the lungs, another through the abdomen and a third shattered Mr. Harrison's hand. Help came upon the instant, but it was of no avail. The senses of the dying man lasted only long enough for him to call for his children and for the woman to whom within a few days he was to have been married. In ten minutes he was unconscious; in half an hour he was dead. When his cruel work was accomplished, the assassin ran out of the house and a few minutes later walked into a police station, calmly gave an account of what he had done and asked to be taken into custody. His name, he said, was Eugene Prendergast, he was an attorney, and his object in killing the mayor was revenge. For some political service, he said, the mayor had promised to appoint him to an office, but "he betrayed my confidence, therefore I am justified in my act." The man was clearly insane; or, in the language of the day, a "crank." He had, so investigation proved, been a supporter of Harrison in the late election, and had, as he said, vainly sought an official place. In the insane rage of his disappointment, he committed the dreadful crime. As we write on Wednesday, Mr. Harrison's funeral is in progress at Chicago. The whole city is in mourning. The political considerations which have so divided the community are all forgotten in the intensity of a common horror and grief.

The act of Prendergast seems to have stimulated into activity the whole fraternity of murderous cranks. On the following day, Thomas Bradley entered the office of Supt. Matthies of the Postal Telegraph Co. at New York and made a demand for money, and, on being refused, shot Mr. Matthies through the body with probably fatal effect. On the same day, Margolia Andrews forced his way into the private office of Edwin Gould at New York and demanded five thousand dollars or Mr. Gould's life. He was detained in conversation until the police could be summoned. Again on Tuesday of this week the police of New York and Brooklyn were kept busy by cranks, there being three instances of threatening and five violent attempts at murder in the two cities. In each of these cases, the assailant was to all intents and purposes an insane person. At Portland, Or., three days ago, a crank was arrested and committed to the asylum, having threatened the lives of the mayor of the city and the Governor

of the State. These several incidents call to mind recent murderous assaults by cranks in this city—that upon the life of Mr. George Lent Jr., and another upon Mr. John Mackey, the well-known capitalist.

Apparently, we are developing a new type of insanity in the United States—a type in which disappointment, despair, rage, malice, revenge and cruelty are compounded and combined with moral obliquity. That there should be identity of passion in a multitude of widely separated cases—in nearly every instance the person affected having been of previous respectable character—is an indication unmistakable that there are influences at work in our modern life which regularly produce abnormalities of the Guiteau type. The study and correction of these influences are among the highest duties of the time. Perhaps we are living too fast; perhaps the method of our politics has something to do with it. Whatever its nature, there is somewhere a serious fault in a civilization which, with mechanical regularity, produces a crop of revengeful and murderous lunatics.

On Monday of the current week, by 42 yeas to 32 nays, the Senate voted to repeal the Sherman silver-purchase law. For the Wilson bill (providing for repeal without conditions), which passed the House nearly two months ago, the Senate substituted the Voorhees bill, which, in addition to repeal, pledges the faith of Congress to the bimetallic system. The terms of this commitment are as follows:

And it is hereby declared to be the policy of the United States to continue the use of both gold and silver as standard money, and to coin both gold and silver into money of equal intrinsic and exchangeable value, such equality to be secured through international agreement or by such safeguards of legislation as will insure the maintenance of the parity in value of the coins of the two metals and the equal power of every dollar at all times in the market and in the payment of debts.

And it is hereby further declared that the efforts of the Government should be steadily directed to the establishment of such a safe system of bimetalism as will maintain at all times the equal power of every dollar coined or issued by the United States in the markets and in the payment of debts.

The vote on the direct question of repeal with the above condition attached was preceded by a series of votes arranged to test the temper of the Senate in a variety of compromise schemes. A proposition to restore the old Bland-Allison law, another to coin the silver bullion in the treasury vaults, another to continue the coinage at the rate of \$2,000,000 per month, another for the issue of \$250,000,000 in treasury notes, another for free silver coinage pure and simple—these and half a dozen other propositions were voted down one after the other. It was evidently the intention of the Senate to clean the statute book of the Sherman law before attempting any other reform in the matter of the currency. On Wednesday morning the House concurred in the bimetallic pledge, and within a few hours the President affixed his name to the bill. Repeal is therefore an accomplished fact.

As we view it, this is a very notable triumph of common-sense, but it is not to be expected that because a bad law has been wiped from the statute book things will immediately fly back into normal shape. The mischiefs slowly wrought by this law will have to be slowly cured; and there is, moreover, still to be dealt with, the situation created by the threat of tariff revolution. This last-named mischief is by many wise men deemed the worse of the two. What may be expected from the repeal of the Sherman law is not that it will bring back prosperity with a rush, but that it will remove the first if not the most serious cause of depression. It will settle it in the public mind that every dollar is to be maintained the equal and par of any other dollar. It will give assurance to the lender that he will be repaid in the same kind of money in which his loan was made. It will assure sellers upon credit or for future delivery that the value of current money will not change until their contracts are carried out. It will, in the words of Senator Voorhees, guarantee the whole business community against violent change in the purchasing power of the currency of the country.

All this will help the return of normal times; but there is still much for Congress to do, and it should not think of adjournment until its work is done. A quietus should be put upon the scheme of tariff revolution; immediate steps should be taken toward increasing the volume of the national currency and a bimetallic scheme in conformity with the promise of the repeal measure should be formulated. These things are essential to a settlement of the times, and there should be no vacation until they are accomplished.

At the great Stanford ranch in Tehama county only the best of certain kinds of grapes are being gathered, as there is no market for poor grapes. In a portion of the vineyard devoted to the California or Mission grapes and other like qualities the sheep of the ranch are now running. It is considered better that the grapes should be eaten from the vines than that they should rot on them.

Farm Wages and Produce Prices.

We print on another page an outspoken article from the Oroville Register on the subject of farm wages, which should be read and pondered over by all who are conducting agricultural enterprises. How to make such enterprises profitable with the greatly-reduced market values, and still not reduce the labor cost, is a question which all would like to see satisfactorily explained, for the California employer dislikes exceedingly to grind his help. When, however, great corporations which exact their full charge for moving his produce, whether the farmer gets anything or not, find it necessary to reduce the pay of their men, how can the farmer, who gets merely the scant residuum after all others are paid, live and not reduce the compensation of those he employs. As the writer for the Register says, it is a dismal question and one which excites the populace terribly, and yet it is merely an economic matter after all which should be adjusted by calm calculation and full information of the facts.

The following is the range of wages paid on the average to farm laborers in the different regions of the United States for the years named, as reported by the Department of Agriculture:

Sections.	1866.	1875.	1888.
Eastern States.....	\$33 30	\$28 96	\$26 03
Middle States.....	30 07	26 02	23 11
Southern States.....	16 00	16 22	14 54
Western States.....	28 91	23 60	22 22
California.....	35 75	44 50	38 08

This shows how California stood at the dates given in the payment of farm wages. We do not find any later collection of statistics on the point, but probably the relative position of the different parts of the country has not materially changed. In all other regions there has been a notable reduction since 1866, while California has advanced until in 1888 she stood nearly 50 per cent higher than the next highest and almost double the average of all other regions of the country beyond her own borders. Surely this is a subject for thought and discussion in view of the present era of low values for produce.

The World's Wheat Supply.

Clapp & Co., bankers and brokers, of New York, publish the following in their weekly circular for October 13th relative to the wheat crop and supply of the world:

Great Britain's annual imports since 1884 averaged 154,625,092 bushels of wheat. Last year they imported 180,084,127 bushels. Their imports usually exceed early estimates about 10 to 20 per cent. Since 1884 52 per cent of their supplies came from the United States, 14½ per cent from Russia, 12 per cent from India. Last year 66 per cent came from the United States, about half being in flour. The average consumption of the United Kingdom since 1884 has been about 228,000,000 bushels, or more than three times their average crop of about 73,000,000 bushels, and about four and a half times as large as this year's crop, which is but about 52,000,000 bushels. The Argentine Republic shipped them more flour and wheat last year than India. The Indian crop was large, but much of the surplus is being buried in "holes and caves in the earth" by the well-to-do Ryots; stored that way it keeps for years and retains its good qualities, sometimes losing its color. Russia is hoarding about 25,000,000 bushels of rye because it is cheap; their farmers need money. Many other countries report isolated cases where a well-to-do wheat-grower has from one to three crops in his barns. The world's jobbers of flour, wheat and rye are fairly well supplied and great believers in high prices, as they never saw such low prices or as great temptation to lay in supplies. Europe's weather reports generally have been more or less like our own up to a fortnight ago.

The following statistics show the probable requirements of importing countries and the possible surplus of exporting countries:

IMPORTING COUNTRIES.		Bushels.
United Kingdom.....	175,000,000	
France.....	48,000,000	
Germany.....	35,000,000	
Belgium, including Holland.....	40,000,000	
Italy.....	40,000,000	
Spain.....	16,000,000	
Portugal.....	6,000,000	
Switzerland.....	12,000,000	
Greece and Scandinavia.....	7,000,000	
West Indies, China and scattering.....	15,000,000	
Total.....	394,000,000	
EXPORTING COUNTRIES.		Bushels.
United States.....	150,000,000	
Canada.....	8,000,000	
Russia.....	100,000,000	
Roumania.....	35,000,000	
Bulgaria.....	12,000,000	
Turkey and Servia, Austria and Hungary.....	30,000,000	
India and Persia.....	60,000,000	
Algeria, Tunis and Egypt.....	4,000,000	
Chili, Argentina and Australasia.....	20,000,000	
Total.....	419,000,000	

The available supply of the world on July 1st was about 152,000,000 bushels, and it is now a little over 160,000,000 bushels, thus showing an increase of something over 8,000,000 bushels.

The world's visible supply increased in September about 12,750,000 bushels. Our visible decreased in 1875, from July 1st to October 1st, 24,000 bushels; in 1876, 1,504,000 bushels; in 1887, 3,815,000; in 1890, 2,579,166 bushels, and increased in price. The visible decreased in 1893, from

July 1st to October 1st, 4,389,000 bushels. All other intervening years there was an increase in the visible ranging from 2,076,000 bushels in 1880 to 23,001,000 bushels in 1886. The fourteen annual increases since 1875 averaged 8,688,456 bushels and the five annual decreases averaged 2,462,000 bushels. Exports since July 1st have been about 73,000,000 again about 52,000,000 last year. Liberal rains in our winter-wheat belt recently have caused many radical changes in the appearance of the growing crop. Government reports on wheat indicate a yield of 11.3 bushels per acre and the acreage is 34,623,000 acres, indicating a crop of 391,239,000 bushels. Local traders seem to believe the Government report is less reliable than the *Price Current*, which claims there are 425,000,000 bushels. Our visible was never larger at this date; price never lower in thirty years. The bears say it is not a matter of price now, but of quantity; that Wall street has too much wheat to get the price up. The bulls claim patience and time will secure great gains.

A Ruined Wheat Harvest.

The extent of the disaster to the unharvested grain fields in the Columbia river basin is thus reported in the Portland Oregonian of October 26th:

From pretty full information about the state of the wheat crop in eastern Washington and northern Idaho these facts are derived, viz.: There is a stretch of country about fifty miles in length and thirty in breadth, embracing the most productive district in the two States, where the rainfall has been excessive, and indeed without precedent. The larger part of the crop in Whitman county, Washington, and Latah county, Idaho, is greatly damaged, or lost altogether. This district, lying up against the mountains, has been more subjected to rains than any other. West and south of it the rains were greatly diminished, and in the Big Bend country the losses are nothing, or small. But throughout the eastern half of Whitman county, Washington, and the whole of Latah county, Idaho, the larger part of the wheat crop yet remains unharvested. During almost six weeks there have been almost constant rains. The wheat had been slow to mature, on account of the lateness of the spring and the coolness of the summer, and just as the harvest opened the rains began and there has been no harvesting weather since.

A few fields were cut before the rains began. Through want of money, which the local banks were unable to supply, the farmers could not hire hands for their work, and in each neighborhood they joined to help each other. This caused some delay, for, had the farmers been able to hire as usual, a good deal more would have been cut. For the same reason the threshing of what was cut was somewhat delayed. Headers were largely used, and as the stacks of short straw would not throw off the rain, during the long downpour they were soaked through. Where reapers were used the wheat stands in the shock, and is not in so bad condition. That in the uncut fields is least injured, but the ground is so soft that harvesting is laborious and slow. The wheels of wagons, and especially of harvesting machines, sink deep into the soil and fill up with heavy loads of mud mixed with straw, till horses can scarcely drag them. Though little rain has fallen for several days, the air is hazy and moist and the fields do not dry out. Some grain that was threshed was poured out on the ground, for want of sacks, and covered with straw. This also has been injured or ruined. Sacks could not be had, because they were not in the market. The State of Washington had undertaken to supply sacks made at the penitentiary, but could not make enough, and importers had declined to bring sacks in, fearing they would be undersold.

On the whole, it is a deplorable condition throughout a large section. The losses may reach 5,000,000 bushels, may indeed exceed that figure, since it is uncertain how much wheat can yet be saved in merchantable order. In every direction, as far as the eye can reach, there are fields yet uncut. In some localities much of it has fallen down and been beaten into the mud. Still, there will be a great deal of wheat in eastern Washington. In the western part of Whitman county the rains were less, and in Douglas, Adams and Lincoln counties, the wheat is almost unharmed. In spite of the heavy losses, eastern Washington may ship nearly as much wheat as heretofore. But there is distress throughout a large section. South of Snake river the damage is light.

How Is It Done?

TO THE EDITOR:—I notice a communication in the RURAL from Mr. J. P. Johnston, in which he says he picked and dried 11¼ tons of Seedless Sultan raisins from 2½ acres. I will not try to compete with Mr. Johnston. I have a vineyard of 40 acres, and six acres are Seedless Sultan. This year I picked and sold 12½ tons of raisins from the six acres and I thought I had a big crop, but I can't raise 4½ tons to the acre, as Mr. Johnston does, and I would like him to tell the secret of how he does it.

Yuba City. B. F. FRISBIE.
[Will Mr. Johnston rise and explain.—ED.]

We judge from notes and reports in our exchanges from beyond the Mississippi that there is a likelihood that electric roads for freight and passengers will be considerably extended into farming regions. One writer says that almost every Illinois town of 4000 inhabitants has its electric street-car lines, which have either rural extensions or tendencies. In Ohio such extensions have been made from three or four cities, and farmers prefer to use them both for freight and passenger service rather than haul either heavy wagons or road vehicles by horses. Of course, if such service can be had cheaply enough, it will be economical of horse power and the farmer may be able to reduce the number of his animals and the feed he has to grow or purchase for them. There seems to be quite a change imminent in this branch of rural life, and it is not possible to predict to what ends it may proceed.

Treatment for Insects and Fungi.

The following is a horticultural commissioner's bulletin of Santa Clara county just issued by Edward M. Ehrhorn, county commissioner. The remedies are the same as have been previously approved, but now is the time to paste them in your hat:

LIME, SULPHUR AND SALT, FOR WINTER USE UPON DECIDUOUS TREES.

Believing that some practical formulas, which have been well tested, for the preparation of washes to be used in treating trees may be of great good to orchardists, I have selected the following, which are recommended by the State Board and others:

For Pernicious or San Jose Scale.—The following formula and directions, if properly carried out, will produce an effective solution:

Unslacked lime..... 40 pounds
Sulphur..... 20 pounds
Rock salt..... 15 pounds
Water to make 60 gallons.

Directions. Place 10 pounds of lime and 20 pounds of sulphur in a boiler with 20 gallons of water, and boil over a brisk fire for not less than one hour and a half, or until the sulphur is thoroughly dissolved. When this takes place the mixture will be of an amber color. Next place in a cask 20 pounds of unslacked lime, pouring over it enough hot water to thoroughly slack it, and while it is boiling add the 15 pounds of salt. When this is dissolved, add it to the lime and sulphur in the boiler and cook for half an hour longer, when the necessary amount of water to make the 60 gallons should be added.

RESIN WASH FOR WINTER USE UPON DECIDUOUS TREES, FOR PERNICIOUS SCALE, AND BLACK AND BROWN APRICOT SCALE.

The following are the proportions of materials for the winter wash:

Resin..... 30 pounds
Caustic soda (70 per cent)..... 9 pounds
Fish oil..... 4½ pints

Directions. Place the resin, caustic soda, and fish oil in a large boiler, pouring over them about 20 gallons of water, and cook thoroughly over a brisk fire for at least three hours; then add hot water, a little occasionally, and stir well, until you have not less than 50 gallons of hot solution. Place this in the spray tank and add cold water to make 100 gallons. Never add cold water when cooking, as this will cause the resin to settle.

FOR CODLIN MOTH.

For Early Ripening Apples and Pears.—Spray with one pound of Paris green to 200 gallons of water, when just out of bloom. Spray again just before fruit turns down, with one pound to 160 gallons of water. Always stir well, so as to keep the Paris green in suspension.

FOR APHIS UPON PLUM AND PRUNE TREES.

Caustic soda (98 per cent)..... 1 pound
Resin..... 6 pounds
Water..... 40 gallons

Directions. Prepare as directed in resin wash for winter use.

RESIN SOAP.

Forty pounds of resin, 40 pounds of whale oil foots. Melt these two together. Dissolve 10 pounds of potash (concentrated lye), and 10 pounds of caustic soda, in 20 gallons of water. Mix the two ingredients together, and add enough hot water to make the whole 50 gallons. Boil hard, until thoroughly mixed. Add hot water enough to keep up 50 gallons. When thoroughly cooked, and while still hot, pour into five-gallon coal oil cans. Take a can and add 45 gallons of hot water, when thoroughly mixed, spray warm.

For Pernicious Scale.—Five pounds sal soda, 25 gallons of water, one gallon of whale oil foots. Boil till mixed. Spray when warm, and in winter.

FUNGI.

The following may be used for pear and apple scab which are fungus diseases.

EAU CELESTE.

In two gallons of hot water dissolve one pound sulphate of copper. In another dish dissolve two pounds carbonate of soda (sal soda). Mix the two, and after a few hours add one and one-half pints of ammonia, and dilute the whole to 22 gallons. In practice it is found to be sufficiently strong to make the dilution to 30 gallons, or even more.

BORDEAUX MIXTURE.

Sulphate of copper (bluestone), six pounds, dissolved in 16 gallons of water. Lime, four pounds, slacked and mixed with six gallons of water. When cool slowly pour into the copper solution, constantly stirring. Though this is the original formula it has been found just as well to add about five or six gallons of water, or even more in summer time, when enough may be added to make 40 gallons.

The first time to apply either of these remedies is just before the leaves drop in fall so as to kill all germs on the old leaves and prevent the spread to other orchards; the second time when the buds start; the third time it can be mixed with Paris green in the proportion of one pound of Paris green to 160 gallons of mixture. For orchards not badly infested two applications will suffice.

THE Government report for October places the eastern potato crop at 71 per cent or about three-quarters of a full average yield. Only three times in a decade has the figure dropped so low. This gives an outlet for California potatoes which are now going overland in large quantities. Last week a solid train of potatoes was taken over the southern route to Texas. The Lone Star State is a greedy buyer of California potatoes. It seems as if they can scarcely get enough to satisfy the demands of the market. It is claimed that thousands of carloads of potatoes will be sent over the Central Pacific and Union Pacific lines this year.

THE STATE HORTICULTURAL SOCIETY.

Proceedings of the October Meeting Held at San Jose.

The Old Officers Re-elected—Mr. Perkins Explains His Plan of Preserving Ripe Fruit in Transit—A Proposition to Do Away With the Middleman in the East, Etc., Etc.

The October meeting of the State Horticultural Society was held on Friday of last week at San Jose, in response to an invitation given by the Santa Clara Fruit Exchange and fruit-growers generally of that section. There was a perfect day and a large attendance. The visitors were first taken to the warehouses of the Fruit Exchange, where the various operations of receiving, grading, dipping, boxing, sacking, shipping, etc., were going on. It was most interesting, not only as an exposition of the methods of fruit handling, but as an illustration of successful co-operation. The forenoon was devoted to general visitations and converse among the visiting and resident fruit-growers, and it was not till 1 o'clock that the society came into formal session at Grand Army hall.

ELECTION OF OFFICERS.

The first business was the election of officers for the ensuing year, which resulted as follows: Honorary President, Prof. E. W. Hilgard, Berkeley; President, B. M. Lelong, San Francisco; Vice-President, Leonard Coates, Napa; Treasurer, A. T. Perkins, Alameda; Secretary, E. J. Wickson, Berkeley. Directors—N. P. Batchelder, J. L. Mosher, Howard Overacker Jr., S. J. Stabler and H. A. Brainard. There were no contests, the election in each case being by acclamation. In response to calls, President Lelong spoke as follows:

PRESIDENT'S ADDRESS.

Gentlemen of the State Horticultural Society:—It is one year ago to-day that you first honored me by electing me to fill the position of president of your society, an honor which I assure you I appreciated at that time, and my appreciation of which has increased as I have realized the great importance of our labors and the willingness with which my efforts have been seconded by all my fellow laborers in the horticultural field.

At the time I first accepted the nomination for the position it was with the understanding that I should serve for but one year. At your last meeting it was evident that you were disinclined to remember this or to relieve me of my duties, and therefore gave me the unanimous nomination for a second term, which nomination has been confirmed by the election to-day.

In once again accepting this trust at your hands, I do so with the full realization that our society has before it a wide and ever-increasing field of usefulness, and that its duties are greater each year, that to achieve success we must all work together for that end and that your president will be utterly impotent without your able and willing assistance. This has been so cheerfully accorded in the past that I cannot entertain a doubt of the future.

In my first annual address to this society I recommended the holding of our meetings, during the year, in the different fruit-growing sections. This recommendation you have seen fit to adopt and this meeting to-day, held in the beautiful city of San Jose, in the building of the Santa Clara County Fruit Exchange, is the first session we have held outside of our regular place of meeting and its success amply proves the wisdom of the suggestion, and it is hoped that it may prove the precursor of many profitable and pleasant gatherings of horticulturists in different portions of the State. From the attendance present and the evident interest manifested in our proceedings, both on the part of members and visiting friends, there can be little doubt but that similar meetings held in different fruit-producing sections will prove successful as well as profitable to our members and to all engaged in the fruit industry. It will also give a renewed interest in our society, add largely to its membership and widen its field of usefulness.

The objects of this society are to advance the science of horticulture by an interchange of ideas by practical men and an explanation of methods by which improved results have been attained. It is our object to reach all departments of horticulture, from the planting of the seed to the marketing of the fruit, and he is a poor horticulturist indeed who has no knowledge that will help his friends and he has attained an unheard of degree of perfection who cannot pick up some new practical ideas at our meetings. A small admission fee is charged for membership and very small monthly dues are required. These are very light, as the expenses of our society are almost nominal. I am pleased to state that our society is on a good financial footing and practically out of debt. It is proposed to use the future income of the society to publish its proceedings, by which the members will receive the additional benefit of having the best ideas on various topics considered here in shape for future reference and use. This is a new departure, for while our society was organized in 1879, the first publication of its proceedings was not made until August of the present year, and while this work was of necessity small, and its contents much condensed, it is of inestimable value, does great credit to our society, and points a direction for future labors.

Of course, the larger our membership the greater our influence, and the more we can hope to accomplish. The wider range of thought will be brought into our meetings, the larger the number of experiments and the more successful results will be reported for our guidance, and the more force we display when we demand rights or seek concessions from the railroads or others. It is, therefore, the direct interest of every member of this society to do all in his power to increase the active membership until it shall include all the practical horticulturists of the State.

The September meeting of this society was devoted to the consideration of distant markets for fruit. So great was the interest manifested in the subject that it was unanimously resolved to continue the subject at the present meeting, and to avail ourselves of the experience of the successful and organized horticulturists of Santa Clara county. We will therefore take up the subject where we dropped it last month.

At the beginning of the fruit season, according to the report of the manager of the California Fruit Union, the service of the railroad company was all that could have been reasonably demanded; later in the season the service became very unsatisfactory, owing, it is supposed, to a shortage of refrigerator cars, and twice the number of those furnished could have been profitably employed. There is a feeling among some fruit-growers that our society ought to ask Congress to pass a law making all clauses in contracts which waive loss by delay, illegal. If a car of fruit be delayed so long that the fruit rots there is no recourse upon the railroads, and the freight charges are just the same as though the shipment had been handled promptly. On the other hand there is a feeling that the railroad companies have done very much for the fruit-growing interests of California; that they voluntarily reduced rates, and that it lies in their power either to wreck or save our fresh-fruit business in the East.

It might be well enough at this meeting to appoint a committee to confer with the California Fruit and Transportation Company requesting it to build more cars preparatory to next season, and show

it that the investment in new cars cannot help paying good dividends.

At the last meeting of the society the principal question which arose was, "Where will California find a market for her fruits a few years hence when the product promises to be doubled?" So far California fruits have been sent to large cities. A great many small places bordering these large cities have never seen our fruits, for the reason that there is no organization to distribute the fruit throughout these regions. The California Fruit Union aims to divide the fruit in those cities where there are markets for it, but you must understand that there are many other concerns that also ship considerable fruit. This question has been before our society for a number of years, and has been taken hold of also by the State Fruit-Growers' Conventions each year, and the conclusion reached is that the fruit must be distributed in the East through some organization to be hereafter formed.

The various fruit interests of this State have been considering for some time the establishment of houses in Chicago, Boston and New York, with an idea of making our own concern—our own house—the supply depot, not only for New York, Chicago and Boston, but for the towns and the country tributary to those cities, and I suppose the reason why this has not already been taken up and put into practical operation is that it would mean the putting together, running and keeping oiled a vast distributing machinery.

You must remember that while the California Fruit Union has been in existence eight years and started in with a great many more bands against it than with it, we have not raised large quantities of fresh fruit for Eastern shipment until within the last five years. There seems to be a general disposition among the fruit-growers toward a distributing system which shall embrace all populous districts where our products can be placed. It will be readily understood that a large distributing center in the great cities and smaller distributing points—in towns of 15,000 to 50,000 people—all the way from the Mississippi river to the Atlantic coast, and from the Ohio river to the Lakes, would involve a vast deal of work to get it moving. I would recommend the appointment of a committee which shall consider a plan of organization. I also recommend that a meeting be set apart to discuss the question of creating in each county a Fruit Exchange on about the same basis as the Santa Clara County Exchange, and all having a State central organization. There could be a committee appointed to formulate a plan to be submitted to the fruit-growers for adoption at a general convention. The committee which would have this in charge would have very little work to do. The Santa Clara county plan is a perfect model to go by. It has worked successfully and, with slight modifications to suit environment, is well adapted to each county in the State.

In a general way the feeling that the best results can be accomplished by far-reaching local organizations is having firmer growth throughout the State. In southern California the Fruit-Growers' Union has been organized, with headquarters at Los Angeles. This union has many branches—in fact, one in every locality where citrus fruits are grown. The grading, boxing and shipping will be done by this organization and the fruit will be distributed by the union. This ought to be the general plan throughout the State for all the fruits. As the interests are so different and the fruits—citrus, deciduous and dried—marketed at different seasons, there will have to be organizations for the marketing of these different fruits.

Another advantage to be derived from the State organization which I have just suggested is this: Putting a stamp of genuineness on every package of fruit, fresh or dried, which leaves California. We would have to arrange some device by which, when the box was opened, this seal or label or stamp of genuineness would be broken and the box or package rendered useless for other fruit. It would take a little time to get the public to learn about this stamp, but once educated to it no person looking for California fruit in the Eastern market would buy a package unless it had an authoritative brand which guaranteed the quality of its contents.

SECRETARY'S REPORT.

Secretary Wickson made the following report:

To the Members of the State Horticultural Society:—This meeting concludes the fourteenth year of the society's existence. The past year has been one of the most prosperous the society has ever known. Regular meetings have been held each month and the attendance has averaged higher than heretofore. Fifteen new regular members have been elected, and four distinguished horticulturists have been placed upon the honorary list. The total membership of the society has increased somewhat, but the payment of dues has been less prompt than usual, probably owing to the stringency of the times. It is to be hoped that payment may be made as soon as possible, for the society has incurred necessary obligations which it should discharge at once. If outstanding dues were paid, all debts could be paid and a balance left in the hands of the treasurer.

It is also desirable that the membership of the society should be largely increased. This society has always occupied an influential position among the horticultural interests of the State. Through the earnest and devoted work of its members, the State Board of Horticulture was created and provided with funds, and the society can thus claim parentage of the State Board and a parent's pride on the grand work which has been accomplished by it.

Another honorable offspring of this society is the California Fruit Union. This pioneer of the co-operative marketing enterprises of California was suggested at a meeting of this society and its establishment was accomplished by our members. Since then it has grown to greatness and has done a work of vast importance, but loyal sons of this society have always been prominent in its management.

The society has sustained similar relations to many other organizations which labored and are laboring effectively for the promotion of California horticulture. It is gratifying to the old members of the society to note that whenever something new helpful and enterprising crops out, in the central and northern parts of the State at least, the members of the State Horticultural Society are found to be at work contributing the haven of suggestion and promotion. Thus our society has an honorable history and a creditable record. It does not itself undertake great enterprise, but it furnishes men prepared by participation in its meetings and discussions to carry forward enterprises of great importance. The society should be strengthened by a wider influence and a larger membership. Its burdens are light and its rewards are large. The plan of holding meetings at other points than San Francisco is a good one, and should make the society more useful and more popular.

A new undertaking which has been possible this year, through the efforts of Pres. Lelong, has been the publication of our proceedings in pamphlet form. This measure will add much to the dignity and influence of the society, and can be made a regular proceeding of the society if its membership and income can be a little increased.

In closing this brief note on the society's progress, I would remind you that we have been indebted throughout the year to the State Board of Horticulture for the use of its assembly hall and offices for the work of our society. This amounts to much more than free rent to our members because it gives them an excellent opportunity to profit by the researches and publications of the State Board. It seems to me it would be quite in order to adopt and transmit to the State Board a resolution of appreciation and thanks for its courtesy and hospitality.

A NEW PRESERVING PROCESS.

At the last previous meeting Rev. Alfred T. Perkins of Alameda was invited to explain to the society the results of a preserving process originated and developed by himself. In answer to this invitation he was called upon by the president to take the floor.

After a hasty review of the varied questions discussed by the members of the State Horticultural Society during the past few years, Mr. Perkins said:

We have met to-day to consider one of the most interesting of subjects, and one of vital importance to the fruit-growers of California as

well as to the transportation companies. Indeed, the whole success of the horticulturist depends upon the transportation question. It is evident that the home market (the canning and the dried-fruit industries combined) cannot begin to care for the constantly increasing output of our orchards, and unless an outlet for fresh fruit in the Eastern market can be maintained at remunerative prices, then we may expect to hear a continued cry of overproduction, low prices and loss.

Several years ago, when we were just beginning to feel our way into the Eastern market, I thought I could see the demand of the future and commenced a series of studies and experiments which have been continuously pursued until this time. The only true way was to begin at the foundation. What, then, is the prime cause of fruit decay? and what is the proper method of prevention? In fruit decay there are four important factors. Given a specific amount of fruit sugar, a certain quantity of fruit acid, a given degree of humidity, and temperature, and as these vary we have various conditions of decay. There are other factors perhaps of minor importance, the chief of which is the influence of the electrical currents in the atmosphere, and the study of this opens such a wide field that its consideration must be reserved for the future. Let us take as an illustration some of the tender kinds of fruit as, for instance, the apricot or the peach, fruits of fine, tender flesh, and full of juice with a high degree of sugar and acid. There is a period in their growth when they remain for a time in a seemingly dormant condition. For the early ripening fruits this season is short, but I have here a peach that blossomed and set its fruit side by side with the Alexander. It has remained in the dormant state until the present and is just giving evidence of its purpose to ripen, which it usually does from the 10th to the 15th of November. If this ripening process takes place in a high temperature, especially if such weather continues for several days, it passes in a very short time through all the stages from a small, half-developed fruit to full maturity, and often falls in decay on the ground before it can be made available.

If the fruit be picked and packed while heated, we have then the condition for rapid decay, the high temperature accelerating the action of the sugar and acid, causing fermentation, followed by an exudation of moisture to the surface. This moisture is the food for a fungoid growth, the germs of which had been already planted, and although so minute as to be not discernible, are infinite in number and awaiting these proper conditions—moisture and high temperature—for their development. After the fungus has once gained a foothold the spread in every direction is rapid. The decay in a car of fruit is in spots; it may be a portion of one box; it may be in a certain number of boxes, but it always begins from a common center.

In the discussion upon transportation last month each speaker came to one conclusion, a demand for shortened time in transit and lowering of freight rates. The statement was made that one day beyond the limit of the fast freight was a loss of \$100 per car, two days \$200, and anything over three days usually a total loss. Shortened time and lower rates seldom go together. Speed means expense. May there not be another point to be discussed and that the lengthening the life of the fruit? If this is to be done it must be by a process that will act upon all the factors of decay. The present method for its best service takes the fruit before it is perfectly matured, before it receives its full amount of sugar, and places it in a low temperature, retarding fermentation. It does not touch other important points, and a process to be complete must cover all. The result of several years experimenting has shown that a continuous current of dry air at a normal temperature of 55° to 65° Fahr. answers all requirements. It allows the fruit to be perfectly mature, retarding fermentation in the even temperature and not so low as to injure the fruit by the sharp contrast after it leaves the process; it removes the moisture by the continuous dry-air current, always kept up even if the car be sidetracked any length of time, checking the fungoid growth and absolutely preventing its spread, which is one of the prime causes of rapid decay. I have not time to explain the mechanical appliances by which we attain our object. They are simple. The process is inexpensive. It is practical because it is simply the development of a natural law. It has been thoroughly tested with various kinds of fruit. I cite one instance: Grapes in the season of 1891 were shipped at a loss because of the rapid decay. We picked and packed as for market several boxes on the ninth day of December, had them sealed and placed in the process until the 29th of December. The boxes were opened, a few decayed grapes removed, and then returned to the process after being placed so that they could have free circulation of air. Some kept through January and February of 1892 in a fresh state, and we have some of them here to-day for examination. Cherries were kept in prime condition 25 and 30 days, taken out of the process at the expiration of 40 days, somewhat withered of course, and we also have samples of them here.

It may be asked, what advantage can such a system have over ventilation? Ventilation is partial. This is complete. It furnishes dry air, at a given temperature, under an even pressure, and in a continuous current whether the train is in motion or not. All these conditions must be met. Moist air means fungoid growth. High temperature, even if it be in motion, means accelerated fermentation and rapid fungoid decay. Sixty-five degrees Fahr. is the danger point.

It must be evident that the present system, demanding the transportation of 20 tons of dead weight in car construction and ice for the purpose of carrying 10 tons of fruit, cannot expect the railroad company to reduce their tariff, especially when the dead weight is generally hauled back as an empty car. Every ton or over in a car means an expense of a specified amount per mile, and it makes no difference whether it represents the appliance for the preservation of the fruit or the fruit itself.

Our car will not require more than one or two tons above an ordinary freight car. We have these points of vantage: No dead weight upon which fruit must pay transportation; no ice charges; longer life for the fruit; better condition in market, as fruit coming from this process will keep longer than when picked fresh from the tree. All this means a saving to the producer and to the transportation companies, as well as a reduced price to the consumer.

It now remains to be seen whether the system will interest you and capital be willing to place it in operation, or that the old ruinous method shall continue until you are all thoroughly tired of a business that should bring increased wealth to California.

At the conclusion of Mr. Perkins' address, to which marked attention was paid, Mr. Adams of Santa Clara moved that a committee of four be appointed by the chair to examine the new process in detail and to report to the meeting to be held next month at Los Angeles, the understanding being that the State University, the Stanford University, the Southern Pacific R. R. Co. and the California Fruit Union should be represented on such committee. The motion prevailed unanimously, and President Lelong said that he would announce the personnel of the committee through the press.

TRANSPORTATION, TIME OF TRANSIT, ETC.

The president then announced that the subject of fruit marketing was open for general discussion and called on Mr. Block of San Jose for remarks. Mr. Block declared that unless better methods of transportation could be developed, the number of fruit-growers in California would decrease. The railroad, he said, now got all that was in the business and the people got what was left; in fact, the fruit-growers of the State were simply working for the railroad. A particular grievance, he declared, was the uncertain time made by the fruit trains. Instead of being put through to Chicago in four days, according to schedule, it took from 12 to 16 on an average; during the present season he had shipped one car which was 17 days between

San Jose and Chicago. The promises of the railroad people were always broken. Another grievance, he claimed, was the withholding by the railroad companies of moneys due from overcharges. If there was a dispute as to the charge, the shipper was required to pay to release his fruit and then, no matter if the contention was finally adjusted in his favor, it took from six months to a year to get back the money that had been advanced. His own experience, and that of others in his personal knowledge, justified the enactment of laws to regulate this matter. He would have a law requiring prompt settlement of all such claims, or, still better, a law to prevent railroads from exacting their full demands where there was a dispute. Let somebody be designated to receive the money, so that it could be paid out at once to whom it belonged, whenever the matter in dispute was determined.

Mr. Adams, who was next called upon, thought that the main thing to be promoted in the interest of the shipper of fresh fruits was in the matter of time. He didn't object to paying the railroad to haul the fruit East half of what it sold for. He didn't know much about the principles of railroad management but would concede that it might be worth as much to transport our fruit East as to produce it. If the trip across could be made in good time, so that the fruit on its arrival was in good merchantable condition, there was good profit in it, even after paying the railroad half. The main thing was to get there in good time and condition. There were difficulties on the railroad side of the matter. If the fruit-growers were able to say now to the railroad company just how many cars they could use next season and at what dates, there would perhaps be no trouble about providing them; but they couldn't do it. There was the rub. Uncertainty as to the amount of fruit to be shipped and the times of its shipment made a huge annual problem for the railroad.

Mr. Gray, the traffic manager of the Southern Pacific R. R., being called upon, said that he had no speech to make. He would say, however, that his company had not provided itself with an equipment of refrigerator cars for several reasons, among others being the hope that the ingenuity of the shippers would do away with the necessity of transporting an ice-house on wheels to carry each ten or twelve tons of fruit that went from the coast to the East. They had hoped that some better way would be provided. He believed there would be and had listened with interest to Mr. Perkins' plan and he sincerely hoped that practical good would come of it. He would make no attempt to reply to the strictures against his company, made by Mr. Block, further than to say that he denied point blank that the Southern Pacific had unnecessarily or unjustly withheld any of Mr. Block's or of any other man's money. His company made it a cardinal principle of their business policy to repay all overcharges upon the instant settlement was effected.

Mr. Aiken of Wrights said that the railroads were in business for the money there was in it and not to encourage industry. The fruit-growers owed nothing to the good will or policy of the railroad; on the contrary, their courage and industry had during the critical times kept the railroads from bankruptcy. Because he recognized the railroad policy to be a purely selfish one, he went out of the fresh-fruit business some time back. This year the railroad had made pretty fair rates, but there was no assurance that the policy would be continued. Referring to the statement of a previous speaker that the railroad took half of what the fruit sold for, he said it reminded him of the Jew clothier who, for a suit of clothes, named a price absurdly cheap. "How can you do this?" asked the customer. "Vell," replied the dealer in a whisper, "that man what you see there is mine partner and I want to ruin him." It sometimes looked as if this was the game of the railroad people in their dealings with the California fruit-grower. He did not object to high rates if the railroad would put the fruit through in better time—then the shippers could afford to pay more. He had no grudge against the railroad, but wanted both the people and the roads to prosper.

Mr. Rowley gave some interesting statistics relating to the shipment of California fruits. Up to the 23d of October the shipments of deciduous fruits for the season aggregated 5283 carloads, or upward of 105,000,000 pounds. The average rate paid on this enormous shipment was \$1.25 per 100 pounds. To the railroads \$1,300,000 had been paid. To the refrigerating car companies \$740,000 had been paid. He thought the rates, on the whole, not excessive, but he did not regard the time of transit as satisfactory. The same fruit would have brought much more money if it had been put through in time so that none would spoil en route.

The outcome of the whole discussion was the adoption of a motion to create a committee to investigate the whole matter of transportation of California fresh fruits to the East with special reference to time and cost; with instructions to report at the Los Angeles meeting next month. The President said that he wanted to name for this committee men who would do the work. He would, therefore, take time for inquiry and consideration; and would announce the names of the committeemen through the press.

PROPOSITION TO ELIMINATE THE COMMISSION MEN.

At this point the discussion turned upon a resolution introduced earlier in the day by Mr. A. P. Stanton of Aptos, as follows:

WHEREAS, In the judgment of this society, the time has fully come when the dried-fruit interests of California demand that some action be taken to give shape to the handling and marketing of these products of the State. Now, therefore be it

Resolved, That Edward F. Adams, Frank H. Buck, Leonard Coates, H. P. Stabler, I. H. Thomas, A. L. Bancroft, Geo. F. Ditzler, John Markley and Robert Williamson be and are hereby appointed a committee to organize and establish a California [State Dried] Fruit Exchange upon broad lines, the object being to concentrate to the greatest extent possible the marketing of California's product of dried fruit, prunes, raisins, almonds, nuts, beans, honey, etc., in such a manner that there shall be the least possible competition of the fruit-growers among themselves, or of those of one section of the State with those of the other sections.

The officers and directors of the Exchange for the first year shall

be selected from the members of this committee, and the committee shall have power to add to their numbers and to fill vacancies, and shall have full power to act in all matters arising, which, in their judgment, require action for the best interests of the undertaking.

The directors shall have the power to employ a manager and assistants, to define their duties and fix their compensation; also to define the duties and fix the fees of the directors and Executive Committee and the compensation of the officers; to provide funds and to manage the finances of the Exchange.

Mr. Stanton, in reply to an inquiry from Mr. Maslin, explained that it was his idea that the organization projected by his resolution should take in or work in harmony with local exchanges like that at San Jose and that it should represent the interests of California orchardists in the matter of fresh as well as dried fruits.

With reference to this proposition Mr. Williamson of Sacramento spoke of the auction sales at Chicago and elsewhere in the East and declared that the situation was serious and that it behooved the fruit-growers of California to take the matter in their own hands. He thought it would be entirely practicable for the growers to have their own men in Chicago through whom fruit could be shipped and that they could arrange for local agents to distribute it in the smaller cities. The system of closed auctions he declared to be a most outrageous disregard of true business justice in the interest of a gang of middlemen. There were, he understood, 300 men in Chicago who made a living by buying California fruit at one price and selling it for another. This was a condition of affairs which ought not to be permitted to exist.

Mr. Rowley, in reply, declared that the growing of fruit was one thing and the marketing of it quite another. It was a thing that required constant study of conditions and an elaborate system of distribution. There had been no satisfactory result of all the talk about the grower marketing his own fruit. He (the speaker) was in constant correspondence with the Chicago dealers so much criticised, and had himself been present at their sales. Their "closed" auctions did not, he declared, really prohibit any actual purchaser excepting a crowd of street hawkers who injured rather than helped the run of prices. As to the charge sometimes made that it often turned out that the buyer at auction sales was the very firm by which the sales were conducted, acting as agent for the grower, he said that it did the grower no injury, since the consignee had no better chance to bid than anybody else.

Mr. Sumner of Shasta replied that if the method of sales in the East thus upheld by Mr. Rowley were to continue, the fruit-growers might as well go out of business. He, too, knew something about the way the auction sales were conducted. The prices were first agreed upon among those privileged to bid at the sales which usually occurred at an hour when most people were still asleep; the sales were made to cappers, and the commission men made through them another profit before the fruit got into the hands of the retailer. Thus, the very men we are trusting with our products conspire to rob us, and do, as a matter of fact, take a dishonest profit of from 40 to 50 cents per box. We can, he declared, put men there to do our business as it ought to be done, and if we don't do it we may just as well go out of business.

Mr. Frisbie of Shasta spoke in the same strain. Something must be done to take our business out of the hands of men who regularly and persistently rob us.

There was some further discussion, but no point of special interest was brought out. The motion to adopt the resolution—which carried with it the names included in the resolution—was carried by unanimous vote. Those members of the committee present held a consultation in the ante-room during the closing moments of the meeting, and decided to come together on Wednesday of this week at the rooms of the State Board of Horticulture in San Francisco. The proceedings of this meeting will be found on page 322 of this issue.

At 4 o'clock the session came to a rather abrupt close; as most of the persons present had to catch the 4:15 train for San Francisco and the north.

[See page 322 for proceedings of the committee to consider the matter of creating a California Fruit Exchange in Chicago.]

THE DAIRY.

The Training of Heifers.

A dairy is an artificial product. It is as great an improvement upon nature as the finest fruits are, and, as with these, it is the result of many years of the most skillful culture. The natural use of a cow is to rear a calf, and as soon as the teeth of the young animal enable it to graze well enough to support itself, the cow no longer gives milk. This is true not only of the wild races of cattle, but also of a large number of the domesticated animals, who by neglect have not been trained to the longer and more copious product of milk, but still retain the habits of the wild species to a large extent. This is due doubtless to the mistaken habit of permitting the calves to suck the cows, and thus perpetuate the original short period of milking.

It is reasonable to believe that the first step in the culture of a dairy cow is to prevent this natural habit of rearing the calf and to substitute for it the hand milking of the cow and the hand feeding of the calf. This is the most effective way to get rid of the instinctive affection of the dam for its offspring, for when it is taken from the dam as soon as it has been born there is no acquaintance between them, and in a few hours the calf is forgotten. Then, following the regular hand-milking, the milk organs soon become used to the continued effort of secretion, and, the feeding being correspondingly increased, the yield of milk is kept up until, the next calving approaching, the maternal function exerts its influence upon the dam, and the milking ceases at a shorter or longer period before the calf is born,

as the habit may have been fixed on the cow by continued culture. The next step taken by the breeder is then the skillful feeding of the cow, by which the increased quantity of milk, the richer quality and the lengthened milking period are made possible and encouraged in the most effective manner.

That this is precisely so may be proved by any person who will take any common cow which so far has been entirely neglected as to this training, and yet young enough to be easily impressed by these unusual methods, and by subjecting her to a regular and methodical system of milking and feeding—having removed the calf as soon as it was dropped—he will find that the first attempt, even, in this training, will be effective, and that each term after this effect will be more and more conspicuous, until, in five or six years, the whole character of the cow will have been changed. But if the calf is subjected to the training from its birth up, and right along until it be six or seven years old, the result will be still more marked, and so on with the calves that follow.

Thus, in a few years, any intelligent man may build up a herd of improved cows, trained in this way to larger product of milk and an increased proportion of butter. But it is easily perceived that this is not possible to every man, for it requires a mental condition that is rather rare, and one that has been so well described by the philosopher Locke, "as of one who goes about everything, even the most trifling, always with some reason, and above all things loves order, and has a way of observing it in everything with wonderful exactness." This is not easily found in any vocation, but unfortunately it is yet harder to find among farmers, who, as a rule, rarely cultivate such a spirit. But it is indispensable for success in this work as in any occupation of the human race.

And the end is worth the means. There is no other kind of property that is so profitable as a herd of cows in this way, and no other that can be so surely secured with so little exertion or cost. The truth of this assertion is proved by the results of this kind of training, by which all of our best dairy breeds have been reared and brought up to their high standard and to such a high money value. And inasmuch as these highly cultivated breeds have inherited scores of years of labor and skill in this direction, it is most desirable that every dairyman who would enter into this work should secure the good results of it for his own advantage by the use of a bull of one of the best breeds, and thus gain in a day what has cost many years of time and work to some other man. By doing this not only time is saved, but the foundation of the building is secured already laid, and the ends desired are reached so much earlier and easier.

There are many things to think of in this business. Most truly everything must be done with some reason, for there must be all the necessary conveniences provided; the well-arranged stables, pens, separate stalls for the cows, feeding lots, provision for feeding, the well-appointed dairy—for it is only half the matter to have the cows, and the other half must be provided in the dairy supplied with every improved appliance for the best work in it. Then as with an intricate machine, there must be the intelligence and the industry to turn all these to the most account. But we will consider more particularly the rearing of the calf.

In every well-appointed dairy there must be a hospital for the cows, arranged with a view to the needs of it. For a small herd, two separate stalls in an isolated building, as a carriage house or a granary, if one is not specially made for the purpose, will be sufficient. This stall is large enough for a cow to move in freely; it has a feeding trough, but no other fitting. The cow is left loose in it. The litter should be sawdust. No window or other light than that which leaks in is needed. It is a place for quiet rest. Here the cow is removed as soon as the arrival of the calf is indicated, and is cared for in the usual manner by the usual attendant. Nothing strange is to happen to disturb her. She is watched, and as soon as the calf appears it is removed to a distant pen kept for the calves alone. The calf never knows the dam. The dam never recognizes the calf. The instinct is thus never excited, and this precaution is a most effective prevention against the fatal milk fever, a wholly nervous disorder.

The attention of the cow is diverted from her condition by a mess of palatable oatmeal or cotton-seed meal slop, a little warm. This affords precisely the soothing and nutritious refreshment needed by the cow, and she will lie down and rest quietly. In six hours she is milked and the milk given to the calf, which, with a little patient guiding, will drink the milk. This gets rid of the instinct of the calf to suck, and the cow to be sucked, for the future; and after two or three times the cow falls directly into this artificial habit, while the second generation of calves lose their instinctive habit and drink on the first presentation of the pail of milk. No such nuisance of self-sucking cows, or heifers that suck all or any of the cows of the herd are known in a dairy thus managed. The calves thrive better and grow more quickly, and are far less disposed to any viciousness. They are artificial, having lost much of the natural instinct of animals that run with the dams. It is certain they learn nothing from the dams, and they are much more easily handled afterward.

The education of the calf, then, consists of feeding and handling, the first to develop a good frame and constitution, and the latter to accustom the young animal to the milking by and by. The frequent handling of the udder and teats tends to stimulate their growth and to develop increased milking ability. It is quite possible to bring a yearling to milk before she has been bred by this handling of the teats and udder, and this goes a long way to prove how amenable a heifer may be to other kinds of training. When the young animal is ten months old it should be bred to as good a bull as the purse of the owner may permit.

This is the beginning of the herd. The culture of it goes on the same way continually. Every generation is better than the preceding one. And in the course of a few years the owner enjoys the full reward of his work.—Southern Farmer.

SWINE YARD.

Dangerous Boars.

A short time since a farmer near Chattanooga, Tenn., was driving some hogs, among which was a fierce boar, which attacked him, knocked him down, and caused instant death by almost tearing him in two, says the *Kansas City Live Stock Record*. This leads us to make a few suggestions learned in the school of experience. No matter how kind a male animal may be, how gentle, tractable and easily handled, whenever handling such an animal the mind should never be diverted from the fact that you are handling a bull or a boar. Never allow yourself to forget it. Train your mind and eye to constantly watch the animal and to never forget that it is still a bull or a boar. With no other policy are you safe, although you may have run a thousand risks and came out with safety. If you lead or drive, keep your eye on the animal. A sudden freak may take possession of the animal and you may feel his horns in your back or a razor-like tusk in your leg (we have felt both and know), and there is always a disposition to follow up any advantage gained, and though playful at first it often results in death. Don't play with them and encourage this. Never strike an animal in anger. They never forget abuse and will pay you back when you least expect it. Never allow only the most trustworthy help to ever handle such an animal. I find that by kind treatment you can count the boar's teeth; he loves to be petted, scratched and brushed, and it will be good for him and you ought to frequently do it and have him perfectly familiar with your caresses, voice and presence. But never fool with him. Teach him to drive with a whale-bone whip gently. Never undertake to break him or fondle him when his animal passions are aroused. If a sow or another boar are near about there is danger. They will then attempt to get together, and unless you are his complete master, and he knows that you have never failed to control and make him mind, he will get there or die in the attempt, and nothing but the severest of measures will prevent it, and unless you are prepared and bold and active you had better not stand between.

Fattening Hogs.

A correspondent of the *Ohio Farmer* gives the following instructions: For my family I get two six weeks' old March pigs, if possible; this year two April pigs, but they are doing all right. We keep one good cow, and after we use the needed milk, and get all the cream we can off the remainder, I begin giving the pigs all the skimmed milk they will eat. When they want more I use dishwater and table refuse. When that is not enough I put in these slops a pint or two of middlings, and when that is not enough I add more middlings and water, until I use three pailfuls of the slop, always requiring the pigs to eat it up clean. By July 15th we begin to have early apples, and the pigs have the small and wormy ones to the amount of two or more pailfuls. By the middle of September I add a few pounds of cornmeal or sweet corn until the first of October, when I begin feeding some corn, and increase the quantity to all they can eat up clean, dropping off all the above slop and apples except the milk and what water they want to drink with the corn. A little salt and ashes occasionally are good. I usually butcher about the first of December, and they average, one year with another, 200 pounds apiece. If I used whey instead of milk, I should use a little more middlings, and have done so. I believe in cleanliness, such as we read of, and when I feed corn in the ear I clean out the pen every day.

Roots for Hogs.

It is a well-known fact that hogs to do well should have a variety of feed and not depend upon corn alone; especially is this true of hogs kept for breeding purposes, writes a contributor to the *Breeder's Guide*. There are many kinds of root plants that are excellent for feeding to hogs, among them artichokes, potatoes, rutabagas, parsnips and beets, preferred in the order named. When we take into consideration the easy culture, the remuneration for amount of ground required for their growth, we are made to wonder why these are not more generally raised. We can only conclude that farmers generally do not know and appreciate their value. When we take into consideration the fact that an acre of artichokes, planted in rows four feet apart, and in drills about two feet apart, with the same amount of cultivation given to corn, will yield from 400 to 800 bushels, we think that every farmer should have at least one or two acres devoted to the culture of artichokes. Allowing hogs their freedom in the fall and spring, they will root them out of the ground as they will eat them, thus giving them plenty of exercise. Besides, the tubers may be stored away for winter feeding the same as potatoes. We wish to call the especial attention of farmers to the value of artichokes as hog feed.

Oilmeal for Pigs.

This is what Waldo F. Brown of Ohio says on the subject: "Another valuable use for oilmeal is in raising pigs. Two years ago an old farmer asked me if young pigs could be weaned and kept thrifty without milk, and I told him I thought slop could be made with bran and oilmeal that would be both palatable and nutritious. Last spring I had 19 pigs and but little milk, and all we had was needed in the family and to raise a calf, so I made a slop for the pigs with bran and oilmeal and never grew a more thrifty lot, and they sold at 145 days old at top prices for big pork. If any farmer will try the experiment of stirring one pound of old-process oilmeal into a ten-quart

pail of boiling water and see how near it comes to making a mush, then add this to ten gallons of slop made from bran and see what a good body it gives it, he will begin to get an idea of the value of oilmeal as a pig food. Bran is an excellent food for any growing animal, but alone it does not make good slop, particularly the coarse bran made by the roller mills; the oilmeal added makes it far more palatable and the pigs will eat more of it."

POULTRY YARD.

Hints for Turkey Time.

Turkey time is coming. Are the turkeys ready? A correspondent of the *Boston Cultivator* writes as follows: It should be remembered that the best turkeys always bring the greatest profit to the owners, and that in times of a glut in the market they are usually the ones that work off, while the inferior birds are left behind. Try to raise fancy turkeys for Thanksgiving, and you will get your reward. There will be plenty of poor stock from all parts of the country, and the chances are they will sell cheap.

The bronze turkeys usually are the best for raising, as they can be made to produce very tender, sweet meat, while their carcasses, when properly fattened, are very heavy. In fact, they surpass all other breeds both in weight and hardness. The young turkeys before this time should be good-sized birds, and those that have gathered up a living on the farm and in the fields and woods during the summer are in excellent condition for fattening for the holidays. As a rule turkeys can find their living in the woods and fields better than chickens, but they should not be kept without grain feed too long. If they have been accustomed to the fat, juicy worms of summer they are very ready to make a change of diet. But even in the summer time they should be fed night and morning with some good food, such as corn or wheat.

The fattening period for market should cover several weeks. It is better to give them all they can eat for four weeks than to force them to eat more than they want for two weeks. Give them good food only, for everything that they eat now goes to make meat, and if such things as onions, bitter weeds and decayed fruits and vegetables are given to them their meat will have a bad odor and flavor. The food during the fattening period really has much to do in giving the turkeys fine, white, well-flavored meat. Too much exercise is also bad for them, and they should be shut up most of the time. Avoid anything that will bruise the birds. If they are inclined to be quarrelsome they should be separated. Corn is the great fattening food. Plenty of pure water and milk help the turkeys at this time. Sweet, rich milk is good for them and they are very fond of it.

Finally, the marketing should be done with the same care and intelligence that the fattening has been performed with. In many cases it pays better to keep the turkeys until after Thanksgiving, as the market is good then and there are fewer birds for sale. Some years the glut around Thanksgiving time is so great that very poor prices are realized.

Kitchen Scraps.

From the kitchen come many of the very choicest tit-bits which find their way into the capacious craws of the chicks, and it not only relieves the monotony of grain food, but it turns to profitable account what would otherwise be cast out and lost. Bits of bread and meat, the crumbs from the tablecloth, the bits of celery and scraps of cabbage, all are relished by the fowls. While the fowls will greedily take these just as they come from the kitchen, there are many other things which could be profitably used as chicken food, if but a little care and time be bestowed upon its preparation. They are the potato parings, which are usually consigned to the swill tub, or thrown out where they will be of no account except to become a nuisance. These can readily be utilized by boiling them a few minutes, and, while still hot, mixing a few handfuls of fine cornmeal with them, after which they can be set away to steam. When they are cool the mess can be fed to the fowls, and they will soon clean up every particle. They can also be used without the cornmeal. Turnip parings can be similarly treated.—*Poultry World*.

Buying Hens for Use.

At this season, when hens are somewhat cheap, many persons buy a large number for winter layers. In fact, it is a common occurrence, when one wishes to keep a large number of hens, to go out and buy them wherever they can be obtained. This is one of the principal causes of failure. When a lot of hens are procured, they must be obtained from any source available, hence there are as many liabilities of disease as there are sources from which the birds come. A flock from one yard may be healthy and perhaps well bred, while the hens bought of another person may be from a yard in which roup has appeared, or where the stock is constitutionally weak. We have never known of any one buying birds that some difficulty did not spring up. Lice, roup, inbred stock and many other drawbacks appear when it is too late to rectify them. There is but one course to pursue, and that is to raise your pullets, and begin with a few selected hens, not expecting to make a profit the first year, so as to get stocked with good, healthy birds.—*Ex*.

Needed It.

Polite Tramp—Madam, may I inquire what variety of fowl this is?
Lady of the House—That is a Plymouth Rock.
Polite Tramp—Er—I thought so. Have you a stone-crusher on the premises?

THE FIELD.

Farm Wages Must Come Down.

It has been the pride of this State that wages were high and that workmen here were paid more than in any other State in the Union. Intelligent farmers who have studied the question with much interest for several years past unite in saying that wages are too high in this State and they must come down. Talking with several upon that question this week, they gave the following facts which we publish pretty near verbatim: Wages are as high on farms as they were 20 years or more ago, while the products of those farms have materially lessened. Owing to the wearing of the soil and the fact that manuring farm lands is not practiced here to any extent, we place the crops of wheat, barley, etc., at only two-thirds of what they were 20 years ago. Prices for these products have fallen at least 25 per cent. Now, as the crops have decreased and prices have lowered, it is manifestly impossible for farmers to pay the same rate of wages they used to.

If a man rents his farm and receives for the rent one-third of the gross proceeds, it is estimated that he gets all the profit there is, and that no renter can follow up that rate of rent for five years without breaking up and going to the wall. It requires, then, fully two-thirds of the entire crops from the land to pay the expenses of labor, seed, harvesting, etc. At the prices now prevailing it requires one-third of the total proceeds to pay for labor alone, which would leave the renter one-third for his expenses of all kinds. When he takes into consideration what it costs him for seed, taxes, machinery, etc., it is apparent that he cannot keep from breaking down.

The high prices paid for labor have broken down the farmers of this State and is gradually sending them into bankruptcy. They have hung on year after year and borrowed money until the banks now have more loaned upon the land than it is worth. Farmers have struggled to meet payments, interest, taxes, etc., until most of the larger ones are forced to the wall or into a position where they must quit farming to save themselves from bankruptcy. Many are now leasing their lands or making such disposal of them as will enable them to avoid the terrible drain for labor.

The fruit-growers are even in a worse position than the grain-farmers, for fully one-half the expense of the present time comes from labor with which to pick, pack and handle their fruit.

The wool producer is no better off, for the shearer wants seven cents a head, or just what he was paid 20 years ago.

The question that stares the California farmer in the face is not the silver, or tariff, or any question now being discussed by Congress, but simply the one of high wages. The Eastern farmer gets as much for his hay and grain, and a great deal more for his fruit, yet he does not have to pay one-half the wages we are forced to pay here. Wages here are from \$1 to \$1.15 per day and board in winter. Board means 50 cents a day. Wages in summer are higher. In the East a farmer can get all the help he needs at from \$8 to \$15 a month and board. California farmers must come down to \$15 a month and board ere they can compete with Eastern farmers.

Labor of all kinds is too high in this State, and this causes the land-owner such a heavy burden that he is being forced to suspend operations. Before this winter is over there will be hundreds and perhaps thousands of men who will have to go without food because they cannot get work. If men would come to farmers and say we need work, must have work, and will do good honest work by the year for \$15 per month and board, there would be some encouragement for those owning land to make every exertion to give them employment; but as it is, farmers and others who own land are quitting all over the State. They are forced to give up on account of the high wages they have hitherto paid.

We would like to increase rather than decrease wages, but this is impossible. We cannot meet and discuss this question and agree to pay only certain rates, for all the newspapers in the State would howl against us. Facts are, however, stubborn things, and we are forced to quit our lands, lease them, rent them, or quit working them in order to avoid enormous losses.—*Oroville Register*.

The Compost Heap.

It makes little difference what is the season of the year, the compost heap, which should be found upon every farm, should receive attention, first, because it is the place of deposit of all the refuse of the farm of a vegetable nature, and second because the accumulation may be employed for fertilizing purposes. Few farmers who have failed to regard the importance of the compost heap are aware of the amount of material that is allowed to go to waste by being cast aside as useless or of no value. It is the accumulation of small things that aggregate a considerable mass, and so in the economy of the farm. A mass of leaves blowing about, the weeds and refuse of the garden, sawdust and fine chips that have accumulated about the woodpile, decayed fruits and vegetables, refuse lime left from whitewashing, and a thousand and one things that are seemingly of little or no account when taken singly, when mixed together, and perhaps with turfs from the fence corners and wash from the highway mixed and watered with soap-suds from the washroom, slops from the chamber and dishwash, will, by the powers of decomposition and mixing, become of no little consequence as a fertilizer. Even take the dishwash; if one doubts its fertilizing power, let him take some of the soil from the outlet of a sink-drain of a year's use and apply to any crop and note the effect. A cesspool well supplied with absorbent earth, into which only a sink is drained, will form an excellent fertilizer, especially valuable for use in the cultivation of vines.—*Ex*.

THE HOME CIRCLE.

The Song My Mother Sang.

I've listened to the music which the world is pleased to hear;
Heard Patti's wondrous singing, as sweet as it was clear;
I have loved the liquid melody in Emma Abbott's voice,
Like silver music calling on the people to rejoice;
I have sat with listening thousands where a temple thrilled with song,
And eyes were dim with moisture throughout the mighty throng,
But sweeter far than antheims grand or diva's notes can be
Is the music of a little song that once was sung to me:

"Hush, my dear, lie still and slumber;
Holy angels guard thy bed."

It was in an Eastern cottage, ah, many years ago,
One sung that little song to me in peaceful voice and low;

I wouldn't guarantee the notes did not sometimes go wrong,
I'm sure no "artist" would approve the quaver in the song;

Perhaps the voice was cracked at times; I'm not exactly sure,
And possibly 'twas lacking in the quality called "pure";

But of one thing I am certain. This side the "border line,"
No melody I'll ever hear will seem so near divine:

"Heavenly blessings without number
Rest upon my darling's head."

"Hush, my dear"—The old, sweet music now is floating back to me,
From the maze of years out-stealing, ringing o'er Time's misty sea.

Hear it now: "Lie still and slumber"—Love is written on the face,
And a mother's deep affection lends the singer Heaven's grace.

"Holy angels"—Who will doubt they heard that singing long ago?

For the prayer within the music reached the Loving One, I know.

Ah, these memories, how they hold us! How to time-worn souls they cling!

Still, 'mid toil and care and heartache, I can hear my mother sing:

"Hush, my dear, lie still and slumber;
Holy angels guard thy bed."

So, though I've heard Patti's singing, thrilling like Olympian wine;

Though I've listened to the "artists" whom the world has termed divine;

Though I've heard the rush of music, soul-entrancing, wondrous, grand,

And my soul in mighty anthems voids 'twixt Heaven and earth has spanned,

Yet in all there's something lacking, something that I yet have known—

Something dearest to my fancy, something sweet to me alone.

And 'mid all earth's tuneful voices, ringing out in melody,

I have missed the tender longing in my mother's song to me:

"Heavenly blessings without number
Rest upon my darling's head."

—A. J. W. in Stockton Mail.

A Cruel Deception.

DO you think she really loves him? I must confess I have had my doubts lately. Seems to me no woman about to marry should be so wrangled up in another man as Miss Geraldine is with young Allison. What do you think of it, Bessie! Sort o' mysterious—eh?"

Miss Flynn removed a half-dozen pins from her mouth and deposited them upon the sewing-table at her side. Miss Flynn was "the leading dressmaker" in the pretty town of Arlingford, and she was now occupied with the minor details of Miss Geraldine Vane's trousseau. The wedding dress and more important portions of the bride's grand wardrobe were all, of course, ordered from New York, as Arlingford was not capable of producing the requisite "style."

Bessie Grey, the dressmaker's assistant, glanced up, and her round cheeks paled and then flushed. Pretty little brown-eyed Bessie! to her the very suspicion of such a state of affairs as was hinted at by Miss Flynn was simply terrible. Bessie was born at Arlingford and had lived there all her life. She had known Will Floyd, the prospective bridegroom, for years and secretly regarded him as a hero, a chevalier, a Sir Galahad; everything high and lofty, noble and grand. He lived in a stately mansion on the hill just within sight of the home of the Vanes. Bessie glanced swiftly from the window to where the great white stone house stood, its marble pillars wreathed with scarlet runners, a group of noble live oaks clustered around. A soft sigh escaped the girl's lips; then she started and colored guiltily.

"Oh, no, Miss Flynn," she cried deprecatingly. "Surely Miss Vane would not marry Mr. Floyd unless she loved him! How could any woman do such a wicked deed?"

Miss Flynn laughed lightly. She was an

old maid, twice Bessie's age, and knew the world thoroughly, all the deceit and guile, and the love of money, which is indeed "the root of all evil."

"Miss Vane aims high!" said the spinster, grimly, biting off with a vicious snip the blue silk with which she was sewing. "Somebody else has more money than Mr. Floyd, but she is sure of Mr. Floyd (such a fine gentleman as he is, too!), and she is not sure of Richard Allison. Don't you know that Mr. Allison is worth at least two millions? Mr. Floyd has money, it is true—he is rich enough to satisfy an ordinary woman; but Miss Geraldine Vane aims high. She has ambition to become one of the magnates of the land. As Will Floyd's wife she would be rich and honored, but as Allison's wife she would be at the very top of the ladder. It is a glittering prospect, but (with a long-drawn sigh) all's not gold that glitters!"

"It's a shame!" cried little Bessie, indignantly, the big brown eyes kindling. "I think Mr. Floyd ought to know it! He is so good and true. Just to think of going on day after day in ignorance of the truth, and she deceiving him so basely! Some one ought to tell him!"

"Suppose you take it upon yourself?" suggested the dressmaker, dryly.

"If Oh, Miss Flynn, I could never do that!" faltered Bessie, her sweet face crimson. "I only say that he ought not to be kept in the dark—that somebody ought to put him on his guard. Yet still, it necessary, I would tell him myself rather than see a good man deceived."

Miss Flynn's face wore an inscrutable expression. She bent her head a little lower over the sewing machine and worked away with renewed vigor. Down in her heart the dressmaker was saying in consternation:

"Good heavens, that girl is in love with Will Floyd herself! I can detect the signs readily. Well, she would do better to jump into the river yonder rather than give her heart away unsought. I did it, and here I am to-day in consequence—Jane Flynn spinster, and liable to remain Jane Flynn to the end of the chapter! Oh, well—what difference after all? Life is short, and one drags through it without love somehow or other. And there is always the thought of the life beyond!"

"Yes," ventured Bessie Grey, timidly, as she began to fasten a white lace flounce to the pale-blue silk skirt which lay across her knee, "hard as the task would be, I should think it one's duty to inform Mr. Floyd of the ground for suspicion if we were sure that Miss Vane is really guilty of this deception."

"If!" sniffed Miss Flynn, disdainfully, "well now, Bess, listen while I tell you what I saw and heard myself. Then say if you think Miss Vane is very deeply in love with her intended husband. It's all between you and me, Bessie, you know. But I saw Geraldine Vane kissing Mr. Richard Allison in the music-room the other night. You know I was there until very late working on that rose-colored silk ball dress, and I went to the music-room to call Miss Vane. She had told me that she would be there alone, and I was to call her when the dress was ready to try on, so it was perfectly proper for me to go there. And I found her at the piano—and Allison bending over her. As I opened the door (of course they did not hear me) I saw their lips meet in 'a long-clinging kiss,' as the novelists say. And that is not all" (as Bessie uttered an exclamation); "he writes to her! Love letters! I saw her crying over one the other day, and—and she dropped it, and I picked it up to hand to her, and I couldn't help seeing the signature at the bottom: 'Your own, Richard.' I believe she is tired of Will Floyd. She does not wear his ring only when she expects him to call, and I have noticed the expression of disdain that comes over her face when he is near. I believe she cares no more for Will Floyd than—than—you do! There, what have I said?"

For, to Miss Flynn's utter astonishment, Bessie Grey burst into tears.

"Why, what's the matter, Bessie, dear!" cried the dressmaker in real alarm. "I am sure I didn't say anything to make you cry! Oh, dear, what an unlucky mortal I am to be sure!"

Bessie lifted her golden head, and with a vigorous effort composed herself, wiping away the tears with shaking hand.

"There! there!" said Miss Flynn, soothingly, "don't cry, dear—it's no use to cry for anything in this world! 'What is to be will be,' you know! And, besides, your tears will ruin Miss Vane's blue silk! Fancy the storm you would arouse if such a catastrophe should occur! And as you live, there she comes."

The door of the pretty sewing room was pushed open, and a tall, graceful woman entered the apartment. She was elegantly attired in a black and gold carriage robe—a

tiny hat of jet resting upon her golden braids. She looked fair and proud as an empress, and as cold as a marble statue.

"I wish you to alter the position of this bow, Miss Flynn!" she commanded in her clear voice, indicating some of the trimmings attached to her dress. "And if Mr. Floyd calls—Ah!" falling back with a start of unfeigned surprise—"he is here!"

"Why, Will!" (her face paling a trifle) "how in the world did you come to be in that room?"

He bowed.

"Your mother invited me in here to show me a painting. A few moments ago she excused herself to attend to some business, and she has not yet returned. Geraldine, may I have a few words with you? Yes, right here in this room, in the presence of Miss Flynn and Miss Grey. 'Ladies—indicating the grim dressmaker and her pretty assistant—

'I have unwittingly been a listener to your conversation. If all you allege is true, I am under obligations to you decidedly.' Geraldine—turning once more to his affianced—"Is it true that Mr. Allison calls here during my absence—calls as a lover—upon you? Kisses you—writes you love letters—in short, acts the part of an accepted lover? Answer me—yes—or no—that's all I require."

She was pale as death, her blue eyes glittering like cimeters.

"Yes, it is true, no matter who told you! I was determined to be rich—to be richer than ever you could make me, so when Mr. Allison began to show me lover-like attentions I did not repulse him. He did not know of my engagement to you—until after he had written me a letter asking me to be his wife. I hesitated until I could first break with you. Fortune has favored me—you know all! Am I released? Do you give me my freedom?"

He bowed his head.

"With pleasure. Now that I know you as you are, I would not make you my wife for any consideration. Marry Allison if you wish. Heaven help him! Poor fellow, he deserves a better fate! As for myself—"

"You had better marry Bessie Grey?" sneered the proud beauty. "I have known for a long time that she has designs upon you!"

"Hush! You should not speak so of the only good woman I know. I will marry her—if she will consent. Miss Grey"—he took Bessie's trembling hand in his, right there before the astonished eyes of Miss Vane and the dressmaker—"will you be my wife? I have known you for years, and know how pure and sweet you are, how grand and true is your nature. I used to call you my little wife when we were children, before ever yonder false woman crossed my path. Let the old words come true, Bessie—and be my little wife in reality."

But she made no reply; her head drooped, she sat trembling like a leaf, while Miss Vane could only stare in blank bewilderment to see how literally he had taken her sneering advice.

* * * * *

The grand wedding took place, and Miss Vane actually married the millionaire Richard Allison. One month later reverses, which had long threatened him, overtook him, and in a few weeks he found himself comparatively a poor man; for the fortune which had seemed inexhaustible took wings and flew away. His bride returned home to her mother—a sonred, disappointed woman, disliked by everybody, the very servants shunning her as "a holy terror."

And Bessie? Oh, she married Will—handsome Will Floyd, after a year's probation, upon which she had insisted to prove the stability of his affection. And now the great white house on the hill has a mistress, and Will Floyd blesses the day when he first discovered that cruel deception.

Some men will tell you that life is tasteless, wearisome and exhausting. In every case they are men who have tried to live in a narrow and selfish manner.—Dr. Chapin.

As It Should Be.

Maud Muller on a summer's morn
Jerked the suckers from the corn,
And walloped the striped bugs that flew
From the melon vines in the morning dew.
Her dress, though adjusted with patient care,
Was, maybe, a little the worse for wear;
But her face was as fair as the ripe, red rose,
Though she had a few freckles upon her nose.

Her father, an honest and kind old jay,
Was out in the meadow making hay,
And trying to lift with his brawny arm,
The mortgage that covered the dear old farm.
'Twas an uphill job and it made him swear,
For he had ten children, and dogs to spare,
And the crop was large, but the price was not,
And the annual interest made him hot.
The judge rode by on his sway-backed horse,
And saw Maud Muller and changed his course.
He was struck with her beautiful eyes and hair
And fell in love with her then and there.

He stopped and conversed of the growing crops
And the wavering price and the bucket shops,
And was quite impressed with her sterling sense,
As she with his classic eloquence.

He came each day and longer stayed,
And offered his hand to the modest maid,
And she, in true lover's parlance versed,
Requested to be a sister at first.
But afterwards yielded when he demurred,
Submitted a brief, and her dad concurred;
And so it was settled the twain should be
One and the same for eternity.

The wedding day came, 'twas a grand affair,
For the cream of the country were gathered there,
And Maud was dressed like a fairy queen,
In the finest togs she had ever seen,
And the judge was happy, and so was she,
And so was the whole community.

Meantime the Muller farm seemed to be
Fresh meat for the ravenous mortgagee,
But the judge, in a dignified, legal way,
Sought the creditor out and advanced the pay,
And gave his wife's father a farm beside,
Without the least show of judicial pride;
And said to himself as he wrote the deed,
'I'll not see my father-in-law in need,
For he gave me his daughter, and she alone
Is worth many times all the wealth I own.'

—Nebraska State Journal.

Gems.

It requires a great heart to turn small things to heavenly uses.—W. G. Eliot.

The great intercourse of thought is self-adjusting, and the producing finds the consuming mind.—Davis A. Wasson.

Command large fields, but cultivate small ones.—Virgil.

Either I will make a way or I will find one.—Sir P. Sidney.

The secret of a success is constancy to purpose.—Disraeli.

Influence is the exhalation of character.—W. M. Taylor.

Avarice is always poor, but poor by its own fault.—Johnson.

Subtlety may deceive you; integrity never will.—Cromwell.

Three may keep a secret, if two of them are dead.—Franklin.

When faith is lost, and honor dies, the man is dead.—Whittier.

Light griefs do speak, while sorrow's tongue is bound.—Seneca.

Mediocrity can talk, but it is for genius to observe.—Disraeli.

Many children, many cares; no children, no felicity.—Bovee.

Fortune does not change men; it only makes them.—Riccoboni.

If you would civilize a man, begin with his grandmother.—Victor Hugo.

Maxims are the condensed good sense of nations.—Sir J. Mackintosh.

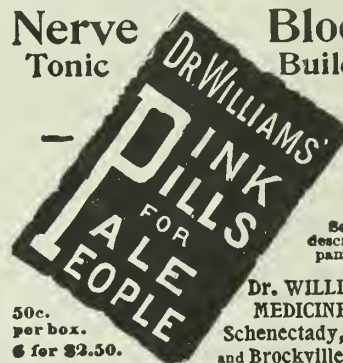
Housekeeping to Please Neighbors.

The hardest housekeeping in the world is the housekeeping people do for the benefit of their neighbors. Half the trouble we have is caused by worry as to what people think. What difference does it make what people think? What is the use of setting up housekeeping on the roof or the outside walls? You and I would be called insane if we suggested it, and yet it is practically what half the world is doing all the time. They can't do this, because the neighbors will talk; they can't do that, because the neighbors will wonder if they couldn't afford to do anything else. They may not say it

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder
ABSOLUTELY PURE

Most Central Location. Reasonable Charge.
A. C. BILICKE & CO., Proprietors,



PATRONS OF HUSBANDRY.

Editorial Observations.

The Secretary's Column covers the ground so well this week as to leave little to be said in general about grange matters. No word has been received from Worthy Master Roache since his departure from Watsonville two weeks ago. By this time, without doubt, he and Mrs. Roache are in the far East; and another fortnight will see them at Syracuse, N. Y., where the National Grange will meet on the 15th inst. We shall hope before that time for an official letter to be given through the RURAL.

Messrs. Loucks and Jones of the Executive Committee met in this city to-day (we write on Tuesday), and had an interview with the managers of the Midwinter Fair with reference to grange representation in the Agricultural and Horticultural building. The matter arose through a proposition from Mr. W. H. Murray, special agent for this building, that the State Grange take the central space immediately beneath the great dome, and furnish it with heroic, emblematic figures of Ceres, Pomona, Flora, etc., etc. At the interview with the managers to-day, Messrs. Loucks and Jones informed them that under no circumstances would the grange pay anything for floor space. Nothing was settled, but the committee came away with the impression that if they wanted the space free they could have it.

The grange should unquestionably be represented at the Midwinter Fair, but it would, we believe, be better to maintain an office where grangers and others would be made welcome and where easy information could be kept on tap than to set up a series of heroic emblematic figures. To keep such an office open during the six months of the fair would, probably, not cost more than to make the proposed figures; and we believe the result would be more satisfactory to the membership at large and more useful in spreading the fame and emphasizing the efficiency of the order. Of course, neither of these things should be done if it would put a strain upon the finances of the State Grange. If, for example, it should be a choice between making an exhibit at the fair and securing the services of the Master of the National Grange for a lecture tour, we should be in favor of letting the fair go and of spending the money in the work of revival in the country.

All this, of course, is in the air. Nothing at all may be done, and it is certain that nothing will be done until it be well considered. The executive committee is not given to hasty action. In the meantime the committee would be glad to hear from members of the order at large with reference to the matter. The columns of the RURAL are open for discussion of the subject. Let us have your views as to how the grange should be represented at the fair.

As the secretary states elsewhere, the manuscript of the proceedings of the State Grange will soon be in the hands of the printer. As soon as the reports for which Mr. Mills is waiting come in, there will be a meeting of the executive committee at the RURAL PRESS office, probably early next week. At that meeting the fair proposition will be further discussed, but no definite action will be taken until Messrs. Roache and Walton are heard from.

From New Hope.

Miss Carrie Carleton, the faithful reporter of New Hope Grange writes that a fine picnic was held under the grange auspices on the 29th of September. The festivities of the day were followed by a dance in the evening.

At a regular meeting held Oct. 31st favorable action was taken upon the applications of six persons for membership. It was determined to have a monthly journal made up of contributions of the several members.

The meetings of New Hope are now held in the evening, suitable to the convenience of many who find it impossible to be present at day sessions.

The Secretary's Column.

Very little correspondence has been received from subordinate granges this week relating to grange work throughout the State. The communications received at this office so far have been of a business character only, relating to supplies, dues, etc.

The Journal of Proceedings is not quite in readiness for the printer, owing to a few granges not sending in their annual reports which ought to be published every year, and which are an important factor in the makeup of the journal. Letters have been sent to those granges which have not reported, and I trust that in a few days all will be heard from and we can proceed with our work. As the RURAL has already stated, the printed proceedings should be in the hands of the order at large by one month from now, and I hope that those who may notice this article and who have not reported, will kindly do so at their earliest opportunity and help push the work so all may have a copy by the first of December.

Lodi Grange reports their lodge in a good condition financially, not having as many members as last year but all seem in earnest, and while the interest lags sometimes, it is soon removed.

A Farmers' Institute will be held in Visalia sometime during December under the auspices of Tulare Grange which promises to be of much benefit to the agriculturists of that vicinity. Armory Hall has been secured and those interested say it will be well filled. Three sessions will be held. The date and hour of meeting have not yet been fixed.

The present indications are that a new grange may possibly be organized at Visalia, Tulare county, by the first of the year. It is to be hoped that those who have the matter in charge will meet with success. Let the good work continue.

Bennett Valley Grange will celebrate the anniversary of the order Friday evening, December 1, 1893, by a musical and literary entertainment, to conclude with a social dance. All members of the order are cordially invited to attend.

The fourth of December is the natal day of the Order of Patrons of Husbandry, and we hope to hear of preparations being made by the subordinates throughout the State for the proper observance of the same. If you are going to celebrate let us hear how and when. Time is getting short. Only about a month until the fourth of December. Let all who are interested go to work at once.

Address all communications for California State Grange to DON MILLS, Santa Rosa, California.

American River Grange.

American River Grange celebrated the tenth anniversary of its organization on the 26th. The hall was beautifully decorated with evergreens and showy chrysanthemums. The forenoon session was devoted to the work of the order. After a delicious repast an open meeting was held. Dr. James Caples was given close attention while he spoke on the financial problem, and, after declaring himself in favor of bimetalism and honest dollars, he closed with an eloquent appeal to voters to throw off the yoke and vote for men of principle and not of party.

Bro. Geo. Wilson offered a resolution adverse to bonding the county for road improvement, and when the sentiment seemed favorable to the adoption of the resolution it was laid on the table for further discussion. The subject is one of great importance at the present time, as the late county road convention declared in favor of the issuance of bonds for the building of a few miles of macadamized road, and will soon call upon the supervisors to arrange for an election at which the people of the county will decide for or against bonds.

The exercises were completed by an enjoyable evening party. A large number of patrons were present from neighboring granges.

—A movement has been successfully started at Tacoma to hold a general Northwest Coast Fair during the months of August, September and October of next year. All the coast States and Idaho, Nevada, Montana, Alaska and British Columbia will be invited to participate. The buildings of the Western Washington Exposition are to be enlarged for the purpose. The stock show will be made a special feature. Subscriptions to the fund have already been made, and much enthusiasm is shown.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

A Palermo letter reports the following shipments from that point since the 1st of last June: Green peaches, 9585 boxes weighing 158 445 pounds in small shipments, 916 boxes weighing 62,400 pounds in three carload shipments, making a total of 7501 boxes of green peaches weighing 220,845 pounds; then, in dried peaches, we have shipped 1121 sacks weighing 79,070 pounds, which includes two carloads; in green grapes we have shipped 1632 crates weighing 35,385 pounds, besides 25 crates of green prunes, 6 boxes of nectarines, both weighing 550 pounds, and 69 sacks of dried pears, 60 sacks of dried apples weighing 8076 pounds. Thus it will be seen that in green and dried fruit we have shipped a total of 340,931 pounds, besides about 1300 pounds shipped by Wells, Fargo & Co.'s Express.

Calaveras.

The Citizen: Good apples are somewhat more plentiful in this section than for several years past. The codlin moth's depredations are not so visible as during past years.

Kern.

Kern County Echo: This is the way J. A. Clark is managing it. Having harvested a big crop of grain hay, he irrigated and plowed the land and planted it to corn. In planting he tried to divide the field into ten-acre tracts, planting each ten-acre piece a little later than the one before it. When the first planting was just passing out of the roasting-ear stage he turned in some big steers which he had shipped in from Arizona. Any farmer knows the result. The sweet and tender ears, blades and stalks were consumed, leaving little to show what the planting had been. One piece being cleaned up, another one was turned over to the tender mercies of the big, expanding steers. Of course the corn grew and matured faster than the cattle could reach it, so the consequence is that as they approach a marketable condition they are consuming nearly or fully matured corn, which will harden the beef and make it still more marketable. Our informant did not state, but we dare say some thrifty young hogs have been following these cattle, and soon Mr. Clark's bank account will show the sale of some prime beef and pork. For a second-crop proposition, what is the matter with Mr. Clark's plan.

Kings.

Hanford Journal: W. S. Camn has a force of men and teams at work on the West Side, planting in 1500 acres of grain at the rate of 70 or 80 acres a day. He will also sow 1000 acres at home, 1000 acres near the lake, and considerable at Summit lake besides. He will make a pile next year if wheat reaches the price he anticipates.

Los Angeles.

Pomona Progress: The returns which Geo. S. Bisbee received from a strawberry patch on his ranch northeast of Pomona are the largest we have heard of. From two-fifths of an acre he sold 5333 boxes of berries and received for them \$365.10, besides several hundred boxes that his family used.

Pomona Progress: The orange-growers of Azusa, Glendora and Covina are practically unanimous in the organization of a fruit exchange for that section. Only one or two small growers have failed as yet to join in the movement, and it is expected that they will soon come in. That exchange is going right ahead without any delay. They have lumber on the ground for erecting two large packing-houses, and possibly have the contract for building them let by this time. They propose to carry on their organization whatever other localities may do.

Los Angeles Express: That bug with the name which, when spoken, sounds like the attempt to say something on the part of the man who has been imbibing freely, viz., the *Rhizobius ventralis*, is being packed up in lots and shipped away to orchards which are infected with black scale, and there given a chance to eat and grow fat. This commendable work has been done by Mr. Alexander Craw, quarantine officer of the State Board of Horticulture, and Ellwood Cooper, at Mr. Cooper's ranch at Santa Barbara.

Monterey.

Watsonville Pajaronian: Spuds are being hauled by team from the Salinas valley to the Santa Cruz market. The railroad is missing that traffic, and it is claimed that the teams beat the railroad rate. Over in Gilroy the Alliance flour mill makes its shipments to San Jose and Hollister by team and claims to beat the railroad rate. When the era of good roads is once established, the transportation companies will have to considerably reduce their rates, or the era of freight wagons will be largely restored.

Napa.

The Napa Register, writing of a visit to Tubbs' winery at Calistoga, says: "The machinery is driven by a six-horse power gasoline engine. The grapes are dumped from the wagon into an endless chain carrier, which carries them up to the upper story of the building where they drop into the crusher and from there into the stemmer, where the stems and grapes are separated, the stems being driven out into one chute and the juice and crushed grapes running down another to the press. The press used runs by hydraulic power. We saw something new to us, too, in the fermenting tanks, where the grape-juice is pumped into an air-tight tank, and in the hung-hole is fitted a tin tube, with a valve in it, filled with water, so that when fermentation begins in the tank, the gas

must escape through the water in the can. This keeps the wine air-tight during fermentation, and much better wine is claimed as a result. The capacity of the crusher and press used at this winery is about 50 tons per day. The number of acres in vines on the ranch is about 120, and, as a large proportion are what are known as hill grapes, the quality is of the very best."

Placer.

The call for meeting of Placer county fruit-growers, printed early in the month, resulted in a largely attended meeting at Auburn last week and in the organization of a permanent club. From the *Republican* we learn that J. Parker Whitney was chosen president of the club, and Messrs. G. H. Turner, H. E. Parker and P. W. Butler were elected vice-presidents thereof. The following gentlemen were chosen directors: J. Parker Whitney, Fred C. Miles, H. E. Parker, P. W. Butler, A. C. Short, L. L. Crocker, J. N. Barton, F. J. Mason, G. H. Turner, T. F. Hunter, Charles Hitchcock, C. G. Lavers, N. B. Lardner, Wallace Dewe, A. Moger, W. B. Gester, J. B. Sisley. A committee on by-laws was appointed, consisting of H. E. Parker, J. Parker Whitney, W. B. Gester, F. C. Miles and J. H. Bickford, which will report at the next meeting of the club.

Riverside.

C. C. Thomas, J. N. Walter, J. E. Stuart, John Nicolson and R. S. Thomas united in a call to the bee-keepers of Riverside county to meet at Winchester on Nov. 22d to consider the matter of appointing foul-brood inspectors.

San Diego.

The San Jacinto Register reports that a farmer in that vicinity shipped, through a San Diego commission merchant, 255 sacks of barley to San Francisco. The grain sold for \$121.12. The freight was \$79.60. The sacks and threshing cost \$43. This left the farmer with an indebtedness of \$1.48, which is in reality a small sum to pay for the large amount of healthful exercise he got out of raising and harvesting the grain.

Santa Barbara.

Santa Barbara Press: Shipments of beans continue very heavy from Ventura and Santa Barbara counties to the East. Since the first of September, fully 500 carloads have gone out over the Southern Pacific system.

Solano.

Davisville letter in the Winters' Express: Never in the history of the raisin business has there been such a crop harvested as this of the present season, and it is seldom that the weather has been more propitious for curing. The favorable weather still continues and raisin making is progressing favorably. The last gathering is now very near the turning point, after which the danger from mold is greatly lessened. In three weeks more the entire crop can be housed and even at the low prices ruling the profits will be considerable.

Sonoma.

Sonoma Index-Tribune: The Tokay grape crop of this valley which for the most part is being shipped direct to Chicago, through the agency of Porter Bros. on commission, will net the producers between \$70 and \$75 per ton. The crop is a heavy one and the bunches are large and full and free from all blemishes.

Santa Rosa Democrat: Thomas Taylor, whose farm is between Santa Rosa and Etna has for some years been cultivating onion sets with which he supplies the entire Santa Rosa market, and may soon extend his business outside of it. He has a method of his own by which his product is so cured that the sets will keep for an indefinite time. When cured in the ordinary way they will not last more than a month or six weeks, but under this system, if it were desired, they could be carried over from one season to another without injury. Mr. Taylor has also made some very interesting and successful experiments in the cultivation of timothy for hay. It has heretofore been thought impracticable to grow this best of all grasses for hay. He has had it for use for one or two years, and this season has seeded a number of acres from which he will sell the crop next season. The yield is about three tons to the acre.

Shasta.

The fruit-growers of Anderson valley held a meeting at Anderson last week to talk over matters of general interest. Speeches were made by prominent fruit-growers, expressing confidence in Shasta county as a fruit region, and there should be no lack of energy on their part to place her among the first counties of the State. The dried fruit matter was taken up and discussed at length and amounts taken from each grower that is now on hand and ready for market, showing it to be 240 tons or 20 carloads of 12 tons per car. Resolutions were passed showing dissatisfaction in the manner our fruit was handled by the commission men both at San Francisco and at Chicago and a full determination was made that the same thing shall not be repeated next season. The meeting then adjourned to wait the report of the delegates.

Sutter.

Sutter Farmer: Charles Speer, who has 160 acres of Egyptian corn in District 70, is cutting it with a combined harvester and putting it in the sack the same as wheat. This mode of harvesting corn is very cheap compared to what cutting it by hand is. The corn is making a yield of about 15 sacks to the acre. He also has about 30 acres of beans and potatoes, which are making a fair yield.

Tehama.

The Red Bluff Cause says: Only the best of certain kinds of grapes are being gathered on the Stanford vineyard at Vina, as there is no market for poor grapes. In a portion of

the vineyard devoted to the California or Mission grapes and other like qualities the sheep of the ranch are now running. It is considered better that the grapes should be eaten from the vines than that they should rot on them.

Tulare.

Tulare Times: There was brought to our office Monday a really startling specimen of the immense growth that characterizes much of the vegetation in this district. It was in the shape of a catalpa sprout that grew in the residence lot of R. H. Stevens in this city. The sprout measures 27 feet 9 inches in length, but, counting this main stem and the numerous branches from it, the entire lineal growth of this single sprout is 72 feet 10 inches. Besides, it is five inches in circumference at the lower end and is almost as large around for 15 feet toward the top. The entire growth was made in only five months, which gives an average increase in length of over five inches every day.

Tulare Register: "I am going to sow my ranch to alfalfa and corn and raise hogs," remarked a farmer to-day; "the Democrats have got to have hog and hominy that I know of, for I was brought up right among them."

Tulare Register: In the course of a conversation had with Mr. Henry Hunsaker yesterday, the fact was developed that farmers are preparing to do better work than heretofore almost universally. Mr. Hunsaker himself has five teams plowing now and will start two more teams the coming week, and he finds that land that was well plowed last season, though dry, plows very well now, but that land which was not well plowed last season cannot be handled until the rains come. What is being plowed now will be Randalled later, sowed broadcast and harrowed thoroughly. With such tillage it is hardly possible to fail of getting something of a crop in a pretty dry year and a good year will bring a good crop indeed.

Ventura.

J. H. Spear, of Bardsdale ranch, informs the *Venturian* that Lady Washington beans turned out 1100 pounds to the acre. His corn crop will be large and is now estimated at two tons to the acre.

Yolo.

Guinda letter in *Woodland Democrat*: I have taken some pains to inquire and it is a conservative estimate to say that the area to be set to young trees in this immediate neighborhood is not less than three or four hundred acres.

A San Jose syndicate has bought 220 acres in Capay valley with the idea of planting it to cherry trees.

Yuba.

Marysville Democrat: The question is frequently asked as to the possibilities of a given area of alfalfa in the way of stock-raising, milk and butter-making, etc., and there is a constantly accumulating mass of evidence bearing on this point. One of the latest bits of interesting information comes from Fresno, where a farmer of long experience says that one acre of alfalfa in good heavy land will feed ten sheep, and that on 20 acres 200 lambs can be raised every year. If so, at the proper time they will sell at \$4 per head, at which figure the demand is practically unlimited. Alfalfa-fed sheep produce the mutton, and the butchers of San Francisco are always ready to pay high prices for sheep raised on that kind of grass.

Marysville Appeal: The apple market is glutted. Over 20,000 boxes are ready to come to the Marysville market at prices that are astonishingly low. These want to come here because they generally find this a shipping point, but this year the commission men and shippers are not anxiously seeking supplies or eagerly making consignments. From the Honey Lake and Lassen country nearly 40,000 boxes now want a market, and much of that supply is being offered to the commission men here, and the prices at which it is offered to land the fruit here makes it enter into competition with that grown within this district. The lower-grade apples in 50-pound boxes are worth from 40 to 45 cents, while the better varieties will run from 50 to 62½ cents.

PIANOS A. L. BANCROFT & CO.
303 SUTTER ST., S. F.
KNAKE, HAINES, BUSH & GERTS, and others.
Cash or installments. Please call or correspond.
SAN FRANCISCO. **BANCROFT**

STUCK SCALES
4 TON **\$45.**
U.S. STANDARD. FULLY WARRANTED.
Delivered at your R. R. Station and ample time for building and testing allowed before acceptance.
OSGOOD & THOMPSON, Singhamton, N. Y.

PORTABLE PLATFORM SCALES, TRUCKS, ETC.
Twenty-five per cent cheaper than any other on the market. Send for Catalogue.

C. H. LINDEMANN, Agent,
126 KEARNY STREET, SAN FRANCISCO.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,
Surveying, Architecture, Drawing and Assaying,
728 MARKET ST., SAN FRANCISCO, CAL
Open All Year.

A. VAN DER NAILLEN, President.
Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50.
ESTABLISHED 1864. Send for circular.

Guano Fertilizer!
PLAIN AND NITROGENOUS
SUPERPHOSPHATES.
GUANO FLOUR.
Complete and Special Fertilizers
FOR ALL KINDS OF
Fruit, Grain, Sugar Beets, Vegetables, Etc.
MANUFACTURED BY THE
MEXICAN PHOSPHATE & SULPHUR CO.

For circulars and other information address
H. M. NEWHALL & CO., Agents,
309 & 311 SANSOME STREET,
San Francisco.

Horse Owners! Try
GOMBAULT'S
Caustic
Balsam
A Safe Speedy and Positive Cure
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.
THE LAWRENCE-WILLIAMS CO., Cleveland, O.

RELIABLE INCUBATOR
And Brooder Combined.
In stamps will bring you 4c. Catalogue and book of hundreds of testimonials of successful artificial hatching by the "Reliable." The best, most durable, easiest operated, made of best material & workmanship—A conceded fact. Reliable Incubator & Brooder Co., Quincy, Ill.

EVERY FARMER
CAN NOW
DO HIS OWN
THRESHING,
with less help and power than ever before. Send for free illus. Catalogue.
WELLS CITY MFG. CO., Racine, Wis.

Dewey & Co.'s Scientific Press
Patent Agency.



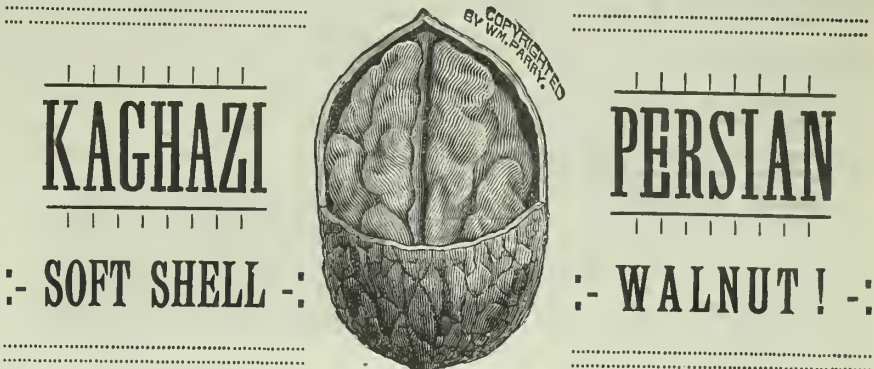
OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own country, and our most extensive law and reference library, containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free.

DEWEY & CO., Patent Agents,
220 Market St., Elevator, 12 Front St., S. F.
TELEPHONE No. 658.

A. T. DEWEY. W. B. EWER. GEO. H. STRONG

The American Bee Journal,
(Established 1861.)
Is Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample.
\$1.00 BEE-BOOK FREE
PRO. W. YORK & CO., 54 Fifth Ave., Chicago, Ill.

WE GIVE ESPECIAL ATTENTION TO
Fruit Trees! Deciduous Fruit Trees!
ALEXANDER & HAMMON'S
Rio Bonito Nurseries, Biggs, Butte Co., Cal.



Our Stock of TREES and VINES is Most Complete in EVERY CLASS of Fruits.

A LARGE STOCK OF THOMPSON'S SEEDLESS GRAPES.

SHIPPING, CANNING and DRYING Fruits of all Kinds.

Best Assortment of RAISIN and TABLE GRAPES in California.

Early Shipping Plums a Specialty.

SPECIAL PRICES FOR TREES IN LARGE QUANTITIES.

DURING the last three years, trees grown on the FEATHER RIVER BOTTOM LANDS, at RIO BONITO, BUTTE COUNTY, have been much sought after, and the demand for them is increasing all over the State where they have been planted. Owing to the peculiar adaptability of the soil and climate of this section for growing nursery stock, the trees making a very large and well-furnished system of root growth, and maintaining a correspondingly strong and vigorous top, maturing the wood thoroughly, we are enabled to supply our patrons with the best of trees, healthy in every respect, entirely free from insect pests, and in perfect condition for transplanting.

If You Are Going To Plant Trees, It Will Pay You To Correspond With Us Before Purchasing.

ALEXANDER & HAMMON,
BIGGS, BUTTE COUNTY. CALIFORNIA.

GRANGERS' BUSINESS ASSOCIATION,
GENERAL COMMISSION HOUSE.
OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.
Warehouse and Wharf at Port Costa.

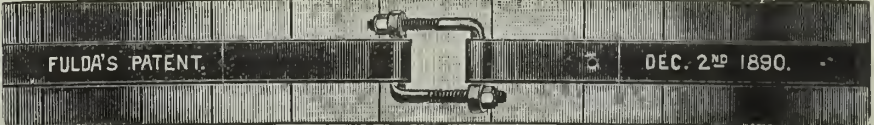
CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

T. R. BALLINGER, Grain Salesman.

SPRAYING PUMPS.
Ours always the best—We lead others follow—Our Double Empire Barrel Pump has brass cylinder, plunger and rod, brass valve seat, and brass spout. Our **CARFIELD KNAPSACK** is made of heavy sheet copper, concaved to fit the back, with metal valves, and furnished with the latest improved Vermorel Nozzle. The very best Knapsack Sprayer on the market. Our Little Gem pail pump is all brass with metal valves, heavy hose and the improved Vermorel Nozzle. Special prices to offset high transportation rates. Catalogue free.
FIELD FORCE PUMP CO.,
141 BRISTOL AVE., LOCKPORT, N. Y.



FULDA'S PATENT BAND AND HOOP COUPLING.

The Best, Simplest and Cheapest Coupling for Tank Hoops. sufficient lap of hoop renders it unnecessary to rivet the hoop. It will fit the circle of any tank, regardless of sizes. Made in sizes to fit any width of iron.
Prices, \$1.00 to \$1.50 per Pair. For sale to the trade. Liberal discount in quantities.

FULDA BROTHERS,
30 TO 40 SPEAR ST., SAN FRANCISCO,
MANUFACTURERS OF MINING AND WATER TANKS.
Send for Catalogue.

DEWEY & CO. { 220 MARKET ST., S. F. } PATENT AGENTS.
Elevator, 12 Front.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

JERSEYS AND HOLSTEINS, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. William Niles & Co., Los Angeles, Cal., Breeders and Exporters. Established n 1876.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER SAKS & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS—The best A. J. C. C. Registered Prize Herd is owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

WM. NILES & CO., Los Angeles, Cal., Breeders of nearly all varieties of Poultry, Dairy Cattle and Hogs.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

R. H. CRANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

SWINE.

H. J. PHILPOTT, Niles, Cal., Importer and breeder of Tecumseh and other choice strains of Registered Poland-China Hogs.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, new Prices.

BERKSHIRES & POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. William Niles & Co., Los Angeles, Cal. Established 1876.

MONROE MILLER, Elsie, Ventura County, Cal., Breeder of Registered Berkshire Hogs.

P. H. MURPHY, Perkins, Sac. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.

CHAS. A. STOWE, Stockton, Regist'd Berkshires.



In These Dull Times

You Can Largely Increase Your Income by buying an Incubator and engaging in the chicken business. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember, the best is the cheapest. **PACIFIC INCUBATOR CO.** 1317 Castro St., Oakland, Cal.

FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank.) Wants you all to write to him for prices on Young Stock.

MINORCAS: White and Black.
LEGHORNS: White, Brown, Black, Buff.
B. P. ROOKS.

Mention the age desired and when shipped. Circular Free.

HATCH CHICKENS BY STEAM
With the Improved Excelsior Incubator.
Simple, Perfect, Self-Regulating. Thousands in successful operation. Guaranteed to hatch a larger percentage of fertile eggs at less cost than any other hatcher. Lowest priced first-class Hatcher made.
Circulars free. Send 5c. for Illus. Catalogue.
GEO. H. STAHL, Quincy, Ill.



THE HALSTED INCUBATOR

COMPANY,
1312 Myrtle Street, Oakland, Cal.
Send Stamp for Circular

CALIFORNIA If you want to know about California and the Pacific States, send for the **PACIFIC RURAL PRESS**, the best Illustrated and Leading Farming and Horticultural Weekly of the Far West. Trial, 50c for 3 mos. Two sample copies, 10 cents. Established 1870. **DEWEY PUBLISHING CO.**, 220 Market St., San Francisco.



ONLY 25 YEARS OLD AND A GIANT!

THE H. H. H. LINIMENT

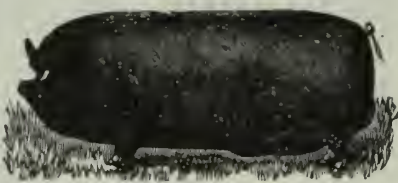
HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.



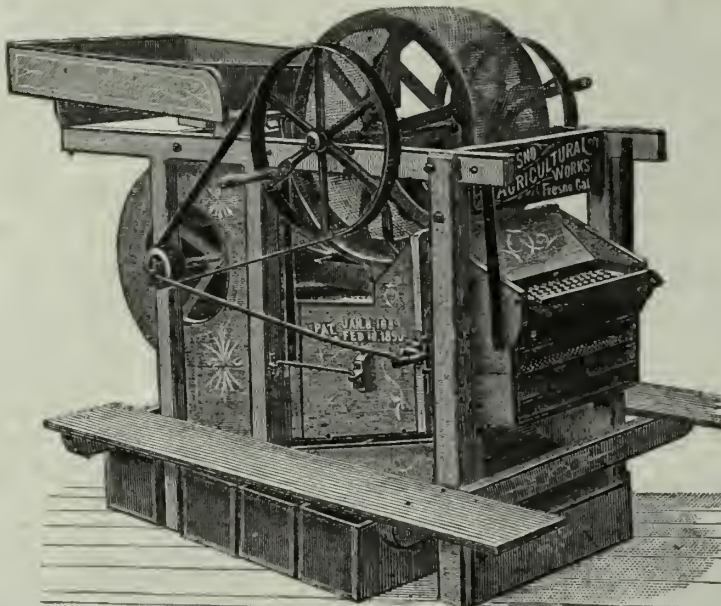
BERKSHIRE SWINE.

Prize Herd of Southern California.

PIGS OF ALL AGES FOR SALE.

SESSIONS & CO., Los Angeles, Cal.

P. O. Box 686.



SEND FOR CATALOGUE OF RAISIN MACHINERY TO
FRESNO AGRICULTURAL W'KS, FRESNO, CAL.

FRANCIS SMITH & CO.,

MANUFACTURER OF

SHEET IRON & STEEL PIPE

FOR TOWN WATER WORKS.

Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes.

NO. 130 BEALE STREET, SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.

Send for Price Lists

OF GUNS

And all Articles used
by Hunters and
Anglers.



GUNS SENT ON
TRIAL.

OLD GUNS TAKEN
IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular

E. FOUGERA & CO.,

30 North William Street, New York.

To Angora Goat Men.

MOHAIR We solicit consignments. Will give prompt personal attention to shipments, large or small. Have orders from manufacturers, therefore can promise full market prices and quick cash returns. Write us for quotations and shipping tags.

OILLEY & MARSHALL,
101 Gold St., N. Y.

W. R. PAYNE, Mgr. Mohair Dept.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos. A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

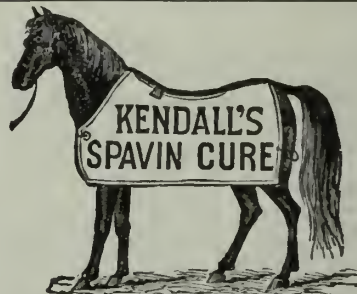
The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address **DEWEY PUBLISHING CO.**, Publishers "Pacific Rural Press," 220 Market St., San Francisco.

THIS IS THE BLANKET

all tattered and torn,
Which was bought last Winter; you see how its worn.
It was sold by a man with a smooth, easy way,
Who said "That's as good as any 5/A."

There is a lesson in this for every man who wants a new horse blanket—bright men profit by the experience of others. If you don't care how long a blanket wears, or how it looks, the "just as good" kind will probably suit you. But if you want a blanket that will last for years, and always be a credit to you and your horse, you can only be suited with a genuine 5/A. This mark is on every blanket. It is an absolute guarantee of value.

Sold everywhere. Made only by
WM. AYRES & SONS,
Philadelphia.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STAR, LANE CO., OREGON, Feb. 8th, 1892.

DR. B. J. KENDALL CO.,
Dear Sirs:—I have used your KENDALL'S SPAVIN CURE for the last twelve years never being without it but a few weeks in that time and I have made several wonderful cures with it. I cured a Curb of long standing. Then I had a four year old colt badly swollen; tried every thing without any benefit, so I tried your liniment, and in a few weeks he was well and his shoulder filled up all right, and the other, a four year old that had a Thoroughpin and Blood Spavin on the same joint, and to-day no one can tell which leg it was on. These statements can be proven, if necessary; the four year olds are now seven and can be seen any day at Cottage Grove, Or.

—Price \$1.00 per bottle.—

DR. B. J. KENDALL CO.,
Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

C. H. EVANS & CO.,

(Successors to THOMSON & EVANS.)

110 and 112 Beale Street, S. F.
MACHINE WORKS,
Steam Pumps Steam Engines
And All Kinds of MACHINERY.



DEEP WELL
PUMPS

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.



HAS DONE IT for others, will do it for you. Our DEAD EELIXIR will force a heavy mustache in 10 days if full beard in 30. Never known to fail. Sample packet, postpaid, 15c., two for 25c., one dozen \$1.00. Agents wanted everywhere. Address **WESSON MFG. CO.**, 6 E St., Providence, R. I.

S. E. MARKET REPORT

Market Review.

WEDNESDAY MORNING, Nov. 1, 1893.

During the past week the local wheat market has dragged along with small offers and small transactions at prices ranging from \$1.03 to \$1.06. On Tuesday, however, there was a drop in sympathy with the speculative market at Chicago and to-day quotations are \$1.02½ to \$1.03½ for No. 1 shipping. There is, of course, the usual advance for choice milling grades, though practically nothing is doing in that line. There is a pretense at Chicago to connect the drop in the speculative market with the repeal of the Sherman silver-purchase law, but there would seem to be no reasonable connection between the two things. The general and local conditions are unchanged, from which we infer that the decline is one of those variations without reason, and therefore without permanence. The following table shows the range of the speculative markets during the week:

LIVERPOOL.

(Per cent.)	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Thursday.....	504½d	504½d	505½d	507d	507½d	508½d
Friday.....	504½d	504½d	505½d	507d	507½d	508½d
Saturday.....	504½d	504½d	505½d	507d	507½d	508½d
Monday.....	504½d	505d	506½d	507½d	508½d	509½d
Tuesday.....	504½d	505d	506½d	507½d	508½d	509½d

To-day's cablegram is as follows:

LIVERPOOL, Nov. 1.—Wheat—Dull. California spot lots, 5d 8d; off coast, 27s 9d; just shipped, 28s 9d; nearly due, 27s 9d; cargoes off coast, very quiet; on passage, slow and probably cheaper; Mark Lane wheat, quiet but steady; French country markets, very quiet; weather in England, unsettled.

NEW YORK.

Day	(Per bushel.)	Oct.	Dec.	May.
Thursday.....	68½	70½	71½	72½
Friday.....	69	70½	71½	72½
Saturday.....	69½	71½	72½	73½
Monday.....	70½	71½	72½	73½
Tuesday.....	70	71½	72½	73½

The following is to-day's telegram—per bushel:

NEW YORK, Nov. 1.—November, 67½; December, 69; May, 75½.

CHICAGO.

Day	(Per bushel.)	Oct.	Dec.	May.
Thursday.....	64½	64½	65½	67½
Friday.....	64½	64½	65½	67½
Saturday.....	64½	64½	65½	67½
Monday.....	64½	64½	65½	67½
Tuesday.....	64½	64½	65½	67½

The following is to-day's telegram—per bushel:

CHICAGO, Nov. 1.—No Board. Funeral of late Mayor Harrison.

SAN FRANCISCO.

Thursday, highest.....	May.
lowest.....	24½
Friday, highest.....	25½
lowest.....	25½
Saturday, highest.....	26½
lowest.....	25½
Monday, highest.....	26½
lowest.....	25½
Tuesday, highest.....	26½
lowest.....	25½

The following are to-day's recorded sales on Oat:

Morning—Informal Session—December, 100 tons, \$1.10½; May, 100 tons, \$1.22½ per cbl.
Regular Session—December, 100 tons, \$1.10½; 500, \$1.11; May, 100 tons, \$1.23½; 200, \$1.23½; 300, \$1.23½; 100, \$1.23 per cbl.
Afternoon Session—May, 200 tons, \$1.23½; 100, \$1.23½; December, 100 tons, \$1.11½; 300, \$1.11½ per cbl.

Barley.

There is a steadier tone to the market and prices for both feed and brewing qualities are shaping somewhat more favorably for the selling interest. Bright, clean feed barley is not plentiful, and holders are not using any pressure to realize. The steady shipping movement that has prevailed for some time in brewing descriptions is telling on stocks, which are now anything but heavy. As a consequence, the outlook for sellers is more encouraging than it has been in a long while. We quote: Feed, 67½ to 72½c per cbl. for fair to good quality, and 73½ to 75c for choice bright; brewing, 87½ to \$1 per cbl. The following table illustrates the range of prices in local Call Board during the week:

Barley.

Thursday, highest.....	May.
lowest.....	87½
Friday, highest.....	88½
lowest.....	87½
Saturday, highest.....	88½
lowest.....	87½
Monday, highest.....	88½
lowest.....	87½
Tuesday, highest.....	88½
lowest.....	87½

The following are to-day's recorded sales on Oat:

Regular Session—No sales.
Afternoon Session—No sales.

Dried Fruit.

The dried fruit market has been featureless during the week, all lines being weaker than at the time of our last report. All the leading markets are fully stocked up and nobody wants to buy, the current weakness having no more serious occasion than this fact. Up to the hour of going to press the bulletin of the Santa Clara Fruit Exchange had not arrived and we infer that owing to the prevailing stagnation this week's publication has been omitted. We quote: Apples, per lb., sun-dried, 3½ to 5c; evaporated, 7½ to 8c; Apricots, bleached, 10 to 11c; Moorpark, 10 to 12c; sun-dried, 6 to 8c; Peaches, bleached, unpeeled, 7 to 8c; do, peeled, boxes, 10 to 15c; sacks, 12 to 14c; sun-dried, 5 to 8c; Plums, pitted, 5 to 6c; do, unpitted, 3c; French Prunes, sacks, 4 to 6c; boxes, 6 to 7c; Pears, sliced, 4 to 5c; quartered, 4 to 5c; Figs, Smyrna, per pound, 11 to 12½c; California, boxes, \$1 to \$1.25; sacks, 3 to 3½c per lb.

The local market is glutted with raisins and there are no sales to speak of. Shipments on consignment continue liberal. Quotations: London Layers, \$1.25 to \$1.60 per box; Loose Muscatels, boxes, \$1.10 to \$1.35; sacks, 3½ to 4½c per lb.; Dried Grapes, 2 to 2½c.

Other Cereals, Etc.

OATS—The market shows improving symptoms. A decided better feeling prevails than existed a week ago, owing to some extent to lighter receipts and a rather more general demand. These two circumstances have so helped matters of late that dealers have been able to establish a small advance in prices. We quote: Milling, \$1.12½ to \$1.22½; Surplus, \$1.24½ to \$1.27½; fancy feed, \$1.17½ to \$1.20;

good to choice, \$1.07½ to \$1.12½; common to fair, 87½ to 97½c; Black, 87½ to \$1.22½c; Red, 97½c to \$1.07½; Gray, \$1 to \$1.10 cbl.

CORN—Trade continues light. Values have been lowered to a point that it was hoped would bring out some lively custom, but buyers operate very sparingly and holders must wait until there comes a change for the better. Quotable at 80c to 82½c cbl. for large yellow, 82½ to 85c for small Yellow, and 85 to 87½c for White.

CRACKED CORN—Quotable at \$20.50 to \$21.50 cbl.

CORNMEAL—Millers quote feed at \$20 to \$21 per ton; fine kinds for the table, in large and small packages, 2½ to 3½c per pound.

OILCAKE MEAL—Quotable at \$32.50 to \$35 per ton.

CHOPPED FEED—Quotable at \$17.50 to \$18.50 per ton.

SEEDS—We quote: Mustard, brown, \$1.75 to 2; Yellow, \$2.25 to 3; Canary, imported, \$4.50 to 5; do, California, —; Hemp, 4 to 4½c cbl; Rape, \$2.25 to 2.50; Timothy, 6½c per lb; Alfalfa, 9c per lb for California and 9c for Utah; Flax, \$2.25 to 2.50 per cbl.

MIDDLINGS—Quotable at \$19.22 per ton.

MILLSTUFFS—We quote: Rye Flour, 3½c; Rye Meal, 3c; Graham Flour, 3c; Oatmeal, 4½c; Oat Groats, 5c; Cracked Wheat, 3½c; Buckwheat Flour, 5 to 5½c; Pearl Barley, 4 to 4½c per lb; Normal Nutrient, \$3 per case of 1 dozen cans; Breakfast Delight, \$3.25 per case of 2 dozen packages.

BRAN—Quotable at \$17.50 to \$18.50 per ton.

HAY—There is good tone to prices, especially for an article that is strictly choice. A sale of a very fine offering of Wheat Hay is reported at \$15 per ton. Wire-bound hay sells at \$12 to \$2 per ton less than rope-bound hay. Following are wholesale city prices for rope-bound Hay: Wheat, \$10 to \$14.50; Wheat and Oat, \$10.00 to \$13.50; Wild Oat, \$9 to \$12; Alfalfa, \$10 to \$10.50; Clover, \$8.50 to \$10; Barley, \$9 to \$10.50; Compressed, \$10 to \$12.50; Stock, \$8 to \$10.50 cbl.

STRAW—Quotable at 50 to 55c cbl.

HOPS—From 16 to 19c cbl is the asking range, but buyers are not inclined to meet the market at such quotations, and trade is therefore slow and light.

RYE—Offerings are in excess of the demand. Quotable at 80 to 87½c cbl.

BUCKWHEAT—Quotable at \$1.35 to \$1.45 cbl.

GROUND BARLEY—Quotable at \$16 to \$17 per ton.

POTATOES—The market continues to be abundantly supplied. We quote: Garnet Chiles, 40 to 50c; Early Rose, 30 to 40c; River Burhanks, 35 to 45c; River Red, 40 to 55c; Salinas Burhanks, 60 to 85c cbl; Sweet, 50 to 80c cbl.

ONIONS—Stocks are light and prices are firm. Quotable at \$1.25 to \$1.35 cbl for good to choice.

DRIED PEAS—We quote: Green, \$1.60 to \$1.75; Blackeye, \$1.50 to \$1.70; Niles, \$1.50 to \$1.60 cbl.

BEANS—We quote: Bayos, \$1.75 to \$1.85; Butter, \$2.25 to \$2.40 for small and \$2.50 to \$2.75 for large; Pink, \$1.65 to \$1.75; Red, \$2.00 to \$2.25; Lima, \$2.20 to \$2.25; Pea, \$2.15 to \$2.25; Small White, \$1.90 to \$2.05; Large White, \$1.75 to \$2 cbl.

VEGETABLES—Varieties are becoming smaller. Receipts of Green Corn are now so light that the article is not worth quoting. We quote as follows: Green Okra, 75 to \$1 cbl; Eggplant, 25 to 40c cbl; Green Peas, 2½ to 3½c cbl; String Beans, 2 to 3c cbl; Lima Beans 2½ to 3½c; Marrowfat Squash, \$5 to 10 cbl; Cucumbers, 25 to 50c cbl; Green Peppers, 40 to 60c cbl; box for Chiles and 35c to 50c for Bell; Tomatoes, 25 to 40c for large boxes; Turnips, 75c cbl; Beets, 75c to \$1 cbl; Parsnips, \$1.25 cbl; Carrots, 40 to 50c; Cabbage, 50 to 55c; Garlic, 1c cbl; Cauliflower, 45 to 55c dozen; Dry Peppers, 5c cbl; Dry Okra, 15c per lb.

FRESH FRUIT—Apples are in liberal receipt, with fair demand for a first-class article. Pears are moderately represented, the inquiry not being active. Berries still make good exhibit, finding steady custom. We quote: Apples, 75c to \$1 box for good to choice, and 35 to 60c for common to fair; Pears, 25 to 50c per box for common and 75c to \$1 for choice; Quinces, 30 to 50c per box; Strawberries, \$3 to \$5; Persimmons, 75c to \$1; Raspberries, \$3 to 5 per chest Cranberries, \$7 to 8.25 per bbl.

GRAPES—Table varieties still come to hand with freedom, but low asking prices cause good demand from the peddling interest, and stocks clean up fairly well. Wine Grapes are less of a glut. We quote as follows: Sweetwater, 20 to 30c; Muscat, 25 to 35c; Malaga, 20 to 30c; Black, 20 to 30c; Tokay, 20 to 35c; Isabella, 25 to 50c per box; Zinfandel Wine Grapes, \$10 to \$14 per ton; White Grapes, \$9 to \$12 per ton.

NUTS—We quote as follows: Chestnuts, 12½ to 15c cbl; Walnuts, 7 to 8c for hard shell, 8 to 9c for soft shell and 9 to 10c for paper shell; Chile Walnuts, 8 to 9c; California Almonds, 10½ to 11c for soft shell, 5 to 5½c for hard shell and 12 to 13c for paper shell; Peanuts, 3½ to 4c; Hickory Nuts, 5 to 6c; Filberts, 10 to 11c; Pecan, 8 to 9c for rough and 11c for polished; Brazil Nuts, 10 to 10½c; Pine Nuts, 12½ to 13c; Cocoa nuts, \$4 to \$5 cbl.

HONEY—Market quiet, with prices fairly steady. We quote: Comb, 8½ to 9½c; light amber, extracted, 4½ to 5c; dark, 4½ to 4¾c; water white, extracted, 5 to 5½c cbl.

BEESWAX—Quotable at 22 to 23c cbl.

BUTTER—The market is overstocked with fresh qualities and prices are still on the down grade. We quote: Fancy creamery, 26½ to 27½c; fancy dairy, 24 to 26c; good to choice, 22½ to 23½c; common grades, 18 to 22c; pickled roll, 19 to 22c; firkin, 18 to 20c; Eastern lard packed, 17 to 18c cbl.

CHEESE—Prices for select product are firm, as such stock is not plentiful. We quote: Choice to fancy new, 11 to 12½c; fair to good, 8 to 10c; Eastern, ordinary to fine, 11 to 13c cbl.

EGGS—Fancy stock is firm in price, being scarce. Common grades are easy under liberal offerings. We quote: California ranch, 40 to 45c, with sales reported at 47½c; store lots, 25 to 37½c; Eastern, 22½ to 27½c dozen.

POULTRY—Prices are low and weak under a dragging market. Supplies are excessive, owing to liberal Eastern imports. We quote: Live Turkey Gobblers, 14 to 16c cbl; Hens, 14 to 15c; Roosters, \$4.50 to 5 for old and \$3.50 to 4.50 for young; Friers, \$3.25 to 3.50; Broilers, \$2 to 3; Hens, \$4.50 to 5; Ducks, old, \$3.50 to 4; young, \$4 to 5; Geese, \$1.25 to 1.75 cbl; Pigeons, \$1.25 to 1.50 cbl.

GAME—Supplies keep liberal, but custom is good and dealers find a ready market for consignments

that are in order. We quote: Quail, \$1 cbl dozen; Mallard, \$2.50 to 3.50; Widgeon, \$1.25 to 1.50; Teal, \$1.25 to 1.50; Sprig, \$1.75 to 2; Small Ducks, \$1 to 1.25; Gray Geese, \$2 to 2.50; Brant, \$1.25 to 1.50; English Snipe, \$1.25 to 1.50; Common Snipe, 50 to 75c; Hare, \$1 to 1.25; Rabbits, \$1.25 to 1.50.

HIDES AND SKINS—Quotable as follows:

	Sound.	Culls.
Heavy Steers, 57 lbs up, 4½ to 4¾c	4	4
Medium Steers, 48 to 56 lbs. 4	3½	3½
Light, 42 to 47 lbs. 3	2½	2½
Cows, over 50 lbs. 3	2½	2½
Light Cows, 30 to 50 lbs. 3	2½	2½
Stags, 10 to 17 lbs. 2½	2	2
Kips, 17 to 30 lbs. 4	3	3
Veal Skins, 10 to 17 lbs. 5	4	4
Calf Skins, 5 to 10 lbs. 6	5	5

Dry Hides, usual selection, 6c; Dry Kips, 6c; Calf Skins, do, 6c; Cull Hides, Kip and Calf, 4c; Pelts, Shearling, 10 to 20c each; do, short, 25 to 40c each; do, medium, 40 to 60c each; do, long wool, 75c each; Deer Skins, summer, 25c; do, good medium, 15c; do, winter, 5c per lb; Goat Skins, 25 to 40c apiece for prime to perfect, 10 to 20c for damaged, and 5 to 10c each for Kids.

WOOL—Market quiet and depressed. To-morrow there will be a sale of Mendocino county wools at Cloverdale. About 250 bales will be submitted. The weekly report of Thomas Denigan, Son & Co., says: "At the East, the nearer the time approaches to a revision of tariff duties, the worse appears to be the wool trade. This week the news from Boston is very discouraging and as a result our local market is very sick. A sale of wool was held at Ukiah last week, and prices ranged from 7c to 9c cbl as extremes. Last fall these wools sold for 11c to 15c at the same place. Even at the very much lower range of prices buyers were not at all anxious for the stock, though the wools class as the very best." We quote spring:

California, year's fleece, 7 to 9c; do 6 to 8 months, 7 to 8c; do Foothill, 10 to 11c; do Northern, 12 to 13c; do extra Humboldt and Mendocino, 11 to 13c; Nevada, choice and light, 12 to 14c; do heavy, 8 to 10c; Oregon, Eastern, choice, 10 to 12c; do Eastern, poor, 7 to 9c; do Valley, 12 to 15c. We quote fall: Free Mountain, 6 to 7c; Northern defective, 5 to 7c; Southern and San Joaquin, 3 to 5c.

PROVISIONS—Bacon is lower. Tierce lard is also cheaper. We quote as follows: Eastern hams, 14 to 14½c cbl; California hams, 13 to 13½c; Bacon, Eastern, extra light, 19 to 20c; medium, 14 to 14½c; do, light, 14½ to 15c; do, light, clear, 16 to 16½c; light, medium, boneless, 15 to 15½c; Pork, extra prime, \$14 to 15.50; do, prime mess, \$15 to 16; do, mess, \$23 to 24; do, clear, \$25 to 26; do, extra clear, \$26 to 27 cbl; Pigs' Feet, \$12.50 cbl; Beef, mess, bbls, \$7.50 to 8; do, extra mess, bbls, \$8.50 to 9; do, family, \$11 to 12; extra do, \$12.50 to 13 cbl; do smoked, 10 to 10½c; Eastern lard, tierces, 9½ to 10c; do, prime steam, 12c; Eastern pure, 10-lb pails, 13c; 5-lb pails 13½c; 3-lb, 13½c; California, 10-lb tins, 11c; do, 5-lb, 11½c; do, kegs, 11½ to 12c; do, 20-lb buckets, 12½c; compound, 8½c for tierces and 9½c for hf bbls.

TALLOW—Refined, 6c; rendered, 4¾ to 5c; country tallow, 4 to 4½c; Grease, 2½ to 3½c cbl.

San Francisco Meat Market.

Mutton and lamb are both a trifle cheaper. No change in beef. Following are the rates for whole carcasses from slaughterers to dealers:

BEEF—First quality, 5 to 5½c; second quality, 4½ to 5c; third quality, 3½ to 4c cbl.

CALVES—Quotable at 4 to 5c for large, and 6 to 7c cbl for small.

MUTTON—Quotable at 4 to 5½c cbl.

LAMB—Quotable at 6 to 7c cbl.

PORK—Live hogs, on foot, grain fed, heavy and medium, 5½ to 5¾c; stock hogs, 5½ to 5¾c; dressed hogs, 8 to 8½c cbl.

Tuesday's Sales of California Fruit in the East.

CHICAGO, October 31.—Porter Brothers Company sold at auction to-day two carloads of California grapes at the following prices: Tokay Grapes, \$1.65 to 2.25; half-crates Tokay Grapes, 60 to 80c; half-crates Cornichon Grapes, 90c; half-crates Morocco Grapes, 65 to 75c; half-crates Emperor Grapes, 70c; half-crates Muscat Grapes, 60 to 70c; half-crates Black Ferrari Grapes, 65c; half-crates Verdel Grapes, 60c.

New York, October 31.—The Earl Fruit Company sold California fruit at auction to-day as follows: Fancy Tokay Grapes, \$3 to 3.65; half-crates, \$1.55 to 1.85; Choice Tokay Grapes, \$2.10 to 2.75; half-crates, 80c to \$1.40; Cornichon Grapes, \$1.30 to 1.40; Verdelle Grapes, half-crates, \$1.30 to 1.40; Muscat Grapes, half-crates, \$1.10 to 1.25.

CHICAGO, October 31.—The Earl Fruit Company sold California fruit at auction to-day as follows: Glout Moreau Pears, \$2.70 to 2.80; Buere Del Pears, \$2.20 to 2.30; Alencon Pears, \$2.20 to 2.30; Winter Nellis Pears, \$1.85 to 2; Coe's Late Red Plums, \$1.05 to 1.45; Tokay Grapes, \$1.40 to 1.50; half-crates, 65 to 80c; Muscat Grapes, \$1.15 to 1.25; half-crates, 55 to 70c; Cornichon Grapes, half-crates, 80 to 90c; Emperor Grapes, half-crates, 60 to 70c; Verdelle Grapes, half-crates, 60 to 70c.

KANSAS CITY, October 31.—The Earl Fruit Company sold California fruit at auction to-day as follows: Winter Nellis Pears, \$2.25 per box.

Boston, October 31.—The Earl Fruit Company sold California fruit at auction to-day as follows: Tokay Grapes, \$2.80 to 3; half-crates, Tokay Grapes, \$1.85 to 1.65; Cornichon Grapes, \$3.45 to 3.55; half-boxes Winter Nellis Pears, \$1.35 to 1.45.

There are lots of people who mix their religion with business, but forget to stir it up well. As a result the business invariably rises to the top.—Exchange.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 11, 508 Montgomery St., San Francisco (Pacific Mutual Life Insurance Building).

Hay Pressing.

If you are interested in pressing hay write Truman Hooker & Co., San Francisco. They will save you money

Commission Merchants.

ALLISON, GRAY & CO.,

501, 503, 505, 507 & 509 Front St.,
And 300 Washington Street, SAN FRANCISCO.

—GENERAL—

Commission - Merchants,

GREEN and DRIED FRUITS,

Poultry, Eggs, Game, Grain, Produce and Wool.

P. STEINHAGEN & CO.



404 & 406 DAVIS ST. S.F.

MOORE, FERGUSON & CO.

WOOL, GRAIN, FLOUR

—AND—

General Commission Merchants,

310 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

LINDSAY & CRAIG,

Crocker Building.....San Francisco.

Mortgages Bought, Loans Negotiated.

If you desire to sell your farm send us particulars.

VALUABLE

Information relating to orchard tree planting and care of orchards, together with a complete catalogue of the

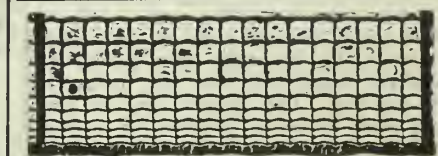
RANCHO CHICO

NURSERIES, will be sent FREE, postage paid, to any address, upon application to

JOHN BIDWELL,

Chico, Butte County, California.

RANCHO CHICO ORCHARDS EMBRACE OVER 1000 ACRES IN FULL BEARING.



Beats the U. S. Senate.

In this, the members of the Page Fence never refuse to PULL and pull altogether for the public good. It is more elastic, not so tied up as to prevent action. Still it is not lacking in "courtesy," always lets an opponent down easy, no shock, no lacerated feelings.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

CABLED FIELD AND HOG FENCING.

Abuse of the Stomach.

Different constitutions have peculiarities in regard to the way in which they assimilate food, and the old adage that what is one man's meat is another's poison, is a very true one, says the *Popular Science Monthly*. There is no ailment more common in middle life and in old age than indigestion. This, of course, depends upon improper food taken too frequently and in undue quantity. As a rule, the victim of indigestion flies to medicines for relief, or to one of the thousand-and-one quack remedies that are advertised to cure everything.

How much more rational would it be to alter the diet, and to give the stomach the food for which it is craving? If the stomach could talk, I can imagine it, after pills, and gin, and bitters, and quack remedies of every description have been poured into it, begging to be relieved of such horrors, and saying, "Give me a little rest, and a cup of beef tea and a biscuit, and go and take a little fresh air and exercise yourself." Instead of this, the miserable organ has to be dosed with all sorts of horrible concoctions in the way of drugs, brandies and sodas, and champagne, to endeavor to stimulate it into action. There is no doubt that the stomach that requires stimulants and potions to enable it to act efficiently, can hardly be said to be in a healthy state, or can long continue to do its work properly.

The digestive organs, unfortunately, are the first to sympathize with any mental worry. They are like a barometer, and indicate the errors of malnutrition and its consequences. The healthy action of every organ depends upon the proper assimilation of the food taken. As soon as the digestive process fails, everything fails, and ill-health results with all its disastrous concomitants.

Healthy Bed Clothing.

In hospital, as well as in private practice, great errors are made in the matter of bed clothing for the sick, and particularly for the sick who are suffering from febrile affections. We have got rid of the heavy curtains around the bed; of the grand accumulator of dust and other uncleanness, the tester; of the heavy valance which converted the underpart of the bed into a close cupboard, in which all kinds of unwholesome and cumbersome articles lay concealed, including sometimes excreted matter itself; and we have banished the carpet, which, often a hard-trodden, dust-laden rag, made the floor beneath the bed persistently impure, says *Hall's Journal of Health*. But the old feather beds, flock mattresses, heavy blankets, thick, impermeable and dense counterpanes still encumber many a patient, rendering ventilation of his body as impossible as in the days of our forefathers. The thick, dense bed and mattress require to be replaced by the light steel elastic bed, and the clothing under and upon the patient, now so close and heavy, requires to be replaced by clothing that is porous, so that it can be permeated with pure air from without, and can at the same time permit the warm and impure air from the patient to have free exit. The mistake now so generally made lies in the idea that the warmth which the bed calls for is best obtained by close material and close packing. The error is positive. There is nothing that retains warmth in so good and equitable a manner as common air at rest. Dense materials cannot keep the body respirably warm. Materials, therefore, both for the bed and for the bed clothing, ought to be porous to a free mechanical extent of porosity. The rule holds good for the clothing of the body in health; in sickness it is imperative.

For the Elimination of the Middleman.

As we go to press on Wednesday the committee appointed by the San Jose meeting to organize a Fruit Exchange to sell California fruits in the Eastern markets, is in session at the rooms of the State Board of Horticulture in this city. The members were slow in coming together, and up to the time of our going to press, have accomplished nothing more than formal organization by the election of Mr. Adams as chairman and Mr. Ditzler as secretary. Mr. Adams has to present to the committee a plan of organization and operation which will appear in full in next week's *RURAL*.

Mr. Lelong has not as yet named the committees authorized by the San Jose meeting.

A writer gives an illustration of the progress of electricity as a mechanical power. He says that 25 years ago it was unknown, and that \$900,000,000 is now invested in various kinds of electrical machinery.

To Record Changes of Temperature.

Changes of temperature are now recorded by an electrical apparatus produced by a Frenchman. It is a metal ampulla half full of ether hermetically sealed, and when the temperature rises the ether expands and slightly raises the cover, which completes an electric circuit, rings a bell, and warns those who want to know that the temperature is going up.

To Relieve Hard Times.

A chance to earn \$500 in the next three months is something worthy of everybody's attention in such a season as this. The publishers of *FARM-POULTRY*, Boston, Mass., the best poultry paper published in the world, make an offer to our readers affording an opportunity for some one, if active, to earn that amount or more. If interested, send at once to I. S. Johnson & Co., 22 Custom House St., Boston, Mass., a one-cent stamp for full particulars regarding above.

"Popper, what's a broncho?" "A horse." "Is that why people are hoarse when they have bronchitis?"—Harper's Bazar.

DIAMONDS!

GENUINE AND FIRST QUALITY.
Warranted Pure White and Perfect, and of Extreme Brilliance.

This diagram shows the approximate sizes of the stones:



1-16 carat.....\$4 00	1/8 carat.....\$8 00	1/4 carat.....\$15 00
1/8 carat.....25 00	3/8 carat.....35 00	1/2 carat.....50 00
3/8 carat.....70 00	1/2 carat.....90 00	3/4 carat.....110 00

I will retail these stones at the above wholesale prices and mount them in the latest styles in Rings, Pins, Studs, Ear Screws, Combination sets, etc., at cost of gold and labor. DIAMOND ENGAGEMENT RINGS A SPECIALTY. DIAMONDS, WATCHES AND FINE JEWELRY sent C. O. D., with privilege of examination, provided \$1.00 is forwarded to pay express charges in case the same are returned.

Correspondence solicited. Particular attention paid to mail orders.

Jewelry of every description in stock and made to order. Strictly First-Class work. No Imitation Goods.

JOHN H. DRUMGOLD,
Manufacturing Jeweler, Watches and Diamonds.
Room 113, Phelan Building, S. F.

CANCER CURED

WITH SOOTHING BALMY OILS.

WE SUCCESSFULLY TREAT

Cancer, Tumor, Catarrh, Piles, Fistula,
Eczema and all Skin and Womb
Diseases.

CANCER of the nose, eye, lip, ear, neck, breast, stomach or womb; in fact, all diseased internal and external organs or tissues, successfully treated, without the knife or burning caustic plasters, but with soothing, balmy magnetic oils. Beware of imitations as there are those who hope to profit by advertising an oil cure for these diseases. We are the originators of this system, all others are frauds.

Correspondence solicited. Consultation free. Testimonials furnished. Address

DR. EUGENE BUELL,
Cancer Institute,

ROOM 57, SUPREME COURT BUILDING,
Cor. McAllister and Larkin Sts., San Francisco, Cal.

CALIFORNIA FRUITS

—AND—

HOW TO GROW THEM.

A MANUAL OF METHODS WHICH HAVE YIELDED
GREATEST SUCCESS; WITH LISTS OF VARIETIES
BEST ADAPTED TO THE DIFFERENT
DISTRICTS OF THE STATE.

PRACTICAL, EXPLICIT, COMPREHENSIVE.

Embodying the Experience and Methods of Hundreds
of Successful Growers, and Constituting a Trust-
worthy Guide by which the Inexperienced
may Successfully Produce the Fruits
for which California is Famous

SECOND EDITION, REVISED AND ENLARGED.

BY EDWARD J. WICKSON, A. M.
Assoc. Prof. Agriculture, Horticulture and Entomology,
University of California; Horticultural Editor
PACIFIC RURAL PRESS; San Francisco; Sec'y
California State Horticultural So-
ciety; Pres. California State
Floral Society; Etc.

Large Octavo—599 Pages, Fully Illustrated.
PRICE \$3, POSTPAID.

FOR SALE BY

THE DEWEY PUBLISHING CO.,
PUBLISHERS PACIFIC RURAL PRESS,
220 Market Street, Elevator, 12 Front Street
SAN FRANCISCO, CAL.

RED SEAL GRANULATED 98% LYE

HAS NO EQUAL

FOR DESTROYING SCALE BUGS AND OTHER INSECT PESTS
ON TREES AND PLANTS.

FOR TREE WASH!

—USE—

One pound to 5 gallons of water.

Thousands of Orchardists testify to its value, using it in preference to all other preparations. Where the Red Seal is applied it kills the insects and at the same time forms a coating through which others cannot penetrate. When used in the above proportions, it is a

GREAT BENEFIT TO
THE TREES.

Put up in SIFTING-TOP CANS, so that any quantity may be used and the balance preserved uninjured.

MANSFIELD LOVELL,
124 California St., San Francisco.



SOLD

—BY—
ALL GROCERS.

FOR HOUSEHOLD PURPOSES

The Red Seal Lye is indispensable.

USED AS DIRECTED it will take the place, and at 75% less cost, of all other alkaline preparations, soaps, etc., now on the market. ONE CAN will make 10 to 12 lbs. of Hard Soap, or 200 lbs. of Soft Soap. See directions in can.

It cleans floors, kills roaches and bugs of all kinds, cleans milk vessels, tin or wood; keeps farming implements bright and free from rust; is a perfect disinfectant; softens water, washes dishes and clothes; and can be put to a thousand uses in place of soap or other preparations.

P. C. THOMSON & CO.,
Manufacturers, Philadelphia, Pa.

CALIFORNIA PRODUCTS.

P & B

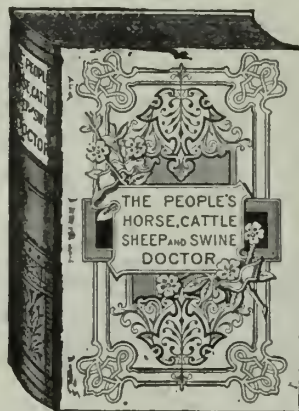
ROOFING.
BUILDING PAPER.
ROOF PAINTS.

First Prizes at the World's Columbian Exposition, 1893.

PARAFFINE PAINT CO., - 116 Battery Street,
SAN FRANCISCO.

E. G. JUDAH, Agent, - 221 South Broadway,
LOS ANGELES.

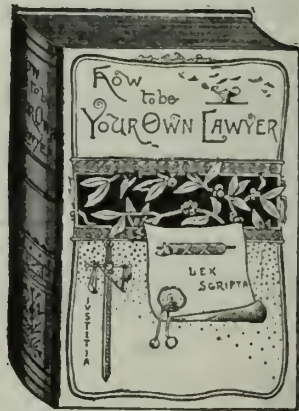
THE PEOPLE'S HORSE, CATTLE, SHEEP, SWINE DOCTOR



Containing in four parts clear and concise descriptions of the diseases of the respective animals, with the exact doses of medicine for each. A book on diseases of domestic animals, which should present a description of each disease and name the proper medicines for treatment in such condensed form as to be within the means of everybody, has long been recognized as a desideratum. This work covers the ground completely. The book embodies the best practice of the ablest Veterinarians in this country and Europe, and the information is arranged so as to be easily accessible—an important consideration. Each disease is first described, then follow the symptoms by which it may be recognized and lastly is given the proper remedies. The different medicines employed in all diseases are described and the doses required are given. The book is copiously illustrated, including engravings showing the shapes of horses' teeth at different ages. An elaborate index is a valuable feature. It will be sent to any address—postpaid—on receipt of the price, ONE DOLLAR.

Address THE DEWEY PUBLISHING CO.,
220 Market St., San Francisco, Cal.

\$1000 WORTH OF LAW FOR \$1.50.



"How to Be Your Own Lawyer" is the title of a book of over 500 pages, adapted for use in every State and Territory in the Union, and is by far the best and most complete work of the kind ever published. It gives instruction on all the most important law points which a Farmer, Mechanic, Merchant or anybody else would want to know about, and if carefully studied and kept at hand for consultation when needed will save any man, in the course of an ordinary business career, hundreds, if not thousands of dollars. It is a lawyer whose retaining fee (the price of the book, \$1.50) has to be paid but once in a lifetime. Plain and concise directions are given and forms furnished for the transaction of all kinds of business, and the preparation of every description of legal document in common use. A copy of this valuable work, handsomely bound in extra cloth, with ink slide-stamp, will be mailed to any address on receipt of \$1.50.

Address THE DEWEY PUBLISHING CO.,
220 Market St., San Francisco, Cal.

ACTUAL BUSINESS PRACTICE.

Established 1863
PACIFIC Business College,
320 POST ST.
SAN FRANCISCO.
Established 1868
LIFE SCHOLARSHIPS, \$75.

Bookkeeping, Penmanship, Shorthand, Typewriting, English Branches, etc. Graduates aided in getting positions. Send for circulars. T. A. ROBINSON, Pres.

MEYER'S SLIP SHARES!

FOR SALE BY

DAVID N. HAWLEY,
No. 318 MARKET STREET.

BACK FILES of the PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes) \$4. Inserted in Dewey's patent binder 50 cents additional per volume.

HEALD'S BUSINESS COLLEGE.

24 POST STREET.....SAN FRANCISCO.

FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR. E. P. HEALD, Pres. C. S. HALEY, Sec.

LIGHTNING WELL MACHINERY Works.
LARGEST
All kinds of tools. Fortune for the driller by using our Adamantine process; can take a core. Perfectly Economical Artesian Pumping Rig to work by Steam, Air, etc. Let us help you. THE AMERICAN WELL WORKS, Aurora, Ill.; Chicago, Ill.; Dallas, Tex.

DOUBLE Breech-Loader \$6.00.
RIFLES \$2.00
WATCHES
BICYCLES \$15
All kinds cheaper than elsewhere. Before you buy, send stamp for catalogue to POWELL & CLEMENT CO. 166 Main St., Cincinnati, O.

Rest in Motion.

"If I am harried or wearied by care or work," said a man who works with his brains, "I can always find rest in motion. I just stop work and get out and walk. As I walk, the weight is lifted, and finally it is gone altogether, and in place of that tired feeling comes tranquility succeeded by elation. It was a pleasing discovery to make, that I could walk out of depression into buoyancy. At first when the exercise was new to me, I needed to go but a little distance to accomplish this happy result, and so clearly defined was the change that I could locate almost exactly the spot where my burdens disappeared and I found myself in the pleasant company of my hopeful, kindly friend, Cheerfulness. I still seek Cheerfulness by that road and I find him unflinching; but I have to go farther and farther to meet him, for, like any other stimulant, the walk must be taken in constantly increasing doses in order to produce the same results. At first a brisk walk of a quarter of a mile brought me to the boundary line; now I find it about a mile and a quarter away. It may be that I will have to seek Cheerfulness nearer home as a permanent atmosphere, for it is obvious that if I must go greater and greater distances to meet the personified Cheerfulness, he might one day be practically beyond reach."

Remedy for Toadstool Poisoning.

Captain McIlvane's recommendation when, by mischance, any of the poisonous toadstools have been eaten, published by him in the *Therapeutic Gazette*, is as follows: "The physician called upon to treat a case of toadstool poisoning need not wait to query after the variety eaten; he need not wish to see a sample. His first endeavor should be to ascertain the exact time elapsed between the eating of the toadstool and the first feeling of discomfort. If this time is within four or five hours, one of the minor poisons is at work, and rapid relief will be given by the administration of an emetic, followed by one or two moderate doses of sweet oil and whisky in equal parts. Vinegar is effective as a substitute for oil. If from 8 to 12 hours have elapsed, the physician may rest assured that amanitine is present and should administer one sixteenth of a grain of atropine at once."

The atropine should be subcutaneously injected, and the injection repeated every half hour until one-twentieth of a grain has been given or the patient's life has been saved.

Over Three Million in One Day.

The transportation lines in the city of Chicago carried probably over 3,000,000 passengers on "Chicago Day," Oct. 9. The following figures are given by the *Tribune* for the most important transportation lines:

South side cable system.....	757,660
North and west side cable lines.....	765,641
Illinois Central.....	738,329
Alley Elevated.....	294,986

This makes a total of 2,556,616; and the traffic on the horse and electric lines in various parts of the city, with the travel on the various lines of steam railway which can be properly classed as city traffic, must have made the total number of passengers carried considerably over the three million mark.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 6 mos., \$1 10 mos., \$2; 15 mos., \$3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

FARM-POULTRY.

The Best Poultry Paper IN THE WORLD.

Write for SAMPLE COPY; Sent Free.

"It opened up a new field and cultivated it thoroughly."—So says the *Fanciers' Journal*.

"FARM-POULTRY is covering itself with glory."

—Thus the *Philadelphia Farm Journal* writes us.

It is worth \$1.00. It Teaches How to Make Money with Six Months for A Few Hens. ONLY 25 CENTS. IF YOU MENTION THIS PAPER.

One department "Answers to Correspondents," is worth ten times the subscription price to anyone; explains many things apt to trouble even old breeders. Send for Index to first 3 Vols. free; judge yourself. If as much instructive matter can be bought anywhere, for many times the price. Remit cash or stamps. This special offer good for only three months. I. S. JOHNSON & CO., 22 Custom House St., Boston, Mass.

Seeds, Plants, Etc.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrabalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal

Santa Rosa Nurseries.

AN IMMENSE AND WELL ASSORTED STOCK.

TREES! TRUE TO NAME—Warranted clean and raised without irrigation.

PEARS AND PRUNES at about HALF USUAL PRICES till my surplus is sold.

Price List mailed free.
Address R. W. Bell, Santa Rosa, Cal.

OAK LAWN NURSERY.

90,000 First-Class Fruit Trees AT LOWEST PRICES.

MUST BE SOLD.

PLEASE WRITE AT ONCE.

HARRY E. HULBERT,
211 THIRD STREET,
SANTA ROSA. - - SONOMA CO., CAL.

GOLD DUST.

"Gold Dust Cling," says H. E. Van Deman, U. S. Pomologist, "is a yellow cling of medium size, round and regular in shape, and very firm in flesh. The color is very attractive, being dark yellow with a very red cheek. It bears heavily and carries to market with very little damage. Coming as it does before the main peach crop is gathered, it is about the first yellow cling of any special value and therefore finds a ready sale. Each year it gains in favor, but as it is a variety but recently originated the public know little of it. It is a very profitable variety." Price \$1 each, \$5 per half dozen. For sale by SACRAMENTO RIVER NURSERY COMPANY, Growers of HIGH-GRADE Fruit Trees, Walnut Grove, Sacramento County, California. Our Specialties—Genuine Tragedy Prunes, Olyman and Japan Plums—price 15 cents each; Sacramento River Bartlett and Peaches—price 10 cents each.

MYROBALAN PLUM

AND

MAZZARD CHERRY SEED.

Fresh Crop Now Ready for Shipment.

FULL PRICE LIST OF

FRUIT STOCKS AND SEEDS ON APPLICATION.

THOMAS MEEHAN & SONS, GERMANTOWN, PA.

B. F. GODFREY & CO.,

NURSEYMEN,

Davisville, Cal.

Write for Catalogue and Prices.

NEW Line of Coreless Pear TREES, also Japan, Golden Russet, Idaho, Vermont Beauty, and others. Japan Mammoth, Success, Advance, Chestnuts, Japan, Persian, English Walnuts, Pecans, etc. ELEGANT Longipes, Trifoliate Orange, Wineberries, Junesberries, etc. Strawberry, Raspberry, Blackberry, Currant, Gooseberry PLANTS. Apple, Peach, Plum, Quince TREES. J. S. COLLINS & SON, Moorestown, N. J. Send for Catalogue.

CALIFORNIA FRUITS AND HOW TO GROW THEM.

A practical, explicit and comprehensive book embodying the experience and methods of hundreds of successful growers, and constituting a trustworthy guide by which the inexperienced may successfully produce the fruits for which California is famous. 600 pages. Fully illustrated. Price \$3. Postpaid. Send for circular. DEWEY PUBLISHING CO. Publishers. 220 Market Street, San Francisco, Cal.

OLIVE TREES OLIVE TREES.

In Variety for Nurserymen, Dealers and Planters.

Will also contract now to propagate Rooted Olive Cuttings for persons who wish to plant them in nursery spring of 1894.

OLIVE CULTURE IN CALIFORNIA, Sixteen pages, mailed free.

Address: JOHN S. CALKINS,
POMONA, LOS ANGELES COUNTY, CAL.

Trees, Vines and Plants,

—FOR 1893 and 1894.—

Terms on Application.

Address, - - L. D. BUTT,
Pearyn, Placer Co., California.

ALL KINDS OF Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,
Pomona, Cal.

Pepper's Nurseries.

ESTABLISHED IN 1853.

For Sale at Low Rates, a General Assortment of Hardy Deciduous Fruit Trees.

I do not buy trees to sell; what is offered is grown in my own grounds and free from scale bugs. No scale bugs of any kind to be found in the Nursery. No agents employed. Order direct from the nursery and procure your trees true to label. Order early, as early planting is the most successful with deciduous trees. Prices furnished on application.

Address W. H. PEPPER, Petaluma, Cal.

STOCKTON NURSERIES,

ESTABLISHED 1853.

FRUIT TREES. FRUIT TREES.

GRAPE VINES.

Also Fine Stock of Shade and Ornamental Trees, Shrubs, Palms, Roses and Carnations. PLANTS IN GREAT VARIETY.

Correspondence Solicited.

E. C. CLOWES, STOCKTON, CAL.

LOW PRICES ON

ALMOND TREES!

California Paper-Shell, Nonpareil, Ne Plus Ultra and I. X. L.

A pamphlet on Almond is mailed free of charge on application. A large supply of the GOLDEN PEACH and FRENCH PRUNE. All kinds of leading fruit trees for sale. No charges made for baling trees.

PRICES: 4 to 6 ft. Trees, 8c; 3 to 4 ft. Trees, 5c.

Address, PERCY W. TREAT,

Davisville Nurseries, Concord, California.

NAPA VALLEY NURSERIES.

NEW CATALOGUES NOW READY.

Fruit, Nut and Shade Trees, Grape Vines, Etc., Citrus Fruits, Ornamental Shrubs, Flowering Plants, Roses, Palms, Bulbs, Seeds, Etc.

Fruit and Nut Trees propagated from bearing orchards at Sausal Fruit Farm; Unirrigated, Clean and Healthy. Do not fail to correspond before making purchases. Satisfaction guaranteed.

LEONARD COATES, - - - NAPA, CAL.

McKEVITT'S EARLY.

The New Yellow Freestone Peach! FIRST AND BEST OF EARLY YELLOW PEACHES.

RIPENS IMMEDIATELY AFTER THE ALEXANDER (White Cling), which is the earliest peach in market.

Fruit is round, of medium size, VERY HIGHLY COLORED, flesh firm and sweet. THIS PEACH HAS BEEN SUCCESSFULLY SHIPPED EAST FOR FIVE YEARS and is no new, untitled variety.

Tree healthy, strong grower, and heavy bearer, never having missed a crop.

A limited number of yearling trees for sale this season. Apply early before stock is exhausted.

FRANK B. McKEVITT, : : : : VACAVILLE, CAL.

THE RAISIN INDUSTRY.

A PRACTICAL TREATISE ON THE RAISIN GRAPES, THEIR HISTORY, CULTURE AND CURING.

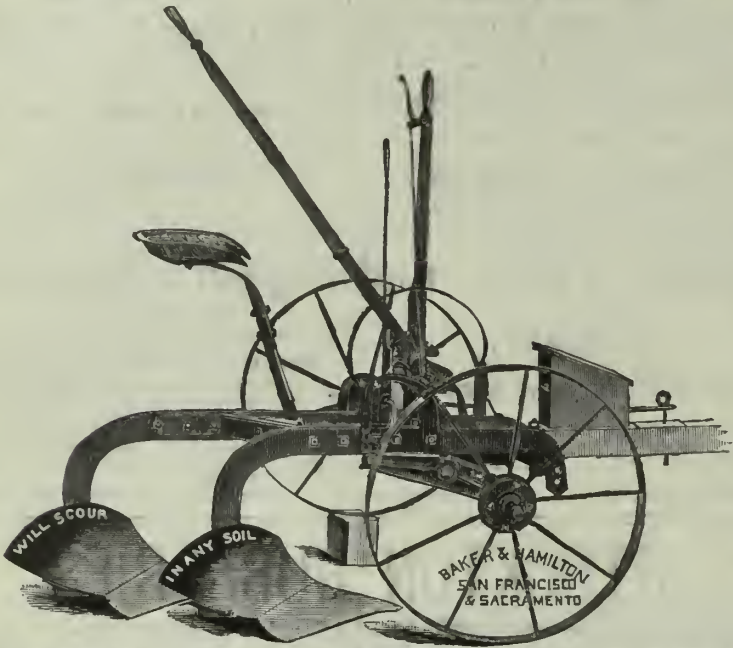
By GUSTAV EISEN.

This is the Standard Work on the Raisin Industry in California. It has been approved by Prof. Hilgard, Prof. Wickson, Mr. Chas. A. Wetmore and a multitude of Practical Raisin Growers.

Sold only by the DEWEY PUBLISHING CO. or its Agents at the uniform price of \$3.00, postage prepaid. Orders should be addressed:

THE DEWEY PUBLISHING CO.,
220 Market St., San Francisco.

Eureka Gang Plows 50% SAVED.



The No. 107C Eureka Gang with "Adobe" Bottoms and Gear Lever Attachment, a Superb Plow.

THE EUREKA GANG while costing a few dollars more than other gang plows, amply repays the purchaser. It is stronger, more durable and will do better work under any condition than any other gang plow. Thousands of farmers can testify to the above facts.

By a simple epur gearing arrangement which we can put on the No. 7C and No. 107C Eureka Gangs, we are enabled to place both Lifting Levers on the left hand side.

This device enables the operator to manipulate the levers as effectively as before, but with much less exertion. Being an improvement, we commend it to your consideration.

We suggest that the Gear Lever Attachment and "Adobe" Bottoms with wrought-steel shares be specified when ordering.

GANG PLOW—Our line is the largest and best in the State. It includes the Eureka, Peerless, Granger and Reversible Mold Gangs, in all sizes.

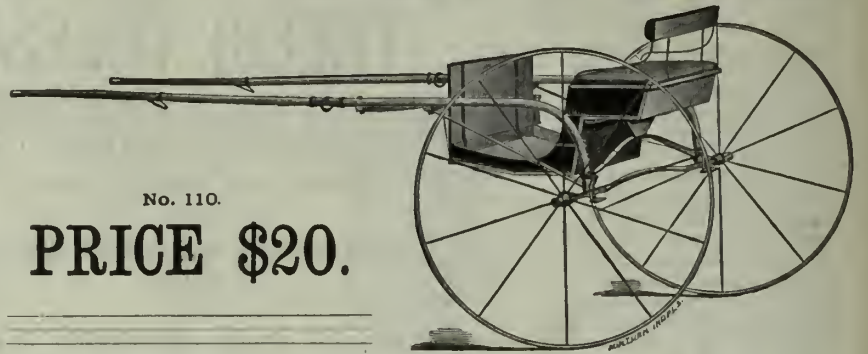
SINGLE PLOWS—We furnish the Benicia, Star, Gale, Princess and a score of others. We guarantee their quality.

HARROWS—We have all the various styles, from a common Drag to a Steel Frame Spring Tooth Lever Harrow. Also the Climax and Tiger Disc Harrows.

SEEDERS—Our stock is not equalled; before purchasing come other kind examine our Gem, with Armstrong's patent force feed, Gorham, Triumph, Monarch, Climax and others.

WRITE FOR OUR NO. 27 LATEST SPECIAL 140-PAGE CATALOGUE of Plows, Harrows, Seeders, Cultivators, etc.

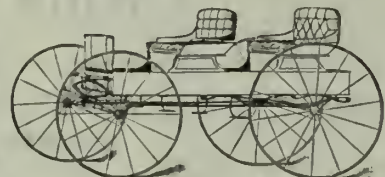
BAKER & HAMILTON,
SAN FRANCISCO AND SACRAMENTO.



HARNESS, \$7. BUGGIES, \$75. SURREYS, \$130.



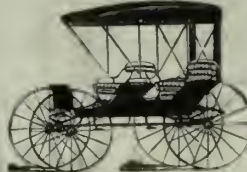
No. 129. Price \$85.



No. 600. Price \$65.
1½ Axle, 1½ Wheel.



No. 81. Price \$110.



No. 90. 1½ Axle. Price \$125.

Write for Catalogue.

We Ship Goods
Everywhere.



No. 58. Price \$80.

50 PER CENT
SAVED.

HARNESSES!

50 PER CENT
SAVED.

No. 10 Single. Try a sample set and be convinced. If not entirely satisfactory you may return at our expense. **No. 10 Single.**

Bridle, 4 inch, box loop checks, over-check or round side reins and winker stay, fancy chain front and rosettes, patent leather blinds. Lines, 1 inch, black or fair hand parts. Breast collar, folded, with lay, box loops. Saddle, 3-inch, full pad, leather lined. Traces, 1 inch, double and stitched. Shaft tugs, 1 inch, box loops. Belly bands, folded. Breeching, folded with lay. Turn back, with round dock.

Fancy Nickel Trimmings, Breast Collar.....Per set, \$14 00

Fancy Nickel Trimmings, Hames and Collar.....16 00

CALIFORNIA WAGON & CARRIAGE CO.,

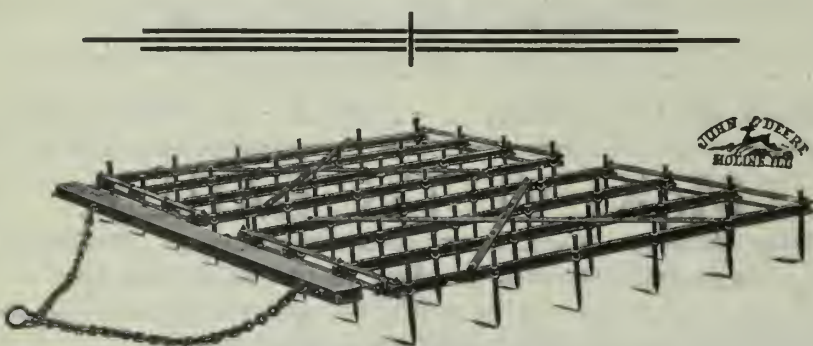
36½ to 44½ FREMONT STREET,

SAN FRANCISCO, CAL.

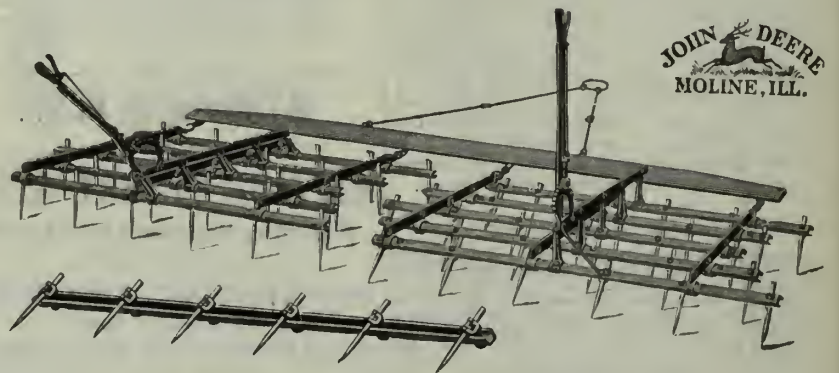
DEERE : STEEL : HARROWS.

2, 3, 4 or 5 Section.
9, 12, 15 or 18 Foot Cut
½ x ½, ½ x ⅝ or ⅝ x ⅝ Steel Teeth.

2-Section—50, 60 or 70 Teeth.
3-Section—75, 90 or 105 Teeth.
4-Section—120 Teeth.



"VAUGHAN" ANGLE STEEL HARROW.



DEERE "ZIG-ZAG" STEEL LEVER HARROW.

JOHN DEERE
MOLINE, ILL.

The Best Harrows in the Market!

SIMPLE! STRONG! DURABLE!

WE USE THE

COMMON STEEL TEETH

WHICH CAN BE BOUGHT ANYWHERE.

WE ALSO CARRY A FULL LINE OF WOOD HARROWS AND A STOCK OF HARROW TEETH.

DEERE IMPLEMENT CO., 305 & 307 Market St., San Francisco.



Vol. XLVI. No. 20.

SAN FRANCISCO, SATURDAY, NOVEMBER 11, 1893

THE DEWEY PUBLISHING CO.
Office, 220 Market Street.

California Almond Orchards.

The engraving on this page gives a very good representation of a California almond orchard of full-bearing age. The almond tree, as commonly grown, has not the regularity and symmetry of our other orchard trees, because after its general form is established, by about three years of pruning, it is allowed to grow very much as it likes afterward. Of course, there will be the need once in a while of checking unbalanced growth and of thinning out some varieties which are especially disposed to make a thicket; but, speaking generally, the tree takes satisfactory care of itself, at least for many years after it goes into full bearing. The engraving shows trees which have been

allowed to take this course, and the irregular and somewhat rangy character of the growth is the result. This does not interfere with successful carrying fruit as it might with heavier fruits. The trees are headed low enough, and have been thinned sufficiently. These two things are of chief importance in shaping the almond. Young trees usually start out two or three times as many branches as they should be allowed to retain.

The almond has had quite a checkered course in this State. Most of the early plantations were

made with varieties which are very sensitive to climatic conditions and are not good self-fertilizers. The result was exceedingly shy bearing which sadly disappointed the growers, and most of the early orchards were grubbed out or grafted over into prunes. As soon as Mr. Hatch's success with his seedling varieties became known, almond planting was seen to be a safer business, providing good varieties were secured. Other growers also developed good seedlings, and now nearly all the almond trees in California nurseries are of California seedling varieties. During the last few years the almond crop has rapidly increased, and successful crops are being secured in places which 15 years ago were pronounced unfit for this fruit. The almond evidently has an excellent future in California.

WHAT could more strongly emphasize the fact that California fruit needs better distribution, and that growers can reap the benefit by doing it themselves, than the following from the St. Louis notes of the *Fruit Trade Journal*: "The largest private sale of California peaches that can be recalled on the street was made last Tuesday by Charles Gerber and consisted of 1707 boxes. Felix Scalzo was the buyer. The purchaser sent out a straight

car of them, 1100 boxes, at once to an outside market, where they have been very high the past week, and where they made a nice margin for the shipper." This simply means that a sharp broker at a main point made more money out of a deal of this kind than the grower received for the fruit. Our growers cannot get their due rewards by such a system of distribution.

CALIFORNIA is shipping peanuts to some extent this year. It seems that the East is short of this delicacy this year, and what a hard winter our old friends will have with their stock of apples, cider and peanuts all at low ebb. It is announced from Tennessee that peanuts were almost a complete failure in the main belt. The vines

appliances used by beekeepers, including several colonies of the busy little workers.

E. L. GOODSSELL, the New York fruit-dealer, confirms the report that there will be no direct shipment of oranges from Florida to England this season. He had contracted with a large number of growers of Florida to ship from Fernandina, but decided that it is an inopportune time for the movement. He says the severe storms of the Gulf States ruined all prospects, because so much fruit was destroyed that growers cannot promise to carry out their contracts. We notice that the Florida people are going after Mr. Goodsell hammer and tongs about some behavior of his with the trial shipments sent to England last year.

Between the storms natural and financial Florida seems to have hard work developing the English market. It may be better by and by.

THE fruitmen of Washington propose to see what there may be in the Asiatic markets and the State Board has sent two sample boxes of Italian prunes with the idea of establishing a trade in dried fruits between our Coast and Japan and China. The trial is worth making, but we do not anticipate that any great outlet for our fruit products will be found in that direction. The

Asiatics have ample supplies of what seems to suit their tastes in the confection line.

THE Santa Clara prune horse, which made such a strike at the World's Fair, is to make the race at the coming Midwinter Fair. The seed, made of the product of the prune trees, will be newly caparisoned with fruit and will surpass its original appearance in the California building in Jackson Park. The horse, with its rider, is intended to indicate the pre-eminence of Santa Clara county in prune culture.

THE Chino beet-sugar factory finished its run November 2d. A telegram says that the total amount harvested from Chino fields was 44,008 tons. Seven thousand tons were received from Anaheim. The amount of the sugar output will be 15,100,000 pounds or 775 carloads. The factory will be enlarged next season.

CLARENCE J. WETMORE, of the Viticultural Commission, says that from all sources of information it may be a safe estimate that the vintage of 1893 will be about 18,000,000 gallons, an increase of 3,000,000 over that of last year.



A SCENE IN A CALIFORNIA ALMOND ORCHARD.

were full of empty shells. Over half of the crop was destroyed by drouth and afterward much damage was done by rain. The crops in Virginia are far from being good. Reports are very conflicting, some sections indicating fair prospects while others report a great deal of blasting. The crop will be shorter than usual and only of a fair quality. In North Carolina the acreage is reduced about one-fifth, and the crop somewhat damaged by dry weather during July and August. This short crop, coupled with the World's Fair munching, which must have exhausted the reserves, gives a good opening for all we have to spare.

SOME of the honey-raisers in the southern part of the State are very desirous to do better this winter than they did at the Columbian Exposition, where the display was good enough, but too small and inconspicuous. The beekeepers are arranging to occupy a large space in which honey will be exhibited in glass cases and bee products in every style and shape. All of the honey districts will be represented, showing honey in comb, in little wooden sections, extracted honey in glass and in the granulated state, beeswax, comb foundation, and an endless variety of the

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half inch (1 square).....	1.00	2.50	6.50	22.00
One inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, November 11, 1893.

TABLE OF CONTENTS.

ILLUSTRATION.—A Scene in a California Almond Orchard, 225.
EDITORIALS.—California Almond Orchards; Miscellaneous, 325. The Week; The Trouble Among the Horticulturists; Another Drouth-Resisting Forage Plant; Miscellaneous, 326. From an Independent Standpoint; The Movement for a California Fruit Exchange, 327.
SWINE YARD.—A Successful Hog-Raiser, 328.
POULTRY YARD.—Open-Air Life for Turkeys, 328.
MISCELLANEOUS.—Photograph and Save the Vine; Regulated Distribution Through the Commission Merchants; A California Dairy School, 328.
ENTOMOLOGICAL.—The Entomological Conflict, 329.
FRUIT MARKETING.—How They Handle Fruit at the Santa Clara Fruit Exchange, 330.
THE DAIRY.—The World's Fair Thirty-Day Butter Test; The Management of a Creamery, 330.
WORLD'S FAIR.—A Horticultural Postscript; Sheep at the World's Fair; The Honey Exhibit at the World's Fair, 331.
THE HOME CIRCLE.—Miscellaneous, 332.
YOUNG FOLKS' COLUMN.—Other Homes Than Ours, 333.
DOMESTIC ECONOMY.—Miscellaneous.
PATRONS OF HUSBANDRY.—Editorial Observations; From Worthy Master Roache; The Secretary's Column, 334. San Jose Grange; From Yuba City; Field Day in Enterprise Grange, 335.
AGRICULTURAL NOTES, 334-335.
MARKET REPORTS.—The Local Produce Market, 337.

BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Agricultural Implements—Baker & Hamilton.....340
Agricultural Implements—H. C. Shaw Plow Works, Stockton.....340
Plows & Harrows—P. P. Mast & Co.....337
St. Jacob's Oil—The Charles A. Vogeler Co., Baltimore, Md.....333
See Advertising Columns.

The Week.

Quite a general rain has fallen, though its volume has been light and no great depth of dry ground has been reached. Thus far then the rain has proved of little practical account, and the fields are spread out for more. Some injury to late grapes has been reported. At the far north the storm was more severe and snow on standing wheat already soaked by rain has added insult to injury to the losing farmers. It is said that a considerable amount of wheat has been rendered unsalable and pigs are demanded to make pork of the soiled and sprouting grain.

President Cleveland has called for Thanksgiving on November 30th. Governor Penoyer of Oregon was so full of the subject that he invited Oregonians to be thankful November 23d. Our northern friends will therefore need two turkeys this year. California will probably consider the hard times and get along with one bird and annihilate it on November 30th. It will be a good idea to evoke the thankful spirit this year. Certainly things might be worse.

We read in *Garden and Forest* that one of the best decorative displays of dried plants at the World's Fair is a large lot of algae shown by Miss M. J. Westfall of Pacific Grove, Cal., in the scientific section of the Woman's Building. The seaweeds have been pressed on Bristol board in such shape as to afford striking ornamental figures while the value of the specimens for scientific study remains. The most novel part of the collection are delicate brands of veiling fabric upon which the most fragile colored algae are permanently impressed, making a unique material for house decoration.

THE farmers of eastern Washington in districts where the wheat crop is damaged by rain, propose to import hogs from the Eastern States to fatten on the damaged wheat. H. F. Heese, State agent of the Farmers' Alliance, says that the Northern Pacific and Great Northern railroads have partly agreed to bring out the hogs free of charge in order to help the farmers out of their present difficulty. They might carry them free as "empties," to get full freight on return to Eastern markets.

AS was expected, the Atlantic seaboard fruit-importers are arming against duties claimed by Californians. A report has gained ground that a bill will be introduced by Geary to put a duty on lemons and oranges of \$1 per box. The Chamber of Commerce of Italy has sent a petition protesting against an increase in the duty on oranges and lemons, and advocating a decrease of the duties. Col. Irish will have his hands full with these chaps.

The Trouble Among the Horticulturists.

We give considerable space to the correspondence preceding the withdrawal of the government entomologists from this State in order that our readers, who are naturally much interested in the conflict which has been long pending, may have as full record as possible of the points involved. It is important to lay bare this matter now, so that those who go to the Los Angeles convention may master the considerations which may there crop out, and may perhaps be given undue force if heard for the first time and not fully understood.

Of course the whole issue between some of the members of the State Board and Prof. Riley should never have arisen to the dignity it now assumes. It could have proceeded indefinitely as an impersonal issue upon points of entomological knowledge or policy, and have done little havoc if it had not done much good. It would have expired, as such contests usually do, through the weariness of the contestants. Prof. Riley is not to blame for the intrusion of personalities. The attack made upon him by Mr. McCoppin was wholly inspired by personal interests. Mr. McCoppin believed himself to be entitled to glory on the Vedalia enterprise which he did not receive, and as Prof. Riley was not disposed to grant that, Mr. McCoppin sought his impeachment, and has rattled the Washington dignitaries quite persistently to that end. Mr. Cooper took up the issue for no personal purpose whatever, but he was misled into the same kind of a contest, and is seen to be calling for the impeachment of Prof. Riley through what he honestly conceives to be the personal unfitness and the entomological deficiencies of that gentleman. It was a mistaken course and the result has not been satisfactory. We are frank to admit that Prof. Riley might have been less exacting on his part, and could have let Mr. McCoppin have his brief glory as the "discoverer of the Vedalia," and he could have done less to excite Mr. Cooper; but that would be equivalent to changing his spots, for Prof. Riley has something of a jousting record himself. As a matter of fact, these distinguished people are all too highly strung for these dull days and cannot expect people to fully appreciate the injury done to their feelings in the contests.

The chief reason why we call special attention to this matter at this time is to indulge the hope that the war is over and will be so declared all along the line. The State Board has done grievous things surely enough. The decapitation of the southern county inspectors and the cancellation of the Los Angeles convention engagement which the Board did last July, was a narrow and short-sighted and mistaken in policy. There should at that time have been reconciliatory measures taken. Instead, however, new fuel was added and the flames caused to flash anew. During the coming convention there may be another opportunity to calm the conflict and secure for the State Board the general interest, sympathy and support which it should secure.

We cannot see anything but disagreeable loss and vexation to any one in the conflict waged against the Board at the South. All useful work depends on harmony. Of course there are personal motives involved in the southern opposition. Part of them are probably unworthy of attention and part may be the result of unjust affronts. The former should be ignored, the latter could be alleviated and compensated. It is not possible to successfully carry on the work arranged for by law with a continuation of the state of feeling which now prevails. This of itself should make the State Board determine to settle the trouble even by concessions on its own part if necessary. It has certainly in some actions shown itself too uncompromising and exacting.

Mr. Lelong occupies rather an uncomfortable position between the contestants in this conflict. At some times the issue at the South seems to be largely a personal one for his dismissal. That measure is not more likely to succeed than Mr. Cooper's effort to impeach Prof. Riley. Officers who serve diligently and earnestly according to their best knowledge and belief are not often unseated by such onsets. Mr. Lelong has faults, no doubt, and has perhaps made mistakes. Ordinary people cannot be judged by ideal standards. There is no doubt whatever that of all the men employed by the State in executive duties connected with the various commissions Mr. Lelong is the most conspicuous for industry and valuable service. He is a constant and indefatigable worker. He is popular in this part of the State and discharges his duties acceptably. We do not know how far he is responsible for the issue made against him at the South, but certainly he does not stir up strife here where his time is spent and his chief work is done.

Now it seems to us that the coming Los Angeles Convention of Fruit-Growers, or the State Board itself during the convention, should decide upon some *modus vivendi* by which existing evils in our official horticulture could be set aside and harmony restored. The people weary of the

quarrels which have been in progress for many months past. If a new era of better feeling and better doing can be led in, the public will be served and the State profited.

Another Drouth-Resisting Forage Plant.

The Experiment Station of the State University received this week two small roots of a drouth-resisting forage plant, which is just now the talk of the agricultural world. Its story is a sort of an agricultural romance. The past summer in Europe, for heat and drouth, has surpassed all recent records. Ordinary pasture plants are well nigh burned up, and hay crops were almost ruined. There was great suffering and large losses among the live stock, and the result is a hay and forage famine which is causing large importations of hay from this and other countries. In one part of France it was noticed that an ornamental plant which had been employed on spacious grounds for its rapid growth of conspicuous foliage did not succumb to the drouth but maintained its verdure and rankness in the midst of conditions which wrought desolation all around it. Naturally, in the scarcity of other cattle food, the plant was offered to live stock and proved to be very acceptable. The growth of the plant and its value as forage were so striking that communications were addressed to the Paris Academy of Sciences, where all good French things find respectable audience, and the French journals spread the fame of the plant throughout the world. The University Experiment Station, which has been seeking new forage plants for arid lands ever since its establishment, immediately sought to obtain seed of the plant from France, but found that its reputation had already reached such a mark that the leading Paris seedsmen could only offer a few root cuttings at \$2.50 each, postage not included.

Meantime the accounts which showed that the plant had already secured standing as an ornamental plant attracted notice and it was found that the Iowa Experiment Station had it in its collection, and an application to that source secured for our University the two roots, the arrival of which in Berkeley has been mentioned. These roots will be grown in Berkeley, multiplied as rapidly as possible and offered to California planters for experiment next year. It will be impossible to distribute any plants this year.

In view of the introduction of the plant to this State the following account of it which the eminent French horticulturist, M. Baltet, sends to the *American Agriculturist*, will be read with interest:

The Persicaria, or Saghalin polygonum, Saghalin knotweed, was discovered by the Russian explorer, Maximowicz, in the Isle of Saghalin, situated in the Sea of Okhotsk, between Japan and Siberia, a moderately large island, ceded to Russia by Japan in exchange for the Kurile Archipelago. In 1869, Edouard Andre noticed this new introduction in the *Jardin d'Acclimation* of Moscow, where it was exceedingly decorative, and brought it into France, telling us of its vigorous growth both above and below ground. The roots branch on all sides, and pass horizontally from the rhizomes, penetrating the hardest soils and giving origin to new shoots which further increase the size of the clump. The stems are numerous and closely set; they vegetate early, and are not long in attaining a height of nearly ten feet, although the first frosts may attack the tips. Small, long, zigzag ramifications develop in the middle and at the top of the luxuriant plant.

The foliage of the Saghalin knotweed is most effective, the leaves being alternate, two-ranked, oval-oblong, measuring twelve to eighteen inches long by three and three-fourths inches broad, and smooth, with no trace of hairs. The petiole is carmine, and the stem when developing shows a reddish tinge on a green background. The dull, white flowers appear in small axillary bunches, growing together in long, panicle fascicles and clusters which bend slightly under their own weight. The bees freely visit the plant in autumn, but it is remarked that the bloom does not appear on plants regularly cut for forage purposes. The experiments made at Balne are sufficiently conclusive as regards the question of fodder. A young plant put into the ground is not slow in covering a surface three feet square with its leafy branches. The first cutting is made when the stems are from three to four and a half feet in height; if the second growth is strong enough, a second harvest is gathered, but on the following years three or four annual cuttings can be very safely made.

M. Baltet calculates that the plant will yield a hundred tons to the acre of green forage, and, considering its height and immense burden of foliage, the figure does not seem to be overdrawn. It is of course still problematical what it will do in California, but surely we can furnish as much heat and hard, dry ground as it needs. It is also possible that care must be taken that it does not spread where it is not wanted; but, judging from the appearance of the roots, it seems likely that the stools can be easily thrown out if the plant is no longer desired. It has nothing of the growth of Bermuda or Johnson and will not spread as they do. It is of course not a grass at all, but a rank, herbaceous plant. We shall ere long have more to tell of its growth here, and, if possibly any of our readers may have already introduced it as an ornamental plant, we shall be glad to know the fact.

THE monster weir that the land company is building in the river four miles above Bakersfield will be completed in the course of three weeks. It is over 400 feet long.

From an Independent Standpoint.

The result of Tuesday's elections is what politicians call a landslide. In nearly every State the Republicans made heavy gains as compared with the late presidential vote; and in every doubtful State they were triumphant. In Ohio, where the Republican plurality last year was only 1072, McKinley is re-elected Governor by a majority of sixty thousand or upward. In New York, which last year gave Cleveland 45,518 plurality, the Democratic candidates are beaten by thirty thousand or thereabouts. In Massachusetts, which in 1892 gave Harrison a plurality of 26,001 and elected a Democratic Governor by a plurality of 2434, the entire Republican ticket including the legislature wins by a majority of close upon thirty thousand. In Iowa, where Harrison's plurality last year was 22,965, and where two years ago a Democrat (Boies) was elected Governor by 8216 plurality, the Republicans will have a majority of about fifteen thousand. In New Jersey, which last year gave the Democrats 14,974 plurality, the Republicans have won by a large majority. In Illinois the Republicans have elected their men and made large gains, especially in Cook county (Chicago). In Pennsylvania the Republican majority will reach seventy-five thousand. In Nebraska there have been slight Republican gains. In South Dakota the Republican ticket is thought to be elected. In Virginia the Democrats hold their own and elect their Governor by about twenty thousand majority. In Michigan there was merely a local election in which the Democrats appear to have the best of it. In Kentucky the Democrats made slight gains. In Colorado the result is so mixed up that it is not possible for either party to claim an advantage over the other. In California the only contest was a local one at Sacramento, where B. M. Steinman, the candidate of the "Reorganized Democracy," was elected by a majority of 1148 out of a total poll of 5507. Steinman was supported by the progressive element against W. F. Knox, upon whom the machine elements of both parties united.

In a political sense the results in Ohio and Massachusetts are conspicuously important. The tariff question was uppermost in these States, and there were no personal or other issues to confuse the public mind. In Ohio, those who cast their votes for McKinley voted for Protection as defined in the Republican national platform and embodied in existing Republican legislation; and those who cast their votes for Neal voted for Tariff Reform as defined in the Chicago Democratic platform and as represented by President Cleveland. It was the same in Massachusetts. The returns from these States show that increasing numbers of citizens are for Protection as against Free Trade or any approach to it. Taken in connection with the almost uniform Republican gains elsewhere, the result is a clear, emphatic and decisive popular protest against tariff propositions now in hand at Washington. In the judgment of the country it is a time to go slow and let the tariff alone. Such an expression at such a time ought to make a profound impression upon the law-makers at Washington; and if we are not greatly mistaken its practical effect will be to paralyze the whole pending scheme of tariff revolution. From the beginning, as our readers may remember, we have held that nothing would be done with the tariff by the present Congress. Sound political policy is against it; the monetary necessities of the Government will not allow it; the business of the country could not stand it; and now the people at the polls thunder out in protest against it. No party can be so infatuated, as, by going counter to all these powers and commands, to rush headlong to its own destruction. If there is any force in public sentiment, the scheme of tariff revolution in 1893-4 got its death-blow yesterday.

The result in Ohio is of highest significance in its relation to the future politics of the country. It re-establishes Protection as a cardinal political issue; it practically makes the lines upon which the next national campaign will be fought. Major McKinley's personal relation to Protection is, by this success, confirmed and intensified. He is now more than ever the logical Republican candidate. The party can hardly fail to make its standard-bearer in 1896 the twice victorious champion of its main fighting principle.

Believing as it does profoundly that in the present stage of our national development Protection is the true policy, the *RURAL* is greatly pleased with Tuesday's emphatic expression of Protection sentiment. The people of California generally must share in this satisfaction, since our State interests are so largely bound up in the Protective policy. It is comforting to reflect that, whatever may be the plans of a temporary Congress, the people are firm in support of a political course which will foster our wool industry, our prune industry, our olive industry and

our thousand and one other interests which rest upon the continuance of Protection as a cardinal principle of American policy. Even if the present Congress should throw prudence, policy and respect for popular majorities to the winds, there is in Tuesday's voting assurance that the mischief will be only of brief duration.

The dignity of American politics rests upon the fact that it has in its guardianship not alone the policies, but the morals of the country. In one way or another it has always to determine between the rights and the wrongs of things related to our national life; and it is to the honor of American character that where the question is direct and clear, the judgment is always given with wisdom and conscience. In Tuesday's voting there were three popular trials of questions nominally political, but practically and essentially moral. In New York two years ago the scheme of the infamous Tammany Society required the substitution of a false election return for a true one; and a lawyer named Maynard was found to do the job. He was rewarded for his crime by temporary appointment to a judgeship in the Court of Appeals, and in the present campaign given the Tammany nomination for the same position. The leading members of the New York bar protested against him; numbers of Democratic journals refused to support him. But Tammany, which never goes back on a friend, good or bad, stuck to him and sought to force his election. The returns show that he is beaten by thirty thousand votes in a district which last year gave his party a majority of forty-five thousand. Furthermore, every name associated on the ticket with that of Maynard has been snowed under. Triumph of decency Number One! In Chicago, six years ago Judge Gary gave righteous judgment against the Haymarket anarchists. This year a blatherskite Governor (Altgeld) pardoned such of the criminals as were confined in the Illinois State's prison. The question of right as between the judge who condemned and the Governor who pardoned became associated in the late campaign with Judge Gary's candidacy for re-election. All the forces of social confusion and infamy conspired to overthrow the honest judge. The telegraph tells us this morning that he has been re-elected by an overwhelming majority. Triumph for decency Number Two!! In New Jersey the contest was based upon an issue forced upon the people by the policy of New York gamblers who have made the little State their racing and sporting ground. The repeal of special privileges granted by a recent legislature was demanded by one party and opposed by the other. Those who were on the side of public morality have carried the legislature by a large vote. Triumph for decency Number Three!!!

And in these three triumphs there is embodied a greater triumph still—that of the principle of independence and discrimination in individual voting. The citizen who looks over his party ticket and scratches off the bad names does himself, his country and his times a service of incalculable benefit. Discrimination thus once performed frees the voter forever after from that greatest of all political vices—the subordination of individual judgment and moral sense to the domination of party spirit and authority.

Repeal of the Silver Purchase law was, as our readers have already been informed, accomplished on last Wednesday. On Thursday the Senate passed and the President signed the bill previously passed by the House giving Chinese resident in the United States six months more time in which to register. On Friday both houses adjourned. This abrupt ending of the special session was something of a disappointment, since the hope was general that there would be no cessation of congressional labors until the country should be more settled. But Congress is a law unto itself, and, if it chooses to take a rest, there is nobody to say it nay. We had hoped that, with repeal of the Sherman law accomplished and the decks thus cleared for action, there would be no adjournment until the pledge of the Voorhees bill should be accomplished. This pledge commits the Government to the policy of bimetalism and makes it the duty of Congress to steadily direct its efforts to that end. Surely it cannot be claimed that Congress is acting in good faith when, before the parchment containing this solemn promise is fairly dry, it quits work and its members go stump-speeching and holiday-making about the country. Now, the conditions which make the single gold standard an injustice are in no wise altered by the repeal of the Sherman law. We have gotten rid of an impediment; but we have done nothing to smooth the road. As gold has been slowly appreciating in value these past twenty years, it continues to appreciate. A dollar is worth more to-day than it was a year ago; and if nothing be done in performance of the Voorhees promise, will be worth more next year than now. Thus, property in the form of money or credits (bonds, notes, bills receivable,

etc., etc.) grows automatically and unfairly, while property in other forms (commodities, lands, etc.) steadily and unjustly declines. The advantage to the creditor and the consumer, and the injustice to the debtor and the producer, are matters clearly apparent.

We are told from Washington that the "silver fight" has not been abandoned and that it will reopen with renewed vigor in December. Now, if the silver fight is to be waged on lines of public policy—that is, in the interest of a just and fair national currency—we are heartily for it. But if the currency interest is subordinated to the industrial interest of silver, it will be a very different thing. The Government owes to the country the regulation of currency on fair and equal terms; and this, as we view it, will incidentally make a legitimate market for silver. We are friendly to silver in this sense; but we protest earnestly against a "silver fight" in the interest, not of an improved currency and therefore of the whole people, but in the interest of the silver miners of the Rocky Mountain mineral belt. The true cause of silver is the cause of a bimetallic currency; the false "fight" for silver is the effort to make the Government support the industry of the miner with monies secured by taxing the other industries of the country.

The Movement for a California Fruit Exchange.

It will be remembered that the San Jose convention commissioned a committee of representative fruit-growers to organize a California Fruit Exchange with the idea of eliminating the middleman from our fruit-marketing system. The first meeting of this committee was held in this city last week, those present being Edwin F. Adams, Frank Buck, A. L. Bancroft, George F. Ditzler, John Marclay and Robert Williamson. Mr. Adams was chosen chairman and Mr. Ditzler secretary. In anticipation of the meeting Mr. Adams had drawn up a plan embodying the principles upon which, in his judgment, the projected organization should be based. The scheme, he claimed, was entirely practicable, provided a sufficient capital were subscribed to conduct the business in a business-like way and provided the Exchange could be assured a sufficient supply of fruit. After some discussion a resolution was adopted by unanimous vote to the effect that it was both practicable and advisable to organize such an exchange as that contemplated by the resolution. It was further resolved to choose a board of directors to serve during the preliminary work of organization, but the board was not filled. A second meeting will be held on Saturday of this week, when the directory will be completed, by-laws adopted and steps taken toward putting the work on its feet.

The *RURAL* does not need to say that the movement is one in which it is in hearty and thorough sympathy. If our fruit-growers are ever to enjoy the full legitimate profit of their business they must find some way to get into closer relations with the consumer. Prunes for which the producer at Saratoga in Santa Clara county gets say five or six cents per pound, are sold for sixteen and eighteen cents by the San Francisco grocer. Now, the difference is too great. It would be fairer and more profitable to the two parties most concerned—namely, the producer and the consumer—if the party of the first part got more and the party of the second part paid less, and it would mightily promote the prune industry.

If this movement is to be a success, it must have the support of the fruit-growers of the State; and they ought to take a hand in its promotion. To give all a chance to express their views and to take an active practical interest in the project, a special convention should be held and the whole time devoted to this one matter. Such a convention ought to attract the interest and presence of every fruit-grower who feels the need of putting the producer and the consumer into closer and more profitable relations.

Important Appointments by President Lelong.

E. J. Wickson, Secretary State Horticultural Society:—I have this day appointed the following committees, in accordance with resolution adopted at our last meeting at San Jose, and you will please inform the various persons named of their appointments, viz.:

Committee to report on the Perkins process at the Los Angeles Convention: Prof. E. W. Hilgard, representing the State University; Prof. E. E. Smith, representing the Stanford University; Mr. Richard Gray, representing the Southern Pacific Company; W. A. Bissell, representing the Atlantic & Pacific Company; and L. W. Buck, representing the California Fruit Union.

Committee to confer with the California Fruit & Transportation Company, also the Goodell Fruit Car Company, to see if more cars will be built for next season: A. Block, Santa Clara; R. C. Kells, Yuba City; A. T. Hatch, San Francisco.

Committee to report on the prospects of finding a market in the cities and sections not yet reached by growers and associations, and also with a view to securing quicker

time on fruit shipments; also to report what the grower pays for transporting his fruit, including boxes and material, labor, hauling, etc.; what the transportation companies receive, and the proportion the grower obtains on his shipments: Alfred Holman, B. N. Rowley and John Isaac, San Francisco. B. M. LELONG, President.
San Francisco, Nov. 4th.

Regulated Distribution Through the Commission Merchants.

TO THE EDITOR:—I was quite interested in the article on the "Ill Effects of Poor Distribution" in your issue of October 28th. Mr. Schwan says that "consignments of fruit must stop" before we can have proper distribution of it in the Eastern markets. But will the buyer do any better if it is left to him? If he does, then it surely can be improved by consignments, if handled in the right manner. I think there is a way out of this difficulty and one by which consignments of fruit can go on and the grower get a good price for it through the season.

If an exchange or bureau could be formed, with headquarters at some central point, say Sacramento, to have charge of the shipping of all of the fruit that leaves the State for the East, sending it where there is a demand and not allow it to pile up in one place, as has been the case this season in Chicago, New York and Boston at different times. In this way the fruit would bring a good price. The exchange could keep posted on all of the Eastern markets, and, by having control of the shipping of the fruit, could distribute it so as to prevent a glut. There are many of the smaller cities in the East that could handle a car of California fruit once a week for such matter, that do not now have any shipped direct to them, because there is no way of finding out where the fruit is wanted, or how soon some one else will send any there. By having the required information and the distribution under the control of an exchange all these places could be supplied, and at a good price.

If the exchange could not demand lower rates from the railroads, it would be in a position to exact better service for the present ones. It could be placed in communication with the railroads, so as to know each day where every car was that had been shipped; and if a delay happened, whereby two or three shipments were caused to arrive at one place at the same time, so as to make a glut, some of them could be diverted from their first destination and be sent to other places. Shippers having any one commission merchant to whom they would like to have their fruit sent, could do so if there was not going to be enough shipped to that same market to glut it.

The exchange could also be a kind of a clearing-house, where a percentage of the returns, say 75, could be telegraphed on the day of the sales and forwarded at once to the shipper, and the remainder sent with the account sales, also through the exchange, so as to correct any telegraphic error that might occur. In this way the small shipper would get prompt return, while, as it is now, he must wait until the commission man gets ready to send his returns.

Now, how could such an exchange or bureau be established and maintained? I think that if the commission man would like to see the market kept up, so as to realize good prices, he would be willing to contribute a small percentage of his commission for such an exchange; if not, then we would know that he was making more money off of a glutted market with low prices than off of a good market with high prices.

If some of the large shippers and the principal commission men in the East would favor some such plan as this, it could soon be established. There should be a man placed at the head of such an exchange who did not have interests of his own to favor, to the detriment of others. There are many men who would raise objections to any such plan and still keep consigning their fruit to the Earl Fruit Co., Porter Bros., Barnett Bros., and other large dealers, to have it dumped in one place and sold for little or nothing, while, if properly distributed, it would have sold at a good price. J. O. HUNT.
Vacaville.

A California Dairy School.

The directors of the recently formed California Dairy Association held their second meeting in this city, November 1st, to deliberate on the feasibility of opening a dairy school. The intention had been to rely upon a State appropriation, but the pressing need for dairy education and the uncertainty of an appeal to the Legislature of 1895 has made a more speedy means of securing the school desirable.

Among the dairymen of the whole country a need for the best teachings in the handling of milk products, in economic feeding and the science of breeding dairy cattle is apparent. California has lately made great progress in the building of creameries and opening up the outside markets for her butter, which has had the effect of rousing up the easy-going buttermakers to the possibilities before them. Taking this fact, with the positive success of several dairy schools in the East, where the demand for graduates to take charge of factories is greater than the supply, the directors of the California Association decided to make an effort to establish such a school, employing a competent instructor, fixing tuition at a rate to cover instruction, and then make a determined canvass for students. With the school, a creamery is proposed for practical demonstration, and ultimately a small herd for feeding experiments is to be added.

It is thought a rivalry for its location may be shown by different dairy localities, with offers of land and buildings, and since the meeting a generous offer of sufficient land has been made at Petaluma. It is usual for dairy supply houses to lend machinery to these schools, where it may be seen in competition, and until a demand can be made for State aid to pay for such machines the different

manufacturers will be requested to allow the use of the necessary apparatus.

The directors are greatly in earnest and will, each in his district, secure all the result possible for the meeting on the first Tuesday in February, for final action towards opening the school.

Photograph and Save the Vine.

TO THE EDITOR:—Reference was made in the issue of Oct. 28th to the large grape vine on the Moraga ranch in Ventura county, stating that Mr. A. D. Barnard would be one to contribute to purchase it, for exhibition at the Mid-winter Fair.

Certainly it would be a grand sight, but I suggest that a photograph be taken as large as possible and in the best possible manner, to exhibit, and that it then be presented to the art gallery at Sacramento.

To remove such an old landmark would seem to me like vandalism. I hope it may stand for thousands of tourists of future generations to enjoy. MRS. I. A. CASEY.
Sacramento.

A Pretty Souvenir.

The RURAL has received from Mr. A. C. Bilicke, proprietor of the Hollenbeck Hotel of Los Angeles, a beautiful collection of southern California views in the form of a pocket album. Mr. Bilicke informs us that these pretty souvenirs will be sent gratuitously to those who write for them. Numbers of fruit-growers are soon to visit Los Angeles to attend the State Horticultural meeting and one of the Hollenbeck books would serve very well as a guide to places of interest. Write to Mr. Bilicke for one and he will send it with his compliments.

SWINE YARD.

A Successful Hog-Raiser.

A correspondent of the New York *Tribune* gives the following account of methods with hogs practiced on the farm of Mr. Theo. Louis, in Wisconsin, the most noted of the swine-breeders of the West:

As authority on swine culture, he has no superior before the people, and some of those most perplexing problems in swine economics he had mastered in advance of the learned efforts of the stations and feeding experiments of the last ten years. Years ago he suspected that cholera in hogs, excessive corn-feeding, breeding from immature animals and filth went together, and wisely went about taking precautions against it by avoiding all four. If there was an importation of breeders to his farm, they were quarantined at a distant part of the farm until pronounced safe to put with the home drove. While he had male pigs for sale at a suitable age, the services of his boars were denied to his neighbors; and while cholera raged at different times all around him, it has never broken out on his farm, which goes to prove that it can be prevented if the right precautions are taken.

At the start he breeds only from the full-grown sows, usually having their first litter at 17 months old. The pigs the first summer are clovered with their dams, and suckle until at least ten weeks old, and in August are fed green peas, some oats and later on corn and fodder. Those for breeders are not pushed, but those for slaughter are fed and finished up on corn and put on to the Thanksgiving market weighing 250 to 275 pounds. The mothers are not allowed to raise more than one litter a year, as he believes that the vitality of the offspring is weakened by inflicting upon the mothers more frequent maternal duties. The sows in the winter are fed a little corn, a good deal of clover hay and a swill made fresh every day—a combination of Boston favorite square and wheat meal feed, scalded but not cooked, and these sows are kept on the farm five years at least unless something happens to destroy their usefulness as breeders. The result is that, by almost wholly discarding corn and keeping these sows and sires on a nitrogenous diet largely, the health and vitality of these pigs is a large safeguard in preventing the cholera. In large self-feeding boxes, summer and winter, one will see a mixture of charcoal, wood ashes, salt and copperas, where the hogs and pigs go at will and eat all they wish; and, when put into the pens to fatten, they are given besides soft sandstone to eat, and 100 hogs will consume a half ton a week of it.

Near the hoghouses are the bathing establishments of the hogs and the "mud baths." After a hog has had its mud bath, it will walk deliberately to the spring brook, wash off the mud, and then proceed to wipe itself dry against a fence-post or a small tree. One thing is noticeable in Mr. Louis' management—the hogs and pigs are taken from clover each evening, and put in the little yards with sleeping pens attached, where they sleep on a dry floor with some bedding, which is frequently changed, and at night these pigs and hogs get the grain ration and the soiling crop in season. The "family" grouping of the hogs is kept up, the sow and her pigs occupying the same quarters every night; and after the dams are removed to other pens and yards, the pigs continue to room in the same place.

One thing this man demonstrated before he read it in books is that a sow first eats her pigs because of the feverish condition of the system, brought on by an exclusive corn diet, and consequent constipation, and when the opportunity presented itself to change the food from starch to a nitrogenous one, she eat the pigs for medicine to relieve nature. Feed the sow little corn, and see that she is not constipated, and no pigs will be eaten. Sows that have eaten their pigs are liable to do so again, let the feed be what it may. The floor of the farrowing pen should be clean and dry, covered with short bedding, and the sow placed in it at least ten days before farrowing. With these precautions, pig-breeding may be a success, and never a "trusting to luck."

POULTRY YARD.

Open-Air Life for Turkeys.

The turkey is evidently a fresh-air bird and a free-range bird as well. Some turkey experiments recently reported by the Rhode Island Experiment Station are interesting in this connection.

A shed for experimental use as sitting and roosting quarters had been built early in the spring. It was made similar to a carriage shed, but with slats over the front. Its dimensions are 20 feet long by 12 wide. The posts are eight feet high at the front and ten feet high at the rear. Roosts are provided and placed high enough to be out of the wind and under the eaves. Two large coops for temporary confinement were built against one end, and beneath them secluded compartments for sitting turkeys. One gable was fitted with a ventilating shutter, which was left open in warm weather. The flock was driven to this shed to roost at night, and when about to lay were confined every morning till each had selected a nest and deposited an egg therein. The eggs were very fertile, 15 out of 16 having hatched in each instance.

The young turkeys seemed frail and tender, but did well until they were several weeks old. Each hen with her young was confined for two or three days in a movable wired-in shed, after which they were allowed their liberty on pleasant days after the dew was off the grass. They were confined during stormy weather and at night. The shed was frequently moved to fresh ground. They were fed four times daily for a few days with bread crumbs moistened with milk, hard-boiled eggs and scalded meal, and then with cornmeal dough mixed with milk, crackers soaked in milk, and cracked corn, making three feeds each day. When three months old they were only given cracked corn at night. One or two young turkeys gave out the second or third week, being, apparently, not strong enough to keep up with the wanderings of the rest. A number were lost when about the size of quails, by being caught by a heavy shower while foraging in the high grass. In August several died within a few days of each other. After this one occasionally died until they were full grown.

Our first season's experience convinced up that, although confining little turkeys at night and when the dew is on prevents their being dragged and lost in the wet grass, it is detrimental to their welfare, and should not be continued too long. If possible they should have full liberty where the grass is short. Their nature is such that they need cool, free air and a great deal of exercise.

Young turkeys cannot thrive on the quality or quantity of food that is desirable for a young chicken. Restricted liberty, even with light feeding, soon puts them out of condition, while full feeding, even with liberty, prevents their taking sufficient exercise, causes disease of the digestive organs, and they are lost or do not thrive. The young turkeys, while confined in the morning and in stormy weather, were very restless and fretful, and their growth was consequently retarded, but the liberty to get wet in the heavy grass would at that age have been a greater evil.

Although the turkey house was airy and high, the young turkeys that were compelled to roost therein did not thrive. The slat door was opened after dark that they might leave in the morning as early as they chose, but they seemed to be affected unfavorably. Those allowed full liberty and outdoor roosts looked much more thrifty. During the winter it was the same with the old turkeys that roosted in the house. Young and old were out of condition and had colds with swelled faces, while those in the trees seemed bright and healthy. The contrast was so great that in mid-winter during the coldest weather those roosting in the building were shut out and compelled to roost in the trees, and in a few days their condition had greatly improved and many of them were soon as well as ever. The shed was kept perfectly clean, and they were not overcrowded.

If an old empty hay barn, having quarter-inch cracks between the boards on all sides, and roosts placed in the center, had been used, we think the results might have been satisfactory. Probably this house was so small that on mild, still nights the turkeys were too warm, while in windy weather the draughts from one direction were more objectionable than exposure on all sides would have been. It will be used in the future for catching and temporarily confining turkeys and for setting turkeys.

Although we had no better success raising turkeys the first season than others in this neighborhood, having lost about 50 per cent of the young and a number of the old, we have as yet seen no symptoms other than would occur from overfeeding, digestive derangement, or lack of inherited vigor. Bowel troubles seem to be more prevalent among turkeys than any other disease, and a bird that gets sick is very apt to die.

Our attention was called to a case last season where 78 turkeys died in one day in September, from a flock of 150 that were large enough for the market. There are doubtless diseases affecting turkeys as well as hens, that are caused, or at least aggravated and spread, by bacteria. Some farms where a disease has played havoc may be so thickly sown with the germs that turkeys raised there are almost sure to be infected. Avoiding contaminated ground and preventing contamination is in such a case of more importance than a cure.

In August fowls that have been overfed and that are confined in hot yards are subject to bowel trouble. When once started it is apt to be quickly fatal. There is diarrhea, weakness, no appetite, and the face and comb change from a bright scarlet to a dark purple. As soon as this dark purple is shown, the bird soon dies unless vigorous remedies are promptly given. We have saved fowls, apparently in the last stages, by administering two or three drops of liquid camphor on bread crumbs every half hour. It is always best to watch stock so closely that the commencement of such trouble is noticed, when, in most cases, it may be easily corrected by giving in the food ginger or black pepper and powdered chalk or charcoal.

ENTOMOLOGICAL.

That Entomological Conflict.

Mr. Cooper's Arraignment and Prof. Riley's Reply.

[In our issue of Oct. 14th we published Secretary Morton's letter to Ellwood Cooper announcing the withdrawal of the Government's entomological agents from this State and the reasons therefor. Mr. Morton's action was based upon documents which were not at that time available for publication, but which we remarked at the time were necessary for a full understanding of the matter. Copies of this correspondence have just been secured, and we give the documents below in all their dismal unfortunateness. Probably no two citizens regret more deeply a style of correspondence, which seemed to each a bounden duty, than the distinguished writers of these two letters. Still, their action is official, and the public is entitled to the full record of it.—ED.]

PRESIDENT COOPER'S LETTER TO SECRETARY MORTON.

SANTA BARBARA, Aug. 2, 1893.

Hon. J. Sterling Morton, Secretary of Agriculture.—DEAR SIR: I returned from San Francisco a few days ago and now take up the subject of Prof. Riley.

I did not see the Hon. Frank McCoppin when in the city. He met with a serious accident by being thrown from a carriage. Our secretary told me that Mr. McCoppin handed to you an envelope containing the correspondence or controversy that had taken place between Prof. Riley and Mr. McCoppin, so that I will not refer to this part of the subject.

I tried to get a copy of the anonymous letter referred to in my former note, but as yet have not received it. Hope I may before many days. The copy that I had was forwarded to the Hon. J. M. Rusk. I enclose herewith the copies of two others to which I refer you. They are marked Nos. 1 and 2. In the letter of Mr. Willits to us in reply to our request that Mr. Koebele be sent to Australia on a second voyage to search for parasites, it was stated that Australia was not the native home of the woolly aphis, red and black scales, etc., etc., but on my inquiry asking for the native place of said insects, no answer was forthcoming. But in communication No. 1 it is asserted that both the red and black scales are natives of southern Europe. In the October letter marked No. 2, Riley equivocates. He says: "It is not proved that red scale is indigenous in Australia." These letters and others were written solely to have the effect of preventing any other search. They contain statements by intimation that are not true. First page No. 1, "not such a power for good as numerous brilliant-hued statements." The State Board never made any statements of any kind. With regard to the red scale, see Koebele's report. It can be traced in Australia to at least 50 years before its appearance in this country. But it is not this; it is the tone of the correspondence to support the effort to break up the further investigation. In all the correspondence, in everything gathered from the Entomological Department, not a word of encouragement, not a single thing granted in our efforts. It was the same regarding the "vedalia." Prof. Riley's remarks at the Riverside convention were the same. An investigation of Mr. Koebele's report will certainly open the eyes of any one who cares to go into it. What has become of these numerous insects that were sent to Coquillett? If I had not most positively directed Mr. Koebele to divide the shipments—to send one part to Coquillett, one part to me and one part to the office in San Francisco—there would have been none here to-day.

The general belief here is that all these shipments were to be allowed to die. Just as soon as they came to me, and were reported in good order, then the trouble began at the San Francisco Customs House. We were charged with taking out insects that were consigned to Coquillett, and an order was written to the Collector that we were to receive none of the Australian consignments.

You are probably aware of the fact that it is no easy matter to ship insects so many thousands of miles, and be on the voyage such a long time and yet live, multiply and do the service intended. If they were to take the ordinary course and go through the Customs House as other goods, no parasites would ever have been here from that country. Coquillett did not write much; still he wrote two or three letters—the same discouragement. All the articles had similar expressions, such as "every scientific entomologist or every economic entomologist knew it would be a failure," etc., etc. These articles were of weekly occurrence. I can send them to you if you wish them. I call your attention to the newspaper sheet marked No. 3—Koebele's Bill. Our secretary gave an itemized list of his expense bill to a friend in San Gabriel. Mr. Coquillett was in his office shortly afterward, and asked for it. It was given to him, and appeared in the Los Angeles Times as per sheet marked No. 3, as above referred to. No other copy of said account was sent out. Dr. Woodbridge will make affidavit to the above circumstance if you wish it. I call your attention to the editorial on this subject. I do not think the department is justified in keeping entomologists who employ their time in mousing around to hunt up news to have published in order to defame the character of a brother officer. One would suppose that the entomologist would have kept track of the insects he turned loose, especially when the orchard was almost in sight of his own dooryard. It is not more than six weeks since an Orange county paper published that there was not, or could not be, found in either Los Angeles or Orange counties one single steel-blue ladybird. As Coquillett was in the enemies' camp, as a matter of course, all these papers were sent to him with the articles marked.

I call your attention to the sheet marked No. 4, containing a little history of the said ladybird. Also beg to

refer you to the two newspaper articles on the subject marked Nos. 5 and 6. I also enclose a copy of my letter to W. B. Coquillett dated August 1st, No. 7. I regret exceedingly to trouble you with all these things, but there is no other way for you to get a history of all this business. You will see by the report No. 6 that the Board of Supervisors had taken the matter of the guardianship of John Scott, and placed the ladybirds in the hands of Coquillett. I am very sorry to write you that under the circumstances we cannot trust such important business in his hands. I have ordered our entomologist, Alexander Craw, to proceed at once to Los Angeles and guard this orchard. The parasites are State property, we are the guardians of the funds appropriated.

The whole difficulty with Prof. Riley is that there is no credit in this business for him. He sees that there is a great future in this investigation. Jealousy has caused him to lose his balance. There is no disputing the fact but that Prof. Riley has done some most excellent work. He has now been employed in the Department about 20 years. Has had experiments conducted with many washes to destroy noxious insects. He has written much on the grasshopper, knows all about its devastating ravages, the misery and suffering caused by the same. Why should he not have thought of combating the insects with their natural parasites? He chafes under this oversight, and feels keenly the fact that no credit can come to him.

A man engaged in scientific pursuits who will so forget himself as to write anonymous letters merits the contempt of every intelligent citizen. Now I do not say that either Prof. Riley or Coquillett are guilty. All the circumstances lead to the supposition that both of them have been mixed up in this business. If they are innocent it is easy for them to publish a disclaimer and deny every point where any suspicion rests.

There is no question but that California will inaugurate a department to search for parasitic insects. We want to act in concert with your Department. We want your aid, your assistance, your knowledge and your protection. With these two men in the field in the Department, it will be impossible, at least until they can show that they were entirely innocent in every particular of this Los Angeles opposition.

It is also incomprehensible that our people in this age of scientific investigation with the high standard of knowledge and the lavishing of money in fitting out expeditions in so many lines to enlarge our comprehension in the mysteries of creation—have not a single cent in that line of paramount importance to every other inquiry. The waste of energy, the devastation and discouragement that reaches the home of every producer or tiller of the soil through the various pests—and not a single thought given to the relief that nature affords in the great balance of all living creatures in God's creation—it is incomprehensible.

Take the grasshopper; estimate the misery and the monied value of its depredations; the codlin moth that has made such inroads on every apple and pear-producing region of the country; the chinch bug that has caused such losses in the wheat-growing regions of the northwest; the cotton worm of the South; the white scale of southern California that would have completely bankrupted the citrus industry had it not been for the Vedula. Man has proceeded entirely on wrong theories. Paris green washes and fumigation with all the multiplicity of patent compounds can only be temporary. We cannot go on forever with these unnatural methods. The State Board of Agriculture of Massachusetts has expended within a few years \$325,000 in trying to wipe out the existence of the gypsy moth. But it is not my purpose to prolong this subject. What I want is to impress you of its importance so that you can lend a willing hand. The cultivators of the soil have the hardest struggle—they get the least assistance. I am very truly,

ELLWOOD COOPER.

[Those who have followed this unfortunate conflict will find that Mr. Riley's rejoinder states more explicitly what the documents are to which Mr. Cooper refers by numbers. We think the references will be sufficiently explicit to indicate their identity, especially to our southern readers.—ED. PRESS.]

PROF. RILEY'S REPLY TO MR. COOPER'S INDICTMENT.

WASHINGTON, Sept. 21, 1893.

Hon. J. Sterling Morton, Secretary of Agriculture.—SIR: During a brief absence from the office in which I sought respite from overwork, a communication dated August 2, 1893, from Mr. Elwood Cooper, of Santa Barbara, California, was sent up to the Division, and Mr. Howard has made a brief reply thereto as Acting Entomologist. Mr. Howard has correctly stated the facts, but in view of the importance of the matter I deem it expedient to take up the charges made by Mr. Cooper more specifically and *seriatim*.

First—The printed matter enclosed in the envelope handed to you by Mr. McCoppin contained the published controversy in the PACIFIC RURAL PRESS of San Francisco between myself and Mr. McCoppin which grew out of Mr. Koebele's first mission, and is now some three years and a half old. It grew out of certain denials of the part which this Department had taken in Mr. Koebele's first mission, and out of a question as to whose authority he was acting under. The true and non-controversial history of that first mission has been recorded in the publications of the Department (see particularly Bulletins 15 and 21, Division of Entomology; annual report of the Entomologist for 1889; *Insect Life*, Volumes II and III, *passim*), and the controversy closed on my part with statements from Mr. Howard and Mr. Koebele in the PACIFIC RURAL PRESS of March 22, 1890, from which I quote the concluding paragraphs:

"Prof. Riley, in his article of Dec. 21 (1889), bestowed more credit upon me than I deserve. He has my sincere thanks and I only hope that we may be able to gain more such points. He, above all, deserves credit in this work. Had it not been for his energetic work, Californians would be in the same condition to-day as they were 18 months ago, so far as the importation of the *Icerya* enemies are con-

cerned; even if they had sent some of their own men over to Australia, they would have had most surely no success in finding them. ALBERT KOEBELE, Alameda, Cal.

"[We trust these statements will close this discussion. We hardly wonder that, in the tangle of red tape which controls such matters, there should have been failure to see all the kinks in the line, and consequently some assertions made which were not true. The fact remains, and will stand as history, that to Prof. Riley's insight, energy and skill in arranging details, the entomological errand to Australia, which has accomplished such beneficial results, was planned and carried out, and thus Mr. Koebele's triumph was made possible. Mr. McCoppin's important contribution to the same end is also generally understood and appreciated. In an affair so full of honor it is unfortunate that there should have been discord—but discord there was at one time even in heaven.—EDITOR PRESS.]"

I felt that the matter might safely rest there. The envelope included also a pamphlet, which I had not seen before, and which is a copy of Bulletin 54 of the California State Board of Horticulture, entitled "Historical Sketch of the Rise and Downfall of the Cottony Cushion Scale (*Icerya purchasi*) in California," by George Rice, Quarantine Officer. This was published in Sacramento in 1890, has doubtless been widely circulated, and is an effort to support Mr. McCoppin's side of the controversy by two statements which are *ex post facto* and without a particle of further evidence. The object of this bulletin is obvious from the following quotation:

"That Mr. McCoppin opened the way to secure the final result, and that to him the honor belongs of finally reporting to the General Government the discovery and importation of this most wonderful little ladybird, the *Vedula cardinalis*, is a settled fact."

However much I may regret to see one-sided and inaccurate statements widely circulated officially by a State institution, the matter has long since passed out of my mind, and the real facts will go down in history notwithstanding the efforts to distort them.

Secondly—With regard to the question from the Los Angeles Times of Sept. 29, 1892, of which Mr. B. M. Lelong, Secretary of the State Board of Horticulture, writes: "The above was no doubt written by Prof. Riley, and the private correspondent is none other than Coquillett," I have to repudiate both insinuations. I have tried to keep track of the voluminous discussion which has taken place in various California journals, but for some reason have not seen this particular article that is quoted; but I positively aver that I have neither written nor prompted the publication of any such article, and I have every reason to believe that Mr. Coquillett likewise had nothing to do with it. So far as the statements are based upon Mr. Willits' letter, to which reference is made by Mr. Cooper, I should be willing to endorse them because that letter was official and public property, but so far as they go beyond that letter this Department cannot be held responsible.

Thirdly—While away on part of my annual leave at Atlantic City, the following telegram was forwarded to me from the Department:

LOS ANGELES, CAL., Sept. 3, 1893.

C. V. RILEY, ENTOMOLOGIST:—Consignments of parasites from Australia sent by Mr. Koebele not satisfactory in breeding or feeding on red and black scales. Many growers, also horticultural commissions of six southern counties, have doubts of their efficacy. State Board says they will breed in sufficient numbers in four or five years. In the meantime do you advise suspension of spraying and fumigating? Have you information of reliable character other than Koebele's that new ladybirds will prove as effective on red and black scale as *Vedula* on white? Wire answer immediately, important.

(Signed) JOHN SCOTT,

Horticultural Commissioner.

My answer to this is that quoted in statement No. 2. It was a specific answer to specific inquiries. The reflection on Mr. Lelong I should have avoided had it been possible, but the mass of published matter on file in this division, and the generally unscientific and sensational nature of most of that which has emanated from Mr. Lelong, fully justify the statement.

About the same time this telegram was sent a very strong division of opinion had sprung up among the California fruit-growers in reference to the course to be pursued against these Australian importations. Mr. Koebele was reported to me by several writers as urging the abandonment of all spraying and fumigating for the protection of trees, so that the imported ladybirds might multiply, expressing the utmost confidence in the ultimate result of his advice. The State Board was reported to endorse this position. I could not fully endorse such advice when given by one who, as an agent of the Department, in a measure represented it.

A short time afterward, at a convention of fruit-growers held at San Jose on November 17, 1892, Mr. Koebele in a paper on the subject of the Australian parasites, is reported to have publicly urged this course and Mr. Cooper to have endorsed his views. The utterances of both these gentlemen on this subject were repudiated by the meeting and by resolution expunged from the records (*vide the Rural Californian* for December, 1892). An amplification of my telegram will be found in what is said by your predecessor, Secretary Rusk, in his report for 1892, page 36, where, after stating the facts and the opposing opinions of the two factions, it is declared that "wisdom dictates a middle course, such as a reservation or certain orchards for the uninterrupted experiment with the Australian introductions, while the ordinary insecticide means continue to be pushed for the protection of orchards generally."

This same question is still being agitated among practical fruit-growers and I have in every instance urged the importance of giving every encouragement to the ladybirds by the non-use of insecticides in specific orchards in which they have been colonized, so as to give them every opportunity to develop their fullest capacity for good and to demonstrate their possibilities and their usefulness, without obliging or requiring orchardists generally, where the insects have not yet been colonized, to jeopardize their crops for the coming year by inactivity and the cessation of all direct remedial measures.

Fourthly—Mr. Cooper charges the divisional agent, Mr. Coquillett, with being instrumental in publishing the third

exhibit which he encloses, namely, a detailed account of Mr. Koebele's expenses. Whether this is true or not, I have no means of knowing, but I do feel quite convinced that the general tone of the article and the editorial comments upon the expenditures never were inspired by Mr. Coquillett. I have viewed with extreme regret the various articles that have appeared in the California papers in reference to Mr. Koebele's expense account, and, though the Department had no control whatever over his expenditures, I have had no sympathy with the criticisms aimed at him, having the utmost confidence in his integrity. Nor can I believe, from my knowledge of Mr. Coquillett's character, that he employs his time in "mousing around to hunt up things to have published in order to defame the character of a brother officer."

Fifthly—Exhibit 4 calls for no especial comment from me, as it is composed of extracts from various newspapers put together on a sheet for wider distribution, in all probability by the State Board of Horticulture, although this fact does not appear. These newspaper articles for the most part assume the success of one of the introduced ladybirds, namely, *Orcus chalybeus*, in very much the same jubilant and boastful tone that has been assumed from the beginning, and are not at all in accordance with the more trustworthy reports of recent examinations which have been made by the two agents of the division, Messrs. Koebele and Coquillett, upon your instructions. These reports, now in hand and about to be printed, show conclusively that this particular ladybird is increasing only in that orchard in which Mr. Coquillett has colonized it, while Mr. Koebele admits from these last examinations that this particular *Orcus chalybeus* has proved practically a failure and a disappointment.

I may say the same of the other two articles, exhibits 5 and 6 which Mr. Cooper sends, viz., articles from the Los Angeles Herald of July 30 and 31, 1893. They call for little comment from me, as they are of a piece with the vast mass of such newspaper matter upon this subject which is on file in the division.

Finally, exhibit 7, a copy of Mr. Cooper's letter to Mr. Coquillett, refusing the latter admission to his ranch, which Mr. Coquillett had been instructed by this Department to examine, I cannot too severely condemn. It is a good illustration of the petty, narrow and unscientific attitude which the officers of the State Board, including its president, have exhibited in this whole matter—a position which is puerile, and which has not only done great injustice to this Department, to myself individually and to Mr. Coquillett, but has been the cause of the strong opposition to the State Board that has been manifested by a large part of the practical fruit-growers of southern California, an opposition which even threatens the existence of the Board, and which, though a necessary consequence of its own action, Mr. Cooper endeavors to ascribe to my instigation. Mr. Cooper's strong opposition to this division is doubtless caused by misunderstanding, begun and fostered by the action of the secretary of the Board of which he is president. Whether this surmise is true or not, he deserves just censure for the methods employed and the recklessness of his statements. To show how unwarranted are the charges, let me say that, notwithstanding all the provocation from the published statements and reflections of Mr. Lelong, which have been brought together for your inspection, and which are so numerous that it would be wearisome to refer to them in detail; and notwithstanding the open reflections and criticisms of myself and the department by Mr. Cooper in his last presidential address to the Board, I have studiously and purposely avoided publishing anything in retort. Outside of the official records in the bulletins and reports of the Department, which have been considerate statements of the facts without personality, I have written nothing for publication on this second mission to Australia; nor have I inspired anything for publication. In the way of official correspondence which might be looked upon as for publication, I have written nothing beyond the telegram to Mr. John Scott, already referred to, and a recent reply (within the past week) to a further inquiry from the same gentleman, calling for my views and advice on certain specific questions. Yet I have been repeatedly requested by reputable editors to make some statement of the position of the Department. Determined from the first to avoid a repetition of the controversy which grew out of the first mission, this has consistently been my course, though I felt sure from my knowledge of the men concerned that the arrangement entered into by your predecessor against my judgment, and that of his acting secretary, would result in just the kind of depreciation of the Department and attempted glorification of the State Board, which have, in fact, resulted.

It is to be regretted that the efforts of the Department to accomplish a great good for the people of California have been thus requited, and that the chief recompense to myself should be a persistent attempt on the part of Mr. Cooper and those associated with him, to secure my discharge as the entomologist of the Department. You know, Mr. Secretary, that my health has been such of late, that, because of the inevitable unpleasantnesses (of which this action of Mr. Cooper's is an example) attendant upon department life, I should be glad to lay down the responsibilities of my position, and that I have already expressed my desire, when circumstances will permit, to do so. When that time comes, I shall have the satisfaction of feeling that it will not be through any such efforts as those of Mr. Cooper, or of any others who choose, without cause, to malign, misrepresent and abuse me personally.

There is much in Mr. Cooper's communication which would justify further and more severe comment, but I refrain from making it, both because it is unnecessary and because my previous relations with Mr. Cooper have been pleasant both personally and by correspondence. I have, heretofore, never uttered, either privately or publicly, an unkind word in reference to him, and much regret the necessity of doing so, which he has now provoked. I have the honor to remain, sir, respectfully yours,

C. V. RILEY, Entomologist.

FRUIT MARKETING.

How They Handle Fruit at the Santa Clara Fruit Exchange.

As stated in last week's RURAL the members of the State Horticultural Society had at San Jose an object lesson of how fruit-producers can succeed in marketing their own fruit. The following account from the San Jose *Tree and Vine* gives an excellent idea of the operations of the enterprise:

Santa Clara County Fruit Exchange is a corporation working on the co-operative plan for the purpose of handling the dried fruit of its stockholders. Shares of stock are taken as nearly as possible in proportion to the acres of orchard owned by the subscriber. Stockholders receive interest at six per cent on all the money they pay in for stock as part of the expense of the exchange. Stockholders furnish their dried fruit to the exchange, where it is received and sold, five per cent commission being charged for the service, and nearly all the money received is at once paid to the owner of the fruit. In ordinary years the person depositing fruit can at once draw half or three-fourths the value, but this year has been an exception. At the end of the season any profit remaining beyond expenses is divided among those who have sold their fruit through the exchange in exact proportion to the value.

This is the way they handle prunes. The warehouse is situated on Sunol street, half a mile south of the narrow gauge depot, and it is a two-story brick structure, 200 feet long by 75 feet wide, having a platform on one side for the reception of fruit from wagons, and on the other for loading cars which can be run alongside.

The office is large, with desks, telephone, and all conveniences for doing business, and also hundreds of boxes containing samples of fruit, each box labeled with letters and figures such as W. C. 6, N. 4, H. H. 2, and so on, the meaning being well known to the men in charge.

Here comes Mr. Gilman's four-horse team. He hauls fruit for the Willow Glen Fruit Union, and has a heavy load of dried prunes in common orchard boxes. Some one gives the balance wheel of the gasoline engine a turn, moves the switch of the electric battery, and a clacking sound and a rumble of moving wheels announce that the elevator, and the grader on the floor above, are in motion. Off come the boxes, which are emptied into the elevator, which carries the fruit on its endless belt to the second floor and into the grader. Down a rather steep incline, over the screens, goes the fruit. Through the first screen drops every bit of straw, prune pit, leaf, or any other small foreign article smaller than a prune. Through the next screen go all the very smallest of the prunes, too to the pound and smaller. Through the next drop those ranging from 90 to 100 to make a pound, and so on down the scale, the very largest rolling over all the screens and into boxes at the extreme end of the grader. Soon the active young men appear at the grader and remove the prunes from the grader into boxes, each size by itself, and these boxes are piled up along a line marked on the floor with paint. Soon the word is passed that Mr. Gilman's load is through the machine, and then there is a rolling of trucks over the floor, and the boxes of graded prunes are loaded on and rolled to the big scales in the center of the room. A young man at the desk gets the weight, takes a scale pan and puts into it a few prunes taken at random from several of the boxes, till he has a pound. These he counts, and then the Willow Glen Fruit Union gets credit for so many pounds of prunes running 46 or 48 to the pound as the case may be. Then comes another truck, and the credit is given for a certain number of pounds of prunes at 60 to 70 to the pound, and so on till the whole load is credited.

Mr. Gilman is no sooner out of the way than a big load from Berryessa Fruit Union is going through the grader and being credited on the books, and after this comes a heavy load from the East-Side Association, another from Mr. Jones, another from Smith, Block, Carter, or any one of the stockholders who may be on hand with a load of prunes. As fast as the grades are weighed they are dumped into big bins along the side of the warehouse.

Here is a man stenciling sacks, here a gang of three filling and sewing them up; and downstairs, at a long table, are a dozen or twenty good-looking girls facing boxes—that is, laying an even layer of fruit in regular order in the bottom of neat boxes lined with white paper, and these boxes are then filled and heaped up till exactly 25 pounds of fruit have been placed in them, and then they are pressed down under a press till the cover can be nailed on. This cover is henceforth the bottom of the box, and the real cover when removed reveals the carefully placed layer put there by the girls.

Before prunes are boxed they are run through boiling water by means of an endless belt passing through a tank, placed in piles to cool, and are then soft and pliable enough to pack into the boxes.

Down a chute a lot of filled sacks are rapidly descending into an empty car, and a locomotive is pulling out a half-dozen loaded ones to the main track to make a part of the evening train.

Not only is one grader thus kept busy, but two of the largest size Hamilton graders are running most of the time from morning till night disposing of the fruit as it is brought in.

And the fruit is not all prunes. Here comes a load of dried apricots. These are inspected, classed, weighed and stowed away in the proper bins. Here is a load of dried peaches, and they are disposed of in the same way. Here comes a grower with 15 boxes of prunes, 4 boxes of pitted plums, 6 boxes of beautiful white nectarines, and a dozen boxes of great, fat, white Silver prunes, besides half a dozen boxes of dried pears. He gets credit for the various items of his load, and the various fruits go to their proper places.

Out in the office we find Col. Philo Hersey, the presi-

dent, receiving telegrams, answering telephone calls, sending out messages for cars, answering in the calmest manner the rather excited questions of some stockholder who didn't understand, standing off some non-stockholder who would like to put in his fruit without the formality of becoming a member, and a thousand and one things that come up. The Colonel has a cool, clear head, and manages the business so that it runs without a jar.

Orders come in for all sorts of quantities of fruit. One house wants a carload of assorted fruit; another wants ten cars of prunes in equal quantities of the "four sizes," which is understood to mean the sizes 60-70, 70-80, 80-90, 90-100. Those smaller than 100's and larger than 60's are special sizes. Prunes rating 40 to the pound are very large.

It is impossible, as we write, to tell the amount of business the Exchange will do in this first year of its operation. It seems pretty sure that half a million dollars' worth of fruit will pass its doors, and it may reach half as much more. It is plain that its big building is only half large enough for the business required. It has kept prices steady. Every Wednesday morning a bulletin has been issued, giving the condition of the market with good advice to growers. These bulletins have been accepted as the best and most reliable reports in the State. In the midst of a financial crisis the Exchange has held prices firm. The brand upon its sacks and boxes is a guaranty of quality, and the stockholders have been relieved of the worry and vexation of selling their own crop.

The large warehouse of the Campbell Fruit Association, being on the railroad, is used also as an Exchange warehouse, and fruit is shipped from this direct, being graded and assorted in the same manner as at the main warehouse at San Jose.

THE DAIRY.

The World's Fair Thirty-Day Butter Test.

The tabulation of the records of the dairy tests at the World's Fair is slow work. Hoard's *Dairyman* gives the results of the 30-day test as follows:

This was the special butter test. It was the only one of the four tests that can claim to have been conducted upon anything like the conditions the dairymen meet with in their regular work. Nothing but the butter produced was considered in making the awards. The food was charged to the animal and the butter credited, the difference between the two being the *net profit*. The only condition which would not be considered in accord with those usually met with by the dairymen was the price of butter. This was fixed at 45 cents, or more, a pound, according to the scoring. This is more than the dairymen gets in the open market. No gain or loss in live weight was taken into consideration in this test. The summary of the work by the herds is as follows:

	Jersey.	Guernsey.	Shorthorn.
Pounds of milk.....	13,921.90	13,518.40	15,618.30
Pounds of butter.....	837.21	724.17	662.66
Value of butter.....	\$385.59	\$329.77	\$303.69
Cost of food.....	111.24	92.77	104.55
Net profit.....	274.35	237.00	199.14
Cost of butter per pound.....	.133	.128	.158
Profit on butter per pound.....	.328	.327	.301
Average price at which butter was credited.....	.461	.455	.459

The best breed was counted the Jersey and the best cow was also a Jersey. The correspondent of the *Dairyman* comments as follows: There are representatives of the three breeds among the best five animals. However, if the price of butter was 25 or 28 cents—what the open market would probably return—the Shorthorn drops materially, bearing out the general impression of the special-purpose animal which exists among the most progressive dairymen.

In cost per pound of butter, it will be seen that the Guernseys and Jerseys produced butter at much lower cost than the Shorthorn, and that the Guernseys produced butter at a slightly less cost than the Jerseys. In profit per pound of butter produced the Jerseys and Guernseys exceed the Shorthorn.

One most striking lesson comes from the summer's work, and that is the important part the *individuality* of the cow plays in her *profitable production of dairy products*. Here all breeds had representatives among the best cows, showing that a *good dairy cow is a good dairy cow*, leaving the question of breed to the fancy of the owner. The Jerseys, by virtue of more money to work with, more animals to select from, and animals that have been bred and handled for great performances, were enabled to gather a herd better in the aggregate than the other two breeds which were represented in the test.

The Management of a Creamery.

Mr. W. R. Leighton, an experienced butter-maker of Iowa, has contributed an interesting article to the *Dairy Journal* on the methods he pursues in keeping his creamery in good order. He says: To begin with, I shall start from the time I go into the creamery in the morning. The first thing that comes to my mind is to see if there is plenty of water in the boiler and to start the fire. All places liable to get clogged by limy water should be noticed as to good shape; the flues, if burning soft coal, should be cleaned before starting the day's work or after finishing in the afternoon. I make a practice of blowing and cleaning out the boiler every two weeks. Never use anything in your boiler of powerful strength to clean it. Potatoes or rice are my favorite articles for keeping a boiler clean and free from scales—about half a bushel of potatoes or one pound of rice to every ten-horse power boiler.

The next piece of machinery in importance in the creamery is the engine. This is a piece of machinery that requires a great deal of care to keep in good running order. The boxes should be kept as tight as possible without

heating. A great many times an engine pounds because the piston and eccentric packing is burnt and all dried out, which makes them bind. The engine should be wiped off every day after its work is done, and never be afraid of using plenty of oil while running, especially in the cylinder, as oil is one of the cheapest things used in a creamery if properly used. In cleaning an engine rub off the worst part of the dirt and then saturate some waste with kerosene oil and apply to all parts of the engine.

The governor belt should always be kept dry and tight, so as not to allow any slipping, as it affects the motion. Loose belts are a loss in fuel. In short, all shafting should be oiled frequently and kept in line with engine. Next in line of creamery machinery, and probably the piece that requires the most care, is the separator. If a belt machine, everything wants to be in line with the machine, as this is the starting point. The separator should be leveled up once a week with a good true level. In putting on a new rope, never use the tightener, as some people call it. It is not for the purpose of tightening the rope; it is simply to steady it and keep it from jumping around. The ropes are made an exact length and the intermediate shaft must be the right distance from the separator.

Always keep good watch of the speed, as improper speed causes a loss to your factory one way or the other—in the loss of butter-fat or the extra amount of fuel used. If a turbine machine, that is what I am using at present, and find that the speed has to be watched very close and plenty of oil used so as to keep the travelers from wearing out. As soon as the separator begins to tremble it is out of balance, or requires a new rubber ring in the upper bearing. In washing the separators you must exert all care possible, so as not to spring the spindle. Never use water in washing off the frame of your separator, as it injures the paint, while kerosene oil will keep the paint in a smooth condition and bright.

The scales that you weigh milk on should be kept in good condition, well balanced and oiled with kerosene oil. A little more in regard to washing separators. I use the Alpha machine, and have not had the tins apart for four months, and they are as clean and bright as the day they were first started. The way we clean them is to put first in warm water, not hot, and stand 20 minutes or more, and then give them a thorough steaming.

WORLD'S FAIR.

A Horticultural Postscript.

TO THE EDITOR:—Horticulture has received an impetus at the World's Fair at Chicago that will for a long time be felt in many portions of this and other lands. It has been well for this important industry, which has attained such large proportions and to which so much careful investigation, hard work and earnest, thoughtful study and research have been given, that the directors of the fair gave such prominence to its representation. Here have gathered well-known representatives of horticulture from all sections of our own land, European countries, far-away Japan and elsewhere, exhibiting different products, installing fruit trees of many varieties, comparing notes, and all have been mutually benefited. They will return to their homes to help others. No such an opportunity for horticulturists of all lands to meet in consultation, in groups or in convention, has ever before presented itself. Realizing the importance of obtaining all the information possible, the representatives of this and of other countries have organized a World's Horticultural Society, which promises to add much to the knowledge and the profit of its members.

The true horticulturist is ever on the qui vive for more knowledge and greater light. He is willing and anxious to seize hold of anything that shall make him more efficient in his chosen avocation. His motto is, or should be, "Progress." He should also feel the force of the axiom: "Thy light burns none the less brighter for lighting another's candle." There is too much selfishness on the part of many horticulturists.

What concerns California horticulturists mostly, as to the benefits derived from this representation here, is the profit accruing to the State in particular, rather than to the world at large. That we, with many other fruit-growers, will be benefited at the present time and in the years to come from the holding of this the grandest of all expositions is beyond doubt.

Probably the horticulturists of other States will learn more from us in the matter of the cultivation of fine varieties of fruit than we shall from them. Many persons having seen our fruit, either fresh on the tables, or in jars in solution, have been impressed with its beauty and size, and have decided to obtain trees in quantities from our California nurserymen. If these men are wise they will follow up the advantage gained; yet it is well known to every California fruit-grower that varieties which grow to perfection in our State will not attain so great excellence in the States to the east and northeast. The fact has been made more apparent than ever, by the exhibition of fruits from many States of the Union in the large Horticultural building, that California is pre-eminently the fruit State of America.

At the World's Fair we have a very poor showing of apples—none, in fact, worthy of the name. Although the exhibit of other fruits might be far better than it is, it surpasses that of other States. This applies to deciduous fruits. As to the display of citrus fruits, it has been very fine from first to last. Great credit is due the southern counties of our State for the very large interest they have manifested in this matter. Our only competitor in these fruits, Florida, made a very poor showing.

Very many of our horticulturists have failed to take the interest they should in the display of fruits here, probably because they did not appreciate the benefits accruing from aiding this vast exposition. If California has done very

well, we might have done far better. Much merited praise has been bestowed upon our horticultural display by people from all lands. "Yours must certainly be a remarkable State to send such a display here," is an oft-heard expression. More than ever are Californians now here convinced of the wonderful adaptability of their State for producing fruit of all varieties, as they have compared our product with that of other States. Fruit-producing localities in many States, we are told by their exhibitors here, are isolated, not general. We know that throughout our State excellent fruit can be grown, as witnessed by the unsurpassed citrus fruits here on exhibition from southern California and Butte county; very large and fine peaches from Kern county and equally as good ones from Placer county, and so with other fruits, nuts and olives. There is a bright future for the olive-culture industry—a very large market to supply—for our good friends in this part of the country know little or nothing of the taste of pure olive oil. As the knowledge of the wonderful capacity of every part of our State to produce fine fruits redounds to our benefit, young horticulturists will locate with us and older ones as well.

Two orange and as many lemon groves are in flourishing condition on the grounds of the World's Fair, also a number of palms and deciduous trees. These attract much attention. Our method of pruning is contrasted with that generally practiced in States east of California, and is often favorably commented upon. The fact is, many of our horticulturists are wide awake on all points relating to their chosen occupation, and outsiders are profiting by the progress we make. We are watched, and our doings along horticultural lines are copied far more than many of us are aware.

Another advantage we of California have over fruit-growers in these States of the East is reliable crops of fruit of various kinds. In Illinois and neighboring States, and as far south as Ohio and Kentucky, fruit is scarce this year, owing to various causes. The fruit crop of last year was also very unsatisfactory. Small fruits, here, of all kinds became shriveled this season, by reason of severe and protracted drouth. Apples and other fruits were blasted by frosts and sleet in months gone by. It is almost impossible to raise plums of any variety, in quantity, as far east as Illinois, by reason of black knot and curculio, both of which pests we in California are happily free from. Repeated efforts on the part of fruit-growers, in a vast portion of what we call the East, have so often failed that now, so many inform the writer, they have given up, discouraged. Eminent horticulturists think the curculio will never gain a foothold in California, owing to our peculiar climate.

Plums from our State sell readily in Chicago, if they are carefully shipped. They are to be seen here in the markets, almost to the exclusion of those of other States. To sell at highest figures they should be of good size, highly colored, well packed. Good-sized Satsumas, Eggs, Columbias, highly colored Gros prunes, Kelsey Japan (don't ship them green—i. e., without color) and other varieties find ready sales. What would Chicago and the city's guests do this season if California stopped her supplies of fruit? Between 20 and 30 carloads of our fruit are sold at auction here every morning.

Early in the season grapes arrived in this city from Texas, but the supply was limited. Later on, Georgia forwarded supplies of early fruits. These and States near them would be formidable competitors for this Eastern fruit trade if there was more push and enterprise on the part of Southern fruit-growers. Georgia has extensive tracts, so we are informed, very well adapted for fruit-growing. But there is little disposition to plant extensively. There are yet too many "crackers" in Florida and too many "poor whites" in Georgia for those States to make much of a showing horticulturally.

With the knowledge we of California have gained by repeated experiment and earnest, thoughtful study and observation, with co-operation along certain lines that characterizes, or should characterize, our horticulturists; with the determination to forge ahead, "to get there" to use a slang phrase, we must and will succeed. This World's Fair is causing us—our fruits, fresh, dried, canned—to be better known all over the world than ever before. The market for all must constantly enlarge. If we pursue our business in a business-like way—not adopting the rule that is so often quoted here, "Do others or they will do you"—endeavoring always to keep abreast of the times, our efforts will be crowned with success. The future of horticulture in California is bright when, as here at the World's Fair, it is contrasted with that of other States and lands. Careful to plant the best varieties of fruits; careful to cultivate well the soil; careful to market properly; careful to so deal with others, be they customers near at hand or far away, as to retain their patronage, we shall ever be in the van of American horticulturists. SOJOURNER AT THE FAIR.

Sheep at the World's Fair.

The Columbian show of sheep measures fully up to the fondest hopes of all who were interested in its complete success. In the variety of types to be seen in the pens and in the manner in which the sheep are brought out, as well as in the number and quality of the entries, it easily ranks as the greatest exhibit of the kind yet held in the United States.

Time was when the fine wools practically monopolized the attention of our flock-masters, and the achievements of American breeders in the development of wonderful fleeces of the Merino type afford ample proof of the fact that in sheep-breeding, as in all other branches of live-stock husbandry, our people are able to hold their own in competition with the world. In reclaiming such vast areas of agricultural lands from a state of nature and in combating the existence of a capricious climate the Merino has been "the one thing needful" so far as sheep-breeding in the States was concerned. Hardy and easily handled in large

flocks, so long as wool commanded a high price they filled a place in our agriculture which no other sheep could fill. With the great decline in the value of the fleece experienced in recent years, and with the increase in the demand for mutton, farmers residing in localities where feed is abundant and where proper shelter is available have gradually acquired an increasing fondness for the types of sheep which are products of the "intensive" system of farming existing in Great Britain; and hence during the past decade we have drawn heavily upon British flocks—the Down breeds in particular coming in for keen demand from the large number of Western farmers who have felt impelled to make the change from mere wool to mutton-with-wool.

Under these circumstances it is not surprising to find that while in our Merino and Delaine sheep we have practically no competition at the World's Fair, the lion's share of the honors among the long wools and middle wools has fallen, or will fall, to sheep of immediate descent or importation from leading British flocks. In these classes it has simply been a contest between American and Canadian importers; and it can fairly be said that in the classes for Shropshires, Southdowns, Oxfords, Dorsets, Cheviots, Lincolns, Cotswolds and Leicesters no such displays have ever been seen in the West. Indeed, this is really the first time some of these breeds have ever been adequately presented to the American public. Another notable feature of the show is the exhibit of French (Rambouillet) Merinos from the famous flock of Baron F. von Homeyer of Pomerania, Prussia. These sheep are almost a revelation to American Merino breeders; their great weight and the length of staple and fineness of wool shown by their magnificent fleeces demonstrating that the meat-making capacity of the American Merino could be vastly improved without losing the distinguishing characteristics of the fleece.—Breeder's Gazette.

The Honey Exhibit at the World's Fair.

Every person who is in the least interested in bee-keeping and attends the great fair should not fail to see the honey exhibit. Several of the States are represented, and it is difficult to tell which has the finest display. A. I. Root, the largest manufacturer of bee supplies in the world, has a well-arranged exhibit of all the fixtures that are of any value in bee-keeping. Any one, with one of his catalogues to refer to, can learn the names of all the different things and what they are used for, and thus gain considerable knowledge of modern bee-keeping. He also has a nice display of honey, beeswax and foundation. C. P. Dadant, of foundation fame, has a nice display of wax and foundation; also honey and honey cakes. An observatory bee-hive is the first thing that meets the eye of the visitor in this exhibit. It attracts considerable attention, as almost every one is interested in bees when they can see them and see how they are handled. A very pretty wax house adorns the front end of the case. This is the finest display of foundation and wax-work on exhibition.

California, the banner honey-producing State, has a fine display of sage honey, both comb and extracted. It is fully equal in appearance to white clover honey, being very white and clear. Ohio, Michigan, Minnesota and New York have each of them a nice display of honey.

In the New York exhibit there are six hives of bees, which gathered over 250 pounds of honey since being placed in the building last June. This is an excellent showing, since they were compelled to travel a long distance out of the city to find pasturage.

Ontario has a fine display of linden or basswood honey, both comb and extracted, and nearly equal in appearance to any on exhibition. One bee man has on exhibition a patent hive which attracts considerable attention. I do not like it because it has too many hinges, doors, clasps and other fixtures about it, too many places for the bees to deposit glue, which will make the different parts come apart with a jar and thus excite the bees. Bee-keepers want a hive that is constructed on the simplest plan possible—one that has the fewest parts and the least material to handle, and one whose parts are easily transferred from one hive to another.

The Simplicity, Langstroth and Gallup hives have the principles of perfection almost, and are the best and most popular hives in existence.—E. S. Mead, in Ohio Farmer.

A Late Yellow Clingstone.

TO THE EDITOR:—I send you by this mail samples of a new Los Angeles seedling peach, which ripens four to six weeks later than Salway in the same locality. Its lateness, coupled with excellent quality, I think make it valuable and worthy of extensive planting. Would like your opinion of it. The smallest of the samples has been off the tree ten days. We kept some of them last year three weeks. The tree is a good grower and a very heavy bearer. This is its third crop. It holds its leaves as green into November as in midsummer. It is growing thick among other trees and vines in a back yard where it came up, and without the care and cultivation it would have in orchard. Will probably name it "Wright's November."

Los Angeles, Nov. 1st.

A. W. EAMES.

[This is a handsome yellow peach of good size, globular form, flesh firm and of fine texture, juicy and of good flavor for a late fruit. It is a cling, but not very tenaciously adherent to the pit, which is rather small. There is but slight color at the pit—probably not enough to make it objectionable in canning. The condition of the longest picked specimen, and its receipt in perfect condition by mail, show that the fruit has notable keeping quality. For a showy fruit for very late shipping, the variety seems to possess many good points.—ED.]

THE HOME CIRCLE.

The Happy Household.

It's when the birds go piping and the daylight slowly breaks,
That, clamoring for his dinner, our precious baby wakes;
Then it's sleep no more for baby and it's sleep no more for me,
For, when he wants his dinner, why, it's dinner it must be!
And of that lacteal fluid he partakes with great ado,
While gran'ma laughs,
And gran'pa laughs,
And wife, she laughs,
And I—well, I laugh too.

You'd think to see us carrying on about that little lad,
That like as not, that baby was the first we'd ever had;
But, sakes alive! he isn't, yet we people make a fuss
As if the only baby in the world had come to us!
And morning, noon and night time, whatever he may do,

Gran'ma, she laughs,
Gran'pa, he laughs,
Wife, she laughs,
And I, of course, laugh too!

But once—a likely spell ago—when that poor little chick
From teething or from some such ill of infancy fell sick,
You wouldn't know us people as the same that went about
A-feeling good all over, just to hear him crow and shout!

And, though the doctor poohed our fears and said he'd pull him through,
Old gran'ma cried,
And gran'pa cried,
And wife, she cried,
And I—yes, I cried, too!

It makes us all feel good to have a baby on the place
With his everlasting crowing and his dimpling, dumpling face;
The patter of his pinky feet makes music everywhere,
And when he shakes those fists of his, good-by to every care!

No matter what our trouble is, when he begins to coo,
Old gran'ma laughs,
And gran'pa laughs,
Wife, she laughs,
And I—you bet, laugh too.

—Eugene Field.

A Dream.

I had last night a wonderful dream—
The world was built on a brand new scheme,
For men were deaf and women were mute,
And the whole arrangement was very cute.
My creditors came some twenty-three,
And opened their vials of wrath on me;
But I peacefully sat and smoked and read,
For I heard not their coming nor what they said.
Of my good wife, too, I had now no fear,
For she couldn't scold and I couldn't hear;
And though wild was her rage, by my folly provoked,
Yet I peacefully sat and read and smoked,
For I was deaf and my wife was mute,
And the whole arrangement was very cute.
Yes, the world was built on a brand new scheme,
And it's such a pity it was a dream.

—Win. Packard in St. Botolph.

A Whistling Girl.

THE village of Gimptown was old-fashioned and full of old-fashioned people, not one of whom pretended to deny that Mellie Rose was the prettiest, liveliest girl in the place. Now, although Gimptown folk had reluctantly succumbed to the inroads of progress inasmuch that they admitted there were no witches, they still clung persistently to wise old saws. Why not call them the worn-out saws and relegate them to the rubbish heap of other bygone misconceptions?

Thus it happened that while other girls were "spoke for" as soon as they came of age, sweet Mellie Rose wasted her sweetness upon transient lovers.

Joshua Jones, the most appreciative of these, had remarked to his mother: "Now, mammy, I don't believe there's a thing wrong with Mellie. I like her mighty well."

"Gracious, Josh!" said she, holding up her hands in horror. "If you're a-gettin' stuck on that gal, you had just better get over it as quick as possible. My grief! A whistling gal in the Jones family! Ugh!"

So honest Josh put aside his sentiment by muttering: "Yes, I suppose 'whistling gals and crowing hens' is as true to-day as it ever was."

Josh was right. This old saw is just as true to-day as it was when the Innatic of long ago manufactured it. Accordingly, he married a "good housekeeper," who never whistled, and Millie seemed destined to be an old maid.

In Gimptown a girl became an old maid if she was not "keeping regular company" by the time she was twenty-one.

"I can't see why Mell can't be like other girls," said her Aunt Dorothy, who didn't

believe in old maids. "Can't you stop this whistling, Mellie?" she asked her one day.

"I'll try, auntie," replied the innocent girl.

So for a week or so she went about looking as demure as possible, but it was uphill work.

"Got a new minister. They say he's a young man. I'll invite him. No telling he might—but no, of course not! Well, I'll invite him anyhow," said Aunt Dorothy.

A week or two after this she was busy herself making the little parlor look tidy, when a knock sounded on the door. She ushered in a fine-looking young man with a decided clerical air, but pleasant and kindly withal.

The pastor and his hostess were soon talking quietly on parish matters. In the next room there was a rattle as of some one washing dishes.

"I'll call Mellie as soon as she finishes her work," Aunt Dorothy was saying, when horrors! there arose in that young lady's clear, piccololike whistle the familiar notes of "Old Hundred." Poor Mellie had kept her mouth in its normal position for two whole weeks, but now, to the tune of rattling crockery, the notes rose and fell with startling distinctness.

Aunt Dorothy turned red and then white, fidgeted about, and finally, when the assortment of noises stopped, went into the kitchen, saying as she went, "Excuse me, Mr. Haviland, and I'll tell Mellie to come in."

With blood-curdling coolness she said to her niece: "The new minister is here. Come in and be introduced." That was what her mouth uttered, but her eyes said: "Now you've done it with that whistle of yours. Let's see how you'll get out of it."

Mellie followed the irate lady.

"Mr. Haviland, my niece, Miss Rose." One would have supposed that a real rose could not be much redder; but when Mr. Haviland said in an amused tone, "Your brother is a fine whistler," then one knew that Mellie's first blush was a mere tinge of color.

"I—I have no brother," she replied honestly, so the evidently painful subject was dropped.

"A remarkably fine young lady," thought the young minister as he was returning to his boarding place, "and evidently as innocent as her name. It's so dull here. I really must cultivate her acquaintance."

So the fleeting summer days found the Rev. Mr. Haviland often at Aunt Dorothy's house or in Mellie's company wandering upon the rocky banks of the river.

To the young lady these bits of sunshine in her life were snatches from dreamland. To hear the educated young man discourse upon the people and things of the big, big world was so different from the humdrum talk and gossip of Gimptown.

Her aunt thought: "Fancy! I do believe the parson's a-gettin' interested in Mell. Now, if she'll only keep that whistle o' her's quiet who knows?—something may come of it!"

Gimptown in general said that it was almost scandalous that so fine a young man should be "took in" by a pretty face, when every one knew that face was disfigured by a whistling mouth.

Miss Smith, whose age was an unknown quantity between 20 and 40, and who had set her cap so often that that article was badly frayed around its figurative edges, said, "No, he shan't be bamboozled, not if I have to warn him myself!"

And it is on record that she did warn the daring man.

In spite of all this opposing element in his flock, Mr. Haviland could not help thinking how dull life would be without a certain flower whose perfume he alone seemed to have discovered.

One bright September day he walked over to Aunt Dorothy's little cottage, intending to invite Mellie to accompany him on an errand of mercy. As he reached the gate he stopped a moment. The front door was wide open. Mellie, dressed in pink calico, with a cap of the same material only partly concealing her fluffy brown hair, was busily engaged with broom and duster in the hall. There was a happy look upon her innocent face. When, as if birdlike, she could not restrain her joy, the ruby lips puckered bewitchingly, and the notes of a hymn trilled forth with startling clearness and truth.

Suddenly the unconscious warbler was electrified into silence by the sharp words, "Perfectly shocking, isn't it?"

Glancing up, she saw Aunt Dorothy standing with watering can in hand as if preparing to water her own feet, which seemed rooted to the ground.

She was staring at Mr. Haviland, who leaned upon the gate with a puzzled expression upon his face.

Not wanting to hear his answer Mellie fled to her room, where she indulged in that

which seldom spoiled her happy face—a good "cry." For she doubted not that she had forfeited her place in the minister's esteem.

She was not surprised, then, when Aunt Dorothy met her with: "Now you have done it! My goodness. I don't know what to do with you! You're enough to try a saint's patience!"

But Mellie was surprised when her aunt handed her a note from Mr. Haviland containing his request to accompany him to the house of some poor people who lived several miles away.

"Shall I go?" she asked her aunt.

"Of course. No use making matters worse by refusing."

So Mellie said she would accompany the minister, though her sensitive nature rebelled against the trial.

After packing a basket of food for the poor people, Mellie waited in nervous anxiety for her escort. When he arrived, she quietly allowed him to assist her into the trap, where she sat almost dumb, a pained expression upon her face.

"What is the matter with you to-day?" asked the minister as they trundled through the green fields.

Mellie trembled at his kindly tones, but she would not be drawn into conversation until—

But there, no matter! What right have we to intrude? Suffice it to say that the next day Mr. Haviland asked Aunt Dorothy for Mellie's hand.

That worthy dame could not help saying, "But, Mr. Haviland, she is a whistling girl, and you know—"

"There, there, don't say a word against the future mistress of the parsonage!" he interrupted.

And so, amid shocked Gimptown's surprised talk, the doomed old maid of 20 winters was converted into a happy bride of 20 summers.

Rumor has it that Miss Smith is practicing the much abused art of whistling. But heartless rumor also says that she whistles in vain.

Girls in Business.

But, girls, if you don't mean to make a thorough business of the occupation you have chosen, never, never, never begin to be occupied at all. Half-finished work will do for amateurs. It will never answer for professionals. The bracket you are sawing for a New Year's present can hang a little crooked on its screws, and you will be forgiven for the love's sake found therein by the dear hearts to which you offer it; but the trinket carved for sale in the Sorrento rooms must be cut as true as a rose leaf. You can be a little shaky as to your German declensions in the Schiller Club, which you join so enthusiastically after leaving school, and no great harm ever come of it; but teach Schiller for a living, and for each dative case forgotten you are so much money out of pocket.

People who pay for a thing demand thorough workmanship or none. To offer incomplete work for complete market price is to be either a cheat or a beggar. The terrible grinding laws of supply and demand, pay and receive, give and get, give no quarter to shilly-shally labor. The excellence of your intentions is nothing to the point. The stress of your poverty has not the slightest connection with the case. An editor will never pay you for your poem because you wish to help your mother. No customer will buy her best bonnet or her wheat flour of you because you are unable to pay your rent. When you have entered the world of trade, you have entered a world where tenderness and charity and personal interest are foreign relations. Not "for friendship's sake," nor "for pity's sake," nor "for chivalry's sake," runs the great rallying cry of this great world—but only "for value received."

It is with sorrow and shame, but yet with hope and courage, that I write it—there is reason for the extensive complaint made by men that women do not work thoroughly.

I am afraid that, till time and trouble shall have taught them better, they will not. Is it because they never have been trained? Is it because they expect to be married? That it is not in the least because they cannot, we know; for we know that some of the most magnificently accurate work in the world has been done by women.—Elizabeth Stuart Phelps in St. Nicholas.

It Is Well to Remember

That flannels should always be washed by themselves in a suds prepared for them; on no account be rubbed on the board unless very dirty.

That the suds should be pleasantly warm to the hand, not too hot, and no hot or cold water be added while the flannels are in the tub.

That they should be rinsed in clean water of the same temperature as the washing suds, and as many waters used as may be necessary to take all the soap out, as the flannels will never be soft with the soap left in them.

That they should never be blued.

That they should be pulled in shape before hanging; undershirts being hung from the shoulders.

That they should never be hung out of doors in freezing weather, but quickly dried before the fire, or, better, over the register, and pressed as soon as dry enough.

That black woolen and cotton hose should be washed by themselves (so as not to get lint on them), pulled in shape, hung on the line from the toes, as then the drip will go down, instead of remaining in the toes and shrinking them.—Good House-keeping.

Benefits of Reading.

The English *Agricultural Gazette* says: Let people say what they will, agricultural publications will have a great deal more to do with a farmer's success in the future than they have ever had in the past. We do not in the least deny, for we have for years insisted upon it, that to have had actual experience upon the land and with animals and markets is absolutely indispensable, not only for those who are to conduct a farm successfully, but for those who would contribute to a paper what is intended for that class. There is no substitute for the genuine knowledge which practice supplies. But there are a good many very serviceable supplements to this knowledge. There are a good many useful hints as to the extension and limitations of home-grown ideas to be picked up by an intelligent visitor to another district in which different practices prevail, or to a show-yard in which the newest forms of live-stock and implements are to be examined; and careful study of a really good farming periodical is to the full as beneficial as travel and sight-seeing.

Carrying Power of the Voice.

The parts in speech of a common conversation may be distinguished at a distance of 460 feet, even when the air is perfectly calm, says the *St. Louis Republic*. A powerful human voice speaking in an observable breeze is audible, but not distinguishable as to parts at a distance of 15,840 feet, with the wind. The sound of a strong brass band cannot be heard at a greater distance, and the report of a musket is scarcely perceptible at a distance of over 20,000 feet. In the Arctic regions, when the spirit thermometer marks 40 or more degrees below zero (Fahrenheit), a common conversation may be carried on by persons separated from each other by upward of 7000 feet. Heavy cannonading in this latitude may be heard 90 miles.

A Cunning Toad.

A scientific journal tells this story of a toad's cunning: A brood of chickens was fed with moistened meal in saucers, and when the dough soured a little it attracted large numbers of flies. An observant toad had evidently noticed this, and every day toward evening he would make his appear-

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder
ABSOLUTELY PURE

ance in the yard, hop to a saucer, climb in, and roll over and over until he was covered with meal, having done which he awaited developments. The flies, enticed by the smell, soon swarmed around the scheming batrachian, and whenever one passed within two inches or so of his nose, his tongue darted out and the fly disappeared. The plan worked so well that the toad made a regular business of it.

Useful Articles.

It is the little adornments of a house that give it a homelike appearance, though one should not be so wedded to those that have gone out of date or become soiled as to be unwilling to give them up for those of more recent date.

WORK-BASKET.—A dainty work-basket is always attractive. The one we give, lined with silk and trimmed with ribbons, and hung in a tripod of bamboo canes, is particularly pretty. It is only to contain the dainty work reserved for evening or when some one drops in.

SLIPPER CHAIR.—A chair you do not care much for can be utilized for this; draped and painted, with a cover to fit the seat, it answers the double purpose of a seat and a receptacle for shoes.

FLOWER TABLE.—This table has the center cut out, so as to sink the flower receptacle below the surface of the table. It can be made a thing of beauty. I had more satisfaction out of one very large, fine-leaved begonia last winter than out of a whole standful of inferior plants. It made an enormous growth and retained all its leaves through the entire season. I rested it this summer, and it will spring into new beauty this winter. A few well developed plants are better than a lot of scraggly ones.

LETTER CASE.—This is made of glass, upon which you can paint a spray of flowers if you choose. It is incased in ribbons and suspended by them. It is a very lovely adjunct to a young girl's room.

NAPKIN HOLDER.—This is a great convenience for children. Crotchet in silk around the brass rings, and run rubber the color of the silk through them, and attach clasps at the ends. These would make very attractive Christmas presents for several little children.

CROTCHETED EDGE.—A few yards of this to some one who does not do the work, would be very acceptable. Fancy braid is used in part of its construction.

LINEN WORK.—To those who are taking this up new, let me say, do not waste your silks and time on the common cotton pieces offered for sale, but get the best of linen, as they last so long, if done upon good material, and you feel that your work has paid. Large patterns are very effective and less work, and the small patterns need to be done with a very exquisite touch to have them look well. Do not attempt too elaborate patterns at first. It would be nice work for a little girls' club, and then about Christmas you could have a sale, if you did not care to keep them.

CHRISTIE IRVING.

About Women.

The deepest tenderness a woman can show to a man is to help him to do his duty.—Mulock.

A great many men's ideas of domestic economy consist in cutting down house expenses and smoking 25-cent cigars.

How the bicycle interest has spread among women is evidenced by a recent announcement in the advertisement of a Brooklyn dry-goods firm, that a rack is provided for bicycles and "wheels may be checked while ladies make their purchases."

The brainy woman, unless she be womanly, is really more undesirable than the silly, pretty doll; but if there could be commingled in one person a desire for both mental and physical perfection, there would be many more charming women in the world than there are to-day.

Men knock each other down and call each other names in many of the big New York clubs from time to time, but it is kept quiet; but just as soon as a feminine hair-pulling match is under way, "time" is called so that the whole world may hear it, and the sickening details of each round become town tattle in a day.

The Art of Not Hearing.

A kind of discreet deafness saves one from many insults and much blame, therefore the art of not hearing should be learned by all. It is quite as important to domestic happiness as a cultivated ear, for which so much money and time are expended. There are so many things which it is painful to hear, many which we ought not to hear, very many which if heard, would disturb the

temper, corrupt simplicity and modesty, detract from contentment and happiness, that everyone should be educated to take in or shut out sounds, according to his pleasure. If a hot and restless friend begins to inflame our feelings, we should consider what mischief those fiery sparks may do in our magazine below, where our temper is kept, and instantly close the door. It has been remarked that if all the petty things said of one by heedless or ill-natured idlers were to be brought home to him, he would become a mere walking pincushion stuck full of sharp remarks.

YOUNG FOLKS' COLUMN.

Other Homes Than Ours.

"Why, Dorothy, what's the matter? why this exceeding tearfulness?" and Tom caught up his little sister and gave her a resounding kiss.

"But, Tom, it really is horrid! Mollie and I were going to finish our playhouse in the garden to-day, and grandpa has just gone out in the carriage, and it's too far to walk, and so I can't go."

"Well, that is pretty bad; but can't you go to-morrow?"

"Perhaps; but I don't want to wait, and it's sure to rain!"

"Suppose," said Tom, "that you come with me this afternoon, and see the houses some friends of mine are making?"

"Oh, lovely!" exclaimed Dollie, and she ran for her hat.

"Are they great boys like you, and will they want me, and are they building the houses out of wood, or are they tents, or what?"

"One question at a time," laughed Tom. "No, they are not boys; a gentleman and lady live in the first house, and they have very peculiar manners. He sings all day long, 'Come, come, come, you'll be welcome,' and once, when I accepted his invitation, his wife went straight away."

"How very rude of her!" exclaimed Dollie. Tom went on: "Their house is peculiar, too. It is built on the ground, with a gypsy tent made of sticks over it. Quietly now, we're almost there! Now look down."

"Oh, Tom, it's a nest!" whispered Dollie, in rather a frightened tone, as a song sparrow flew almost in her face; "and there are four such cunning speckled eggs in it. May I touch them?"

"I think not; you might break them. Now shall we go on to the next? That is in the old orchard, and we can see My Lady Bluebird without her seeing us. Can you climb up into this apple tree? There, now look down into the hole in the trunk of the next tree. You see My Lord and Lady were too aristocratic to set to work and build a house like ordinary birds, so they took the hole that the woodpecker had last year, and made it comfortable with some grass; and now, with their walls all around them, they feel just as if they were in an ancestral castle."

"But I can't see the eggs," whispered Dollie. "Are they spotted, too?"

"No, pale blue, almost white. Now come to the next tree, and see Mistress Wren. She is a sociable little creature, and may have gone to visit her neighbors. Yes, we can see right into the nest and count the eggs. Six of them, and all spotted with brown; but they are much smaller than the song sparrows. Tired yet? No? Then we will take this path past the orioles' hanging nest up into the wood. First we will call on the Maryland Yellow-throat. Do you remember him, Dollie? He is smaller than your canary, with a yellow breast and a green back; and he wears a black mask over his face, just as if he were a highway robber. But he isn't; he is the jolliest little fellow, and builds a nest on the ground almost big enough for a robin. I am sure his little wife will be lost in it when it is finished. There it is, under the bay bush; you see they have not started housekeeping yet."

"Now, Dollie, we are going to make our last call; and I think in this house you will find the children all at home. Knock on that rock; that is the front door."

"Why, Tom, it is nothing but a last year's nest blown down from the tree!"

"No, little sister, it is not. Lift up the dried grass; now what do you see?" And under the grass Dollie found a big nest all lined with hair, and inside of it four of the cunningest baby rabbits tucked in bed side by side. She stopped to stroke one, and out he ran, turning somersaults in his eagerness to take a little journey into the world.

"It's snapper time now," said Tom. "We shall have to make our other visits on another afternoon."

"To-morrow, can't we?" said Dollie.—

Mothers' Nursery Guide.

DOMESTIC ECONOMY.

PAVILION GINGERBREAD.—One egg, one cup of molasses, butter the size of an egg (melted), one cup of coffee, milk or hot water, two teaspoonfuls of soda, three and one-half cups of flour.

SPONGE DROPS.—Three eggs, one cup of sugar, one cup of flour, one teaspoonful of cream tartar, one-half teaspoonful of soda, flavor to taste. Beat the whites of the eggs separately and stir in last. Have small tins lightly buttered, drop a teaspoonful of the mixture in each one. Bake in a quick oven.

SCRAMBLED PORK.—Take slices of cold, boiled pork; cut in inch-wide strips. When thoroughly warmed break two or three eggs over it and stir lightly until well covered with the egg. Cold ham, boiled or fried, is excellent made with the egg gravy mentioned above; also good with the scrambled egg.

SPICE CAKE.—Beat two cups of brown sugar, one-half cup of butter, the yolks of four eggs, and the whites of two (save two whites to ice the cake) till smooth; and one-half cup of sour milk, one nutmeg grated, two teaspoonfuls of ground cloves, one teaspoonful of cinnamon, and two cups of flour in which sift a teaspoonful of soda. Bake in three layers and frost between the layers and over the top.

APPLE AND BREAD PUDDING.—Slice raw apples or make a nice sauce and put it in a buttered pudding dish in alternate layers with bread crumbs or cracker crumbs and bits of butter. Have crumbs on top. Moisten with about a cup of water, according to the juiciness of the apple. Bake about half an hour and serve with sugar and cream, or with any sauce preferred.

SOFT GINGERBREAD.—Two cups of flour, one-half cup of sugar, one-half cup of molasses, one cup of sour cream, or milk and a tablespoonful of butter, one teaspoonful of cinnamon, one teaspoonful of soda dissolved in a little hot water and stirred into the milk. Beat hard for several minutes and bake in a large sheet. This gingerbread is best when eaten warm and broken instead of being cut.

VELVET MUFFINS.—Sift one quart of flour with a level teaspoonful of salt in it. Rub into the flour thoroughly four ounces of butter. Mix it with one teacupful of good yeast and as much fresh milk as will make a very stiff batter. Beat four eggs separately, very light, stir these in and set in a moderately warm place to rise. In three hours it will be sufficiently light. Bake in old-fashioned muffin rings.

BANANA OR COCOANUT CAKE.—Three tablespoonfuls of butter, two cups of sugar, the yolks of five eggs and the whites of three, one cup of cold water, and three cups of flour in which three teaspoonfuls of baking powder have been sifted, the grated peel and juice of one lemon. Cream the butter and sugar, add the yolks of the eggs beaten light, the water, lemon juice and rind and last the whites and the flour. Bake in jelly tins, then fill with one cup of powdered sugar, the whites of two eggs and the juice and grated rind of a lemon; sprinkle each layer of filling with cocoanut.

MRS. M. H. OBER,

Phelan Block, 816 Market, S. F.

Branch, 1236 San Pablo Avenue, Oakland.

All qualities Ypsilanti Union Suits for ladies and children. Headquarters for the Coast. JAROS Hygienic Union Underwear.

Sample pieces and Catalogue sent free.

TIGHTS. Knee and ankle, open and closed seat, \$1.25 up. All qualities.

Fine Black Hosiery for ladies and children.

Sponge Silk for underwear. Cleopatra and Delsarte Girdles. R. F. Sensible Waists for ladies and children.

MRS. MILLER'S PUBLICATIONS.

Book on mother and babe, a few hints for expectant mothers. Send for circular.

Also Physical Beauty. Treats on the care of the body. Monthly Magazine, \$1 a year.

Physical Culture by Mabel Jenness, 50 cents.

Only authorized agent for EQUIPOISE WAIST and JENNESS MILLER GOODS.

DIAMONDS!

GENUINE AND FIRST QUALITY.

Warranted Pure White and Perfect, and of Extreme Brilliance.

This diagram shows the approximate sizes of the stones:



1 1/2	1	3/4	1/2	3/8	1/4	3/16	1/8	1/16
1.16 carat.....\$4 00	1 carat.....\$3 00	3/4 carat.....\$15 00	1/2 carat.....\$5 00	3/8 carat.....\$3 00	1/4 carat.....\$2 00	3/16 carat.....\$1 00	1/8 carat.....\$1 00	1/16 carat.....\$1 00

I will retail these stones at the above wholesale prices and mount them in the latest styles in Rings, Pins, Studs, Ear Screws, Combination sets, etc., at cost of gold and labor.

Diamond Engagement Rings a Specialty. DIAMONDS, WATCHES and FINE JEWELRY sent C. O. D., with privilege of examination, on receipt of \$1.00 to guarantee charges, or sent express or post paid if cash accompanies order.

Correspondence solicited. Particular attention paid to mail orders.

Jewelry of every description in stock and made to order. Strictly First-Class work. No Imitation Goods.

JOHN H. DRUMGOLD, Manufacturing Jeweler, Watches and Diamonds, Room 113, Phelan Building, S. F.

Nerve Tonic Blood Builder



Dr. WILLIAMS' MEDICINE CO., Schenectady, N.Y. and Brockville, Ont.

DOUBLE BREECH-LOADER \$6.00. RIFLES \$2.00. WATCHES \$1.00. BICYCLES \$15

ALL kinds of bicycles and accessories. Before you buy, send stamp for catalogue to POWELL & CLEMENT CO., 166 Main St., Cincinnati, O.

HAS DONE IT for others, will do it for you. Our BEARD ELIXIR will force a heavy mustache in 10 days! Full beard in 30. Never known to fail. Sample package, postpaid, 15c., two for 25c., one dozen, \$1.00. Agents wanted everywhere. Address WESSON MFG. CO., 6 E St., Providence, R. I.

ST. JACOBS OIL



CURES PAIN,

RHEUMATISM, NEURALGIA, SCIATICA, LUMBAGO,

SPRAINS, BRUISES, SWELLINGS, BURNS.

With 23 years of experience in the Watch, Jewelry and Diamond Business, I am in a position to supply the public with goods in the above line at the very lowest figures. Shall be pleased to give estimates on anything appertaining to the line, especially American watches. Goods sent C. O. D. with privilege of examine on receipt of forwarding charges.

GEORGE FRANCIS,

126 Kearny Street, : : : : : San Francisco.



THE HOLLENBECK!

THE LARGEST AND BEST HOTEL

— IN —

LOS ANGELES.

Will be Headquarters for the Members of the

STATE HORTICULTURAL SOCIETY

During Their Coming Convention.

IT IS A WELL-KEPT HOUSE AND CONDUCTED ON

AMERICAN AND EUROPEAN PLANS.

Most Central Location. Reasonable Charges.

A. C. BILICKE & CO., Proprietors.

PATRONS OF HUSBANDRY.

Editorial Observations.

The meeting of the Executive Committee in this city last Friday, reported in Secretary Mills' column, was wholly informal. The main business was to approve the manuscript report of the proceedings of the late State Grange and to arrange for its publication. It was found that Mr. Mills had done the work of arrangement and transcription in first-class style and the committee not only approved it without a single emendation but warmly commended Mr. Mills for the industry and skill displayed. The job of printing the Annual Report is now in hand at the RURAL office and it is expected to have the books ready for distribution by the end of this month. The work could, in fact, be done much sooner, but it is the wish of the Executive Committee to hold open the forms until certain reports from the subordinate granges—for which Secretary Mills is anxiously waiting—shall come in. Those which do not reach the secretary's office prior to Friday of this week will be left out; and the dilatory ones will have only themselves to blame for the omission.

At this meeting there was a good deal of talk with reference to the proposed exhibit at the Midwinter Fair. It was of course regarded as a project most desirable and proper and the only question was as to the expense. Mr. Loucks, who in his long service as auditing officer of the Executive Committee has earned the title of "watch dog of the grange treasury," was heartily in favor of making an exhibit but he thought it should be paid for by subscriptions and not from the regular funds of the grange. This suited Mr. Jones exactly and he said that his grange (San Jose) would do the liberal thing—a pledge which has since been redeemed by the donation of forty dollars, as reported in Mr. Adams' letter. While it was felt that the bulk of the expense should be met by private subscription, there was manifest willingness to do something from the general fund of the order; and for this there is sufficient warrant in the hearty commendation given by the Petaluma State meeting to a proposition for grange representation at the fair. The outcome of the conference was an instruction to Secretary Mills to write to the several subordinate granges asking what they could or would do in the way of substantial aid. It is, of course, not expected that struggling granges will contribute, but there are at least half a dozen large and prosperous organizations which, in the judgment of the Executive Committee, will be both able and willing to help in the matter. San Jose has set a most out liberal example. Not every grange is so large and perhaps not any other so rich, but others will, we doubt not, show equal spirit and proportionate liberality.

There was also some talk about maintaining an office at the fair grounds, though there is a bngbear in the way of expense attached to this proposition. Even if there were no charge for rent, it would cost a good round sum to furnish, keep a clerk, provide stationery, etc. That such an office would be a great convenience to members of the order and a sign of its vigilance and efficiency to the public in general was of course admitted. The only question was as to its cost.

The financial condition of the Grange is good, and there should be scrupulous care to keep it good. There is in the general fund about five hundred dollars and in the lecture fund about two thousand dollars. It is proposed during the coming year to do some revival work, probably in the form of lecture service by either the National Master or the National Lecturer, and this will, of course, cost a good deal of money. In our judgment, this project is more important than any proposi-

tion concerning the Midwinter Fair, but the two things might work well together. The grange needs not only to revive the interest of its members, but to notify the public of its existence and practical usefulness.

Reference to our Agricultural News page, under the head of Tulare County, will show that Tulare Grange has done an excellent thing in getting up an agricultural and horticultural institute to be held early next month. This sort of thing is a great advertisement for a grange. It is evidence to the public that the order is up and doing; that it is maintaining its true relation to rural affairs; and it is always followed by an increase in membership. The purpose of each grange should be to organize and lead the educational, intellectual and social life of its community, and there is no better way to accomplish this than by such projects as that which Tulare Grange has in hand.

There is universal and righteous indignation among the members of the order concerning the assault recently made upon the grange by Secretary Morton of the Department of Agriculture, and reported in the last number of the RURAL; and the resolutions adopted by Enterprise Grange last week will be commended heartily by patrons generally. Mr. Morton has a right to his opinions, of course, but it seems specially ungrateful that his first notable utterance from the high position upon which he stands should be in reproach of the agency which created that position. But it is as true now as it was when Shakespeare wrote that it is ever the vanity of successful ambition to "scorn the degrees by which it did ascend." It has been suggested to the editor that he "answer Mr. Morton;" but that is not necessary. Mr. Morton is already answered by the widespread existence and the continuing usefulness of the grange. The order is regarded by the whole world as a stanch, conservative and highly respectable social force, working steadily in practical ways for useful ends. Its influence is reflected in wiser laws, in a broadened intelligence among farmers, in a closer relationship (in spite of Mr. Morton) between the agricultural interest and the Government, and in a growing intellectual and social spirit among young and old in the country districts. As a direct consequence of the grange work, rural life has expanded and is expanding in its interests. No other organization so fully co-ordinates the interests of social, industrial and family life. In none other are instruction, entertainment and progress so leagued and bound together; and none other so combines to promote an equal degree of devotion in both old and young. The purposes of the grange are noble, its practices are instructive and refining and its influence wholly good. These facts are the best answer to Mr. Morton. Let us, as grangers, waste no words with him.

Again the editor must remind the members of the order that he cannot make a good Grange Department unless they shall co-operate with him. The grange must put itself into the department or the department will be worthless. Do not wait for your "regular (or irregular) correspondent" to write. If anything comes under your notice that would be of interest to your fellow-patrons throughout the State, write it out and let the RURAL have it. A. H.

From Worthy Master Roache.

TO THE EDITOR:—To-day witnesses the closing of the greatest co-operative effort of the century, and while this day, that was to have exceeded all others in the brilliancy of its operations, has, through a mistaken sense of propriety, ended in a dismal and disappointing failure to the waiting thousands, the State, the nation and the world, yet one cannot stand in these vast corridors, filled with the accumulated wealth of all nations, and refrain from expressing the wish

that no American should be so unfortunate as to have been denied the pleasure of viewing a scene, which so pre-eminently stamps Columbia first in peace, first in war and first in that greatness which renders her the mightiest diadem in the firmament of Nations.

No American here can avoid the patriotic thrill which permeates his being, yet all the time there is a nameless something connected with it, irresistibly impelling one to take off his hat and salute the "Old Flag" with a feeling of love and reverence never before experienced.

Coming nearer home, some one has slangily remarked "California has got there with both feet and a crutch." Had they added head and shoulders, too, above all competitors, they would have been far within the truth, for, though others have done nobly, when it comes to fruit "they are not in it," and those California fruit-growers who think the business overdone should not fail to take a peep at this end of the line, note the wonderfully advantageous position they occupy, and then put their wits to work through some co-operative plan in order that they may receive some of the profits realized by some one who sells little miserable grapes at 5 to 10 cents a pound, three little scrubby Winter Nelis pears for 10 cents and bruised and blackened medium-sized peaches at a nickel apiece. Riper fruit, more rapid transit and honest sales are problems the fruit-grower must solve if he is to insure satisfaction to consumers and a just remuneration for himself.

All is now confusion on the Fair ground and many a proud dome and lofty minaret will ere long be dashed to earth, the "Great White City," the incomparable city will soon vanish into the eternal past, leaving but the greatness of its records to illuminate the historic page of the nation whose energy, genius and skill produced this greatest human triumph of countless centuries, either past, present or future. A. P. ROACHE.

World's Fair, Oct. 30, 1893.

The Secretary's Column.

The committee appointed by the executive committee of the California State Grange to receive bids for printing the Journal of Proceedings, session of 1893, met in San Francisco at the office of the PACIFIC RURAL PRESS, November 3d.

Bids were received from several firms. The bid of Mr. J. F. Halloran of the RURAL PRESS, being the most satisfactory, was accepted.

The Midwinter Fair was discussed in an informal manner by members there present, and the secretary was requested to send out a letter to masters of subordinate granges relating to the same. The purpose of this inquiry is to ascertain the sentiment of the subordinate granges in the matter, and also to ascertain what, if anything, they will contribute toward the exhibit fund.

This office acknowledges receipt of a cordial invitation to visit Sacramento Grange on Dec. 2d, when they will celebrate the anniversary of the order of P. of H. A good time is assured.

In answer to letters sent to masters of subordinate granges regarding their annual reports to be published in Journal of Proceedings, 1893, have received reports from Petaluma, Sacramento and New Hope. New Hope Grange reports an increase in membership, and the Worthy Master thinks they will have more life in grange work. They have been organized about one year and a half, and only started with a few members. Some of those dropped out and it has been uphill work for them, but they report that their grange has come to stay. Unfortunately this Grange was not represented at the last session of the State Grange, owing to sickness and pressing business engagements. They have a class of nine on their way to the master's desk, and still more to be advanced later on. This is a good start. What other grange is making progress? Let us know what you are doing, and we will give the order at large the news through this column. Don't wait for a special invitation, for you are all, great and small, cordially invited to contribute.

Past Master S. T. Coulter, who has been confined to his bed with erysipelas, is reported greatly improved.

Postal just received from the Worthy Master A. P. Roache directs all mail to be forwarded to Syracuse, New York, after Nov. 10, 1893.

All communications for the California State Grange should be addressed to Don Mills, Santa Rosa, Cal.

(Continued on page 338.)

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

Oroville Register: Dr. N. L. Coon, of Thermalito, dried this season a quantity of French prunes and they make a beautiful appearance. He says his experience shows him that lye is not needed to cure prunes well. He let his fruit get thoroughly ripe, then picked it and dipped it at once in very hot water. This cracked the skin and gave the fruit a chance to dry. When sufficiently cured he gathered up the fruit from the trays, dipped it a second time in boiling hot water, with a little salt added, and then, as soon as the fruit had dried off, he packed it. The color and flavor are very fine and the fruit sold for a good round price.

Fresno.

Selma has already shipped 141 carloads of raisins, nine of dried fruit and three of honey. The packing houses are all complaining of the scarcity of cars, as they find trouble in getting the fruit to market fast enough to fill orders.

Humboldt.

The Arcata Union reports great activity in tree planting in Humboldt county and predicts that the planting of the present season will more than double the acreage in orchard. We quote: Captains White and Smith intend to plant several acres of trees and vines on their Carpenter Flat property, just above the mouth of Willow creek. J. Victor, on the next place above, will plant a small orchard, and George Hemsted will add several acres to his orchard, which is now the largest in the northern end of the county. Wm. Toms intends to plant several hundred trees, and A. N. Foote will plant several acres. We also understand that the Arcata Mining Co. intend to plant a portion of their property to trees and vines. There is a large amount of land in this valley, now held for mining, that there is nothing being done on except the assessment work, which, if it was cleared and planted to trees and vines, would develop the valley, make homes for a number of families, and add many dollars of value to the rest of the valley. A great many in this section contend that trees and vines cannot be grown without irrigation, but it is a delusion, and if any one wishes to see trees growing and bearing without irrigation, let him visit the ranches of Geo. and F. A. Hemsted and draw his own conclusions.

Kern.

Kern County Echo: The Land Company is still receiving almost weekly shipments of lean cattle from Arizona, to be fattened on their alfalfa fields. A train-load arrived the other day and more will be in shortly. C. L. Connor is down in Arizona attending to the shipping. Fully 20,000 head of big, lean steers will be brought up from that Territory and fattened on Kern alfalfa and Egyptian corn before next May.

Kings.

Tulare Register: W. Warren, who lives north of Hanford, cleared \$70 per acre on his raisins this year on the first crop. Not having trays he did not dry the second crop, but let it out on shares, and up to date the parties have made 450 gallons of wine and claret from the grapes. He has 19 peach trees from which he cleared \$90. He says that people say there is no money in raisins, but he fails to see the point, for had he dried his second crop he would have cleared \$150 per acre, for the second crop was much larger than the first.

Hanford Sentinel: The farmers and horticulturists will hold a meeting at Armory Hall, Visalia, early in December, under the auspices of the Tulare Grange. The Times says that some of the features of the program are as follows: An address by John Tuohy of Tulare; adaptability of the soils and climate of Tulare county to the productions of fruit, C. J. Berry of Visalia; reclamation of alkali land and its uses, Julius Farrar of Tulare; growth and production of prunes, Geo. F. Beals of Visalia; pruning trees, C. A. Riley; production of fruits and vegetables for use on the farm, Thomas Jacob of Kaweah; orange and lemon culture, A. J. Hutchinson of Lindsay; insect pests and remedies, I. H. Thomas of Visalia; how shall Tulare county be represented at the Midwinter Fair? E. Newman of Porterville; cultivation of wheat, N. W. Hammond of Tulare; marketing fruit, N. W. Mothersol of Hanford; county roads, P. M. Norhoe of Visalia; drying prunes, George Nunnemaker of Hanford.

Mendocino.

Ukiah Dispatch: Several sales of hops have been made here this week. W. D. White sold 86 bales at 17½ cents, Clabe and Chas. Bartlett 190 bales at 17 cents, Bartlett & Howell 100 bales at 17½ cents, and Thomas Parsons 122 bales at 17 cents. As near as can be learned just now the product of this county this season is 7000 bales, an increase of nearly 1000 bales over last year.

Orange.

Venturian: Some of the orange-growers of Anaheim, including Wm. Koenig, J. Meredith and others, are topping off their orange trees or digging them out. There are three reasons for this. One is that the red scale is proving troublesome again, and the orchardist will find himself compelled to fumigate his trees at great expense; another is the unsatisfactory price realized for some crops last season, and the uncertainty of better prices the next; and the third is the fact that many of the trees are looking sickly and show considerable dead wood.

The Anaheim beet sugar co-operative company has ordered 30,000 pounds of beet seed from Germany. It is stated that even if their

owu factory is not in operation by next season that the Chino people will handle the crop.

Placer.

Rocklin Representative: The fruit-growers of this section of Placer county are waking up to their interests in a way that promises much mutual advancement and benefit. We look upon the organization of the Fruit-Growers' Club as one of the most important steps yet taken in behalf of the producer. There are a great many new arrivals in this section—English people, especially—who have purchased fruit-bearing property, and who are not deriving the best returns because of past inexperience and a lack of better acquaintance with climatic conditions, etc. The club was organized for the express purpose of meeting this emergency. A leading feature of the meetings will be the discussion of the relative merits of different fruits for various purposes, what description of soil, location, cultivation, etc., is best adapted to its highest productiveness, and other matters having a direct bearing on the fruit business.

Riverside.

Riverside Press: Wm. Collier lately spent several days in the vicinity of Elsinore and Wildomar. He says that notwithstanding the low prices of grain and fruit in that vicinity, the farmers are making arrangements for an increased acreage, especially of grain, next season. While there he leased more than 600 acres of land to different parties, to be put in grain the coming season, and thousands of acres will be added to the grain area in those localities. There are also thousands more acres going into grain than ever before in the San Jacinto and Perris valleys, and the Alessandro tract is being divided up and let out in smaller tracts to parties. Taking the increase of grain area in these localities as but an example of what is being done in other grain-raising portions of the county, the acreage to wheat and barley in this county will be almost doubled the coming season. Mr. Collier incidentally remarked that the grape crop in the vicinity of Elsinore, Wildomar and Murrieta was larger this year than ever before; that, owing to the scarcity of money, the ranchers were having a hard time to harvest them, but that he thought if the fine weather held out a short time longer all would be secured. He thought there would not be less than ten carloads of raisins sent from that section this season. A great many newcomers have settled in the section, and the improvements in the bath houses at the hot springs at Elsinore and the improved hotel accommodations had brought quite a large number of invalids to that town.

San Bernardino.

The auction sale of Chino lands last Tuesday was considered quite a success. Excursion trains and conveyances took about 2000 people to the ground, where an inspection of the sugar factory and a lunch occupied the time until the sale took place. The first piece of 20 acres sold brought \$225 an acre, and, in all, the sales amounted to 700 acres, the gross returns footing up \$90,000. The greater part of sales was to farmers who had been leasing and cultivating the lands to beets. Probably not more than 15 to 20 per cent of sales were made to speculators.

Richard Gird and the Chino Valley Beet-Sugar Company are making arrangements to build at Chino a \$10,000 school house, at their own expense, and present it to the school district.

Orange Grower: M. E. Foulke of West Rialto has the largest "fruit" yet reported in the way of pumpkins. One specimen measures 7 feet 1½ inches one way by 5 feet 9½ inches the other. Another is 6 feet 10½ inches by 6 feet. They are a new variety here and known as the German squash.

Chino Champion: The total harvest of beets from the Chino fields was 44,008 tons and 980 pounds, gross. From Anaheim and vicinity 7302 tons and 251 pounds were received, so there were actually weighed into the factory 51,310 tons and 1131 pounds of beets. For the farmers this has been a remarkably successful season. The percentages of sugar have not averaged as high as in previous years, but the tonnage has been large, and the yield of sugar per acre, which is the true criterion, has been good. The individual farmers are almost universally well pleased with their returns.

San Diego.

San Jacinto Register: Saturday was a big day at the County Clerk's office as rabbit scalps came in by the hundreds and were filed. About 6000 were filed Saturday alone. E. P. Guthrie, of Elsinore, brought in 526, one man deposited 416, and a wagon load of men from Perris placed 1500 on the counter. At 2 P. M. the regular cremation took place, and 7090 scalps, representing \$709, were consumed. At this rate these pests will soon be exterminated.

Santa Clara.

Los Gatos News: The wine crop will reach 3,000,000 gallons. The fermentation is slow and steady, with good indications that one of the light table wines, what is needed in the market, will be the result. The progress of the phylloxera has been slow in this county.

Saratoga Standard: As to the fruit industry, Santa Clara can certainly point with pride to her output and defy any section of country in the United States of equal area to show an income that will in any way compare favorably with ours. During the entire season, in which we have had to contend with the greatest financial stringency the country has known in years, and in which there has been a general depression in all lines of business, we have been prosperous. Truly, compared with others, the fruit industry of Santa Clara county sparkles like a diamond among so many rocks.

Saratoga Standard: On Wednesday of last week there had been shipped from this county

16,000,000 pounds of prunes—about one-half of the crop. If the last half should bring as much as the first, which it undoubtedly will, notwithstanding the fact that not many sales are being made at present, owing to the fact that our shipments for the past few weeks have been the heaviest ever known and the demand is liberally supplied, when the returns are in, so far as we are concerned, the financial stringency will be a thing of the past. All told, adding peaches, pears, cherries and apricots to our immense prune crop, there will be not less than 4000 carloads of fruit shipped from this county, which will average \$1250 per carload, and makes a grand total of \$5,000,000 from one industry alone; and this is a conservative estimate and is probably lower than the actual returns.

Sonoma.

Santa Rosa Democrat. Mr. Johnson, who lives west of Sebastopol, realized \$2768 from his 25-acre apple orchard this season.

The Cloverdale *Reveille* reports that John Turner has grown the boss sweet potato of the year. "It is," says the *Reveille*, "of the Hayti variety, the seed of which John imported from the State of Louisiana along with several other varieties, and weighs 16½ pounds, and measures over 32½ inches round. Just think of it, almost a foot in diameter. He also says that he has a number that will weigh from 7 to 10 pounds. These potatoes, Mr. Turner says, were grown river bottom soil and without irrigation."

Santa Rosa Democrat: Porter Bros. of Chicago have at present 50 packers at work between Sonoma and Glen Ellen, and from 7 to 8 carloads of table grapes are being shipped to the East weekly. The greatest care has to be taken with the packing, as may be imagined when it is said that one man cannot pack more than four 40-pound crates a day. Despite the care and cost in shipping, the growers netted on the fruit shipments \$70 a ton, and on the tailings of the crop \$40 and \$50. The picking, packing and freight amount to \$1000 a car—that is, it costs \$1000 to land a car of grapes in Chicago. Deputy Internal Revenue Collector Davis was over there Friday, and he says he had no idea that this branch of the industry was assuming such proportions. All the growers are jubilant over the result of the season's shipments. The vintage was mostly finished at the wineries last week.

Mr. M. M. Martin of Geyserville has been giving the *Santa Rosa Democrat* results of his experience and observation in irrigating prunes. He says that for two years past Mr. Metzler of Geyserville has irrigated his prune orchard, with the result that his fruit is much larger, more uniform and yielded better than that of any of the other orchards in that part of the county. In size the fruit ran 60 and 70. Proof of that is furnished by the fact that he could not fill an order for a carload of 75's out of his whole orchard. All the fruit was too large for the order. Of course he received the top market price, which ranged from 4½ to 5½ cents. Mr. Ormsby, who has an orchard adjoining Mr. Martin's place, tried irrigating this season with the most satisfactory results. His land is some poorer than that of Mr. Martin's, but the water so equalized the yield that his average was almost up to that of Mr. Metzler's orchard, and the fruit was more uniform in development than that of the Martin orchard. Next season Mr. Ormsby intends to ditch the orchard in the middle of the rows, so that each tree will be in the center of a small square. Heretofore Mr. Ormsby's crops have been much lighter than those of his neighbors, and he feels justified by the result of his experiment in recommending irrigation. The water is applied to the trees soon after the cultivating is finished. Mr. Seaman of Alexander Valley also tried irrigation this season with the same results. It may be safely predicted that within the next few years the producing capacity of our orchards will be greatly increased by the judicious use of water.

Tehama.

Corning Observer: The great question of farmers now is, Are we going to have rain soon? Nearly all the summer-fallow land has been seeded, and a gentle soaking rain is wanted.

Tulare.

There are 70,000 sacks of grain stored in the Lindsay warehouse. Most of this will be kept there till spring unless prices get several notches better than at present.

Porterville Times: J. H. James is shipping apples to the north and south of here, and pomegranates to San Francisco. It is noticeable that the apples of this section are yearly becoming more infested with the codlin moth, and the owners of orchards must begin fighting this pest or soon have no salable apples.

Yolo.

Knights Landing Correspondence in Woodland Democrat: I do not believe there has been any wheat shipped from Knights Landing for more than two weeks. The price is so low that the farmers will probably hold it a little longer with the hope that the financial condition of the country will improve before the first of December.

Davisville Letter: The hay shipments from this point to Sacramento this season amount to about 2,282,600 pounds, or about 1140 tons. This sold for about \$10 per ton, or \$16,600, for so much of the crop as was sold in Sacramento alone.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands, A. SCHULLER, Room 11, 508 Montgomery St., San Francisco (Pacific Mutual Life Insurance Building).

Hay Pressing.

If you are interested in pressing hay write Truman Hooker & Co., San Francisco. They will save you money

Guano Fertilizer!

PLAIN AND NITROGENOUS SUPERPHOSPHATES.

GUANO FLOUR.

Complete and Special Fertilizers

FOR ALL KINDS OF

Fruit, Grain, Sugar Beets, Vegetables, Etc.

MANUFACTURED BY THE

MEXICAN PHOSPHATE & SULPHUR CO.

For circulars and other information address

H. M. NEWHALL & CO., Agents,
309 & 311 SANSOME STREET,
San Francisco.



CHOPPERS

ATTENTION!

ASK FOR THIS AXE.
USE NO OTHER.

Wood-choppers, try the

Kelly Perfect Axe

It will cut more wood than any other axe.

The scoop in the blade keeps it from sticking in the wood, and makes it cut deeper than any other axe. Ask your dealer for it. Send us his name if he don't keep it. It is the Anti-Trust Axe.

Kelly Axe Mfg. Co.
LOUISVILLE, KY.

WE GUARANTEE

That one tablespoonful of

GOMBALT'S CAUSTIC BALSAM

will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made. It is therefore the cheapest (as well as safest and best) external applicant known for man or beast.

THE LAWRENCE WILLIAMS CO., CLEVELAND, OHIO.

Water Queen

FORCE PUMP.

An improvement on all other methods of pumping. Has four times the capacity of the so-called double-acting pumps. Costs less, weighs less, wears longer. Is easily operated and will not freeze. All attachments of the best material. Adapted to hand, windmill or steam power. Every pump guaranteed for strength, durability and capacity. No charge if not as represented. (Our AERATOR Pump, pumps water and air at the same time.)
The Stimmel & Hook Mfg. Co.,
Turner, Illinois.

TREE WASH.

"Greenbank" Powdered Caustic Soda and Insecticide.

T. W. JACKSON & CO.

Sole Agents,

No. 5 Market Street, San Francisco, Cal.

GRANGERS' BANK

OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874.



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 500,000
Dividends paid to Stockholders.... 720,000

OFFICERS.

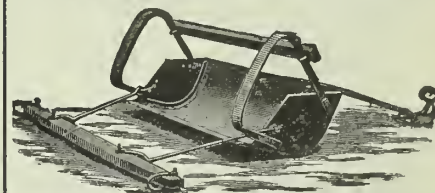
A. D. LOGAN.....President
I. O. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK MCMULLEN.....Secretary

General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on wheat and country produce a specialty.

January 1, 1893. A. MONTPELLIER, Manager.

Porteous Improved Scraper

Patented April 8, 1883. Patented April 17, 1883.



Manufactured by G. LISSENDEEN.

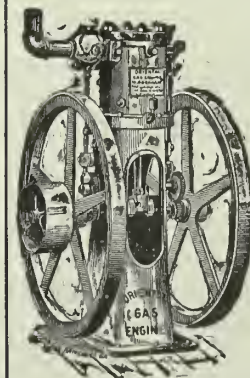
The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making, etc.

This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

This Scraper is all steel—the only one manufactured in the State.

Price, all Steel, four-horse, \$40; Steel two-horse, \$31. Address all orders to G. LISSENDEEN, Stockton, California.

THE ORIENTAL GAS ENGINE



IS THE BEST, because it combines simplicity of construction with power and economy in space. It can be run with natural gas or manufactured gas or gasoline at a cost of 20 to 25 cents per horse power per day.

It can be used for pumping purposes, as well as for all purposes where a perfect engine is required, with the advantage of lessening the risk of explosions. No licensed engineer at a high salary needed to operate it.

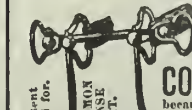
Send for circulars and prices if a good safe engine is what you need.

The Oriental Launch is Perfection.

M. A. GRAHAM,

Inventor and Manufacturer,

105 BEALE STREET, SAN FRANCISCO.



THIS BIT combines the BEST QUALITIES of other patent bits and will easily control the most vicious horse at all times. It is the

COMMON SENSE BIT

because it can also be used as a mild bit.

XC Sample mailed \$1.00.

Nickel 2.00.

RACINE MALLEABLE IRON CO.,

J. F. DAVIES, Mgr. RACINE, WIS.

GRANGERS' BUSINESS ASSOCIATION, GENERAL COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

T. R. BALLINGER, Grain Salesman.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

JERSEYS AND HOLSTEINS, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. William Niles & Co., Los Angeles, Cal., Breeders and Exporters. Established in 1876.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER SAKS & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS—The best A. J. C. C. Registered Prize Herd is owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

WM. NILES & CO., Los Angeles, Cal., Breeders of nearly all varieties of Poultry, Dairy Cattle and Hogs.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

R. H. CRANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

SWINE.

H. J. PHILPOTT, Niles, Cal., Importer and breeder of Tecumseh and other choice strains of Registered Poland-China Hogs.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine, Small Yorkshire Victorias, Essex and Poland-China. Superior Stock, new Prices.

BERKSHIRES & POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. William Niles & Co., Los Angeles, Cal. Established 1876.

MONROE MILLER, Elsie, Ventura County, Cal., Breeder of Registered Berkshire Hogs.

P. H. MURPHY, Perkins, Sac. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.

CHAS. A. STOWE, Stockton, Regist'd Berkshires.

In These Dull Times
You Can Largely Increase Your Income by buying an Incubator and engaging in the chicken business. Send stamp for our catalogue of incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember, the best is the cheapest. **PACIFIC INCUBATOR CO.** 1317 Castro St., Oakland, Cal.

FRANK A. BRUSH, SANTA ROSA, CAL. (Care Santa Rosa National Bank.) Wants you all to write to him for prices on Young Stock.

MINORCAS: White and Black.
LEGHORNS: White, Brown, Black, Buff.
B. P. ROCKS.
Mention the age desired and when shipped. Circular Free.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of **CARY'S PILLS**.
Send for Circular.
E. FOUGERA & CO., 30 North William Street, New York.

RED SEAL GRANULATED 98% LYE

HAS NO EQUAL

FOR DESTROYING SCALE BUGS AND OTHER INSECT PESTS ON TREES AND PLANTS.

FOR TREE WASH!

—USE—

One pound to 5 gallons of water.

Thousands of Orchardists testify to its value, using it in preference to all other preparations. Where the Red Seal is applied it kills the insects and at the same time forms a coating through which others cannot penetrate. When used in the above proportions, it is a

GREAT BENEFIT TO THE TREES.

Put up in SIFTING-TOP CANS, so that any quantity may be used and the balance preserved uninjured.

MANSFIELD LOVELL, 124 California St., San Francisco.

FOR HOUSEHOLD PURPOSES

The Red Seal Lye is indispensable.

USED AS DIRECTED it will take the place, and at 75% less cost, of all other alkaline preparations, soaps, etc., now on the market. ONE CAN will make 10 to 12 lbs. of Hard Soap, or 200 lbs. of Soft Soap. See directions in can.

It cleans floors, kills roaches and bugs of all kinds, cleans milk vessels, tin or wood; keeps farming implements bright and free from rust; is a perfect disinfectant; softens water, washes dishes and clothes; and can be put to a thousand uses in place of soap or other preparations.



SOLD BY—
ALL GROCERS.

P. C. TOMSON & CO., Manufacturers, Philadelphia, Pa.

CALIFORNIA PRODUCTS.

P & B

ROOFING.
BUILDING PAPER.
ROOF PAINTS.

First Prizes at the World's Columbian Exposition, 1893.

PARAFFINE PAINT CO., - . 116 Battery Street,

SAN FRANCISCO.

E. G. JUDAH, Agent, - . 221 South Broadway, LOS ANGELES.



ONLY 25 YEARS OLD AND A GIANT!

THE H. H. H. LINIMENT

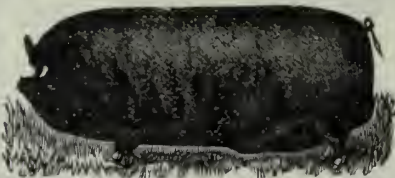
HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.



BERKSHIRE SWINE.

Prize Herd of Southern California.

PIGS OF ALL AGES FOR SALE.

SESSIONS & CO., Los Angeles, Cal.
P. O. Box 686.

Send for Price Lists

OF GUNS

And all Articles used by Hunters and Anglers.



GUNS SENT ON TRIAL.

OLD GUNS TAKEN IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.



MILK MEN
Who ride in these famous
“LOW-DOWN” WAGONS

are protected from the storm. They never have lame backs. They never slip or fall getting in and out. Their milk is not churned. **THEY LIVE LONG AND THEY PROSPER.** You can get full particulars by writing the
PARSONS “LOW-DOWN” WAGON CO., Earlville, N. Y.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,

Surveying, Architecture, Drawing and Assaying,
728 MARKET ST., SAN FRANCISCO, CAL
Open All Year.

A. VAN DER NAILLEN, President.

Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50.
ESTABLISHED 1864. Send for circular.

The American Bee Journal,

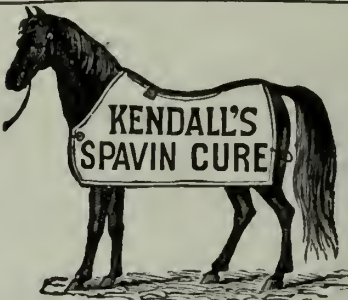
(Established 1861.)
Is Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample.
\$1.00 BEE-BOOK FREE
W. W. YORK & CO., 14 Fifth Ave., Chicago, Ill.

LOOK FOR



ON HORSE BLANKETS

It is a guarantee of quality.
250 STYLES.
ALL PRICES.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STAR, LANE CO., OREGON, Feb. 8th, 1892.

DR. B. J. KENDALL CO.
Dear Sirs:—I have used your KENDALL'S SPAVIN CURE for the last twelve years never being without it but a few weeks in that time and I have made several wonderful cures with it. I cured a Curb of long standing. Then I had a four year old colt badly spavined; tried every thing without any benefit, so I tried your liniment, and in a few weeks he was well and his shoulder filled up all right, and the other, a four year old that had a Thoroughpin and Blood Spavin on the same joint, and to-day no one can tell which leg it was on. These statements can be proven, if necessary; the four year olds are now seven and can be seen any day at Cottage Grove, Or.
S. Z. FAKTOR.

—Price \$1.00 per bottle.—

DR. B. J. KENDALL CO.,
Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

Short-Horn BULLS

Calves, Yearlings and 2-year-olds FOR SALE.

ROBERT ASHBURNER,
Baden Station, San Mateo County, Cal.
The S. F. and San Mateo Electric Road passes my place.

To Angora Goat Men.

MOHAIR We solicit consignments. Will give prompt personal attention to shipments, large or small. Have orders from manufacturers, therefore can promise full market prices and quick cash returns. Write us for quotations and shipping tags.

OILLEY & MARSHALL,
101 Gold St., N. Y.
W. R. PAYNE, Mgr. Mohair Dept.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.

S. F. MARKET REPORT

Market Review.

WEDNESDAY MORNING, Nov. 8, 1893.

There has been a decline in all the leading wheat markets, and it is reflected in our own, not so much by lower prices as in stagnation of business. There is no movement to speak of, and the immediate outlook is anything but satisfactory. Shippers seem to have all they want for immediate demands, and it is hard to get them to give any attention to the samples offered on change. We quote: No. 1 shipping wheat is quotable at \$1.01½ to \$1.02½, with \$1.03½ ctl for something choice. Milling grades are moderately steady at a range of \$1.05 to \$1.07½ ctl.

The range of the speculative markets for the week is shown by the following tables of sales:

LIVERPOOL.

(Per cental.)	Nov.	Dec.	Jan.	Feb.	Mar.	May.
Thursday.....	5603½d	5605d	5606d	5607d	5608d	5609½d
Friday.....	5604d	5605d	5606d	5607d	5608d	5609½d
Saturday.....	5603d	5603½d	5604d	5605d	5606d	5607d
Monday.....	5603d	5603½d	5604d	5605d	5606d	5607d
Tuesday.....	5602½d	5603d	5603½d	5604d	5605d	5606d

To-day's cablegram is as follows:

LIVERPOOL, Nov. 8.—Wheat—Steadily held. California spot lots, 5s 7d; off coast, 27s 9d; just shipped, 28s 3d; nearly due, 27s 9d; cargoes off coast, very little inquiry; on passage, inactive; Mark Lane wheat, steady; French country markets, quiet; Wheat and Flour in Paris, firmer.

NEW YORK.

Day.	(Per bushel.)	Nov.	Jan.	May.
Thursday.....	67½	70½	75	75
Friday.....	67½	70½	75	75
Saturday.....	67½	70½	75	75
Monday.....	67½	70½	75	75
Tuesday.....	67½	70½	75	75

The following is to-day's telegram—per bushel:

NEW YORK, Nov. 8.—November, 66½; May, 74½.

CHICAGO.

Day.	(Per bushel.)	Nov.	Dec.	May.
Thursday.....	62½	63½	70½	75
Friday.....	62½	63½	70½	75
Saturday.....	62½	63½	70½	75
Monday.....	62½	63½	70½	75
Tuesday.....	62½	63½	70½	75

The following is to-day's telegram—per bushel:

CHICAGO, Nov. 8.—November, 61½; December, 62½; May, 69½.

SAN FRANCISCO.

Thursday, highest.	Dec.	May.
lowest.....	1 12	1 24
Friday, highest.....	1 12	1 24
lowest.....	1 11	1 23
Saturday, highest.....	1 11	1 23
lowest.....	1 10	1 22
Monday, highest.....	1 10	1 22
lowest.....	1 09	1 21
Tuesday, highest.....	1 09	1 21
lowest.....	1 08	1 21

The following are to-day's recorded sales on Call:

Morning—Informal Session—December, 100 tons, \$1.00½; May, 300 tons, \$1.22½ per ctl.
 Regular Session—December, 100 tons, \$1.10; 100, \$1.09½; 100, \$1.09; 100, \$1.09½ per ctl.
 May, 200 tons, \$1.22½; 300, \$1.22½; 2000, \$1.22½.
 Afternoon Session—May, 1500 tons, \$1.22½; 100, \$1.22½; 300, \$1.22½ per ctl.
 December, 100 tons, \$1.09½; 100, \$1.09; 700, \$1.08½; 200, \$1.08½; 300, \$1.09 per ctl.

Barley.

There is nothing to report as to barley. The market runs along smoothly without notable fluctuations. For feed barley there is moderate though steady demand, with offerings rather free, except of a strictly bright article, of which the supply is not large. Brewing descriptions still come in for good attention. We quote as follows: Feed, 67½c to 70c per ctl for fair to good quality, and 72½c to 75c for choice bright; brewing, 85c to 95c per ctl.

The following figures represent Call Board quotations at San Francisco:

Thursday, highest.	Dec.	May.
lowest.....	77½	88
Friday, highest.....	77½	88
lowest.....	77½	87
Saturday, highest.....	77½	87
lowest.....	76	85
Monday, highest.....	76	85
lowest.....	75	84
Tuesday, highest.....	75	84
lowest.....	75	83

The following are to-day's recorded sales on Call:

Regular Session—May, 100 tons, 87c; 100, 87½c; 300, 87½c.
 December, 200 tons, 77c; 100, 76½c; 700, 76½c per ctl.
 Afternoon Session—May, 100 tons, 87½c per ctl.

Dried Fruits.

In dried fruits a good deal of business is being done in a small way. There are no orders in carload lots—that is to say, the large Eastern markets are not buying—but there is good business in assorted lots for the smaller points. Still the demand is hardly equal to the supply, since, as usual at this season, there are large numbers of producers anxious to turn their season's output into ready cash; and this naturally makes prices weak. In prunes there is nothing doing. If sellers would accept a reduction to say 4½ cents, there would be good trade, but they will not and there matters rest. The prune situation was summed up this afternoon by Mr. Freeman of the Armshy Co. in the remark that there were "no sellers at 4½c and no buyers at 5c." We quote as follows: Apples, 4 to 4½c per lb for quartered, 4½ to 5c per lb for sliced, and 8 to 8½c for evaporated; Peaches, 6c to 7c per lb for bleached halves and 4c to 6c for quarters; bleached Peaches, 6½ to 7½c; sun-dried Peaches, 5 to 5½c; Apricots, Moorpark, 11 to 12c; do Royals, 10 to 11c for bleached and 6 to 7c for sun-dried; Prunes, 4½ to 5c per lb for the four sizes; Plums, 5½ to 6c for pitted and 2 to 2½c for unpitted; Figs, 4 to 5c for pressed and 2 to 3c for unpressed; White Nectarines, 6½ to 7c; Red Nectarines, 5 to 6c per lb.

RAISINS—Shipments to the East have been quite free, but local offerings continue liberal and all wants can be promptly satisfied. Quotable as follows: London Layers, \$1.20 to \$1.30; loose Muscatels, in boxes, \$1 to \$1.10; clusters, \$1.75 to \$2; loose Muscatels, in sacks, 3½ to 4c per lb for three-crown, 3 to 3½c for two-crown; dried Grapes, 2 to 2½c per lb.

As we go to press Wednesday evening, the Bulletin of the Santa Clara Fruit Exchange has not come to hand, from which we infer that the issue has

again been omitted. There is in fact nothing to report, since the situation is substantially unchanged.

OATS—The late advance in prices is just about maintained, and that is all. Trade is not quite as brisk as it was a short while ago, and stocks are being reduced less rapidly. We quote: Milling, \$1.15 to \$1.22½; Surprise, \$1.22½ to \$1.32½; fancy feed, \$1.20 to \$1.22½; good to choice, \$1.12½ to \$1.17½; common to fair, \$1.10 to \$1.15; Black, 80c to \$1.20; Red, \$1.07½ to \$1.12½; Gray, \$1.02½ to \$1.12½ ctl.

CORN—The market looked yesterday as if it were going to brace up again, but all such encouraging symptoms disappeared this morning, there being an almost entire absence of buyers. Quotable at 86½ to 87½c ctl. for large Yellow, 86½ to 87½c for small Yellow, and 85 to 90c for White.

CRACKED CORN—Quotable at \$20.50 to \$21.50 per ton.

CORNMEAL—Millers quote feed at \$20 to \$21 per ton; fine kinds for the table, in large and small packages, 2½ to 3½c per pound.

OILCAKE MEAL—Quotable at \$32.50 to \$35 per ton.

CHOPPED FEED—Quotable at \$17.50 to \$18.50 per ton.

SEEDS—We quote: Mustard, brown, \$1.75 to 2; Yellow, \$2 to 2.35; Canary, imported, \$4.50 to 5; do, California, —; Hemp, 4 to 4½c lb; Rape, \$2.25 to 2.50; Timothy, 6½c per lb; Alfalfa, 9c per lb for California and 9c for Utah; Flax, \$2.25 per ctl.

MIDDINGS—Quotable at \$19 to \$22 per ton.

MILLSTUFFS—We quote: Rye Flour, 3½c; Rye Meal, 3c; Graham Flour, 3c; Oatmeal, 4½c; Oat Groats, 5c; Cracked Wheat, 3½c; Buckwheat Flour, 5 to 5½c; Pearl Barley, 4 to 4½c per lb; Normal Nutrient, \$3 per case of 1 dozen cans; Breakfast Delight, \$3.25 per case of 2 dozen packages.

BRAN—Quotable at \$16.50 to \$17.50 per ton.

HAY—The demand is good and prices are steady. The indications are that the market will show firm tone for the next month or two, as daily receipts are not heavy and stocks in warehouse are being drawn upon to a greater or less extent. Wire-bound hay sells at \$1 to \$2 per ton less than rope-bound hay. Following are wholesale city prices for rope-bound Hay: Wheat, \$10 to \$14.50; Wheat and Oat, \$10.00 to \$13.50; Wild Oat, \$9 to \$12; Alfalfa, \$10 to \$10.50; Clover, \$8.50 to \$10; Barley, \$9 to \$10.50; Compressed, \$10 to \$12.50; Stock, \$8 to \$10.50 c per ton.

STRAW—Quotable at 50 to 55c per bale.

HOPS—Market very quiet, but few buyers being around, and they are not doing much in the way of purchasing. Quotable at 16 to 19c lb.

RYE—Quotable at 87½ to 92½c ctl.

BUCKWHEAT—Quotable at \$1.35 to \$1.45 ctl.

GROUND BARLEY—Quotable at \$16 to \$17 per ton.

POTATOES—Prices keep low, under continued liberal arrivals. We quote: Garnet Chiles, 40 to 50c; Early Rose, 30 to 40c; River Burbanks, 35 to 45c; River Red, 40 to 50c; Salinas Burbanks, 55 to 85c ctl; Sweets, 50 to 75c ctl.

ONIONS—Limited receipts tend to strengthen prices. Quotable at \$1.25 to \$1.35 ctl for good to choice.

DRIED PEAS—We quote: Green, \$1.60 to \$1.75; Blackeye, \$1.50 to \$1.70; Niles, \$1.50 to \$1.60 ctl.

BEANS—The market seems to be turning favorable for buyers. We quote: Bayos, \$1.80 to \$1.85; Butter, \$2.25 to \$2.40 for small and \$2.50 to \$2.75 for large; Pink, \$1.60 to \$1.65; Red, \$1.75 to \$2.00; Lima, \$2.15 to \$2.20; Pea, \$2.15 to \$2.25; Small White, \$1.85 to \$1.95; Large White, \$1.90 to \$2 ctl.

VEGETABLES—Tomatoes remain plentiful and cheap, the demand being light. Green Okra is not worth quoting any longer, as offerings are so small. Garlic is in heavy receipt and easy in price. We quote: Eggplant, 35 to 50c box; Green Peas, 2 to 3c lb; String Beans, 2 to 3c lb; Lima Beans 2½ to 3c; Marrowfat Squash, 56 to 8 c per ton; Cucumbers, 30 to 60c box; Green Peppers, 40 to 60c box; Tomatoes, 20 to 35c for large boxes; Turnips, 75c ctl; Beets, 75c to \$1 sack; Parsnips, \$1.25 ctl; Carrots, 40 to 50c; Cabbage, 50 to 55c; Garlic, ¾ to 1c lb; Cauliflower, 60 to 70c per dozen; Dry Peppers, 5c lb; Dry Okra, 15c per lb.

FRESH FRUIT—Apples are in large offering, but it is only choice stock that finds anything like quick sale at good figures. Pears make poor exhibit. Berries are still in favor, and daily arrivals clean up well. We quote: Apples, 65c to \$1 per box for good to choice, and 35 to 60c for common to fair; Pears, 25 to 50c per box for common and 75c to \$1 for choice; Quinces, 40 to 60c per box; Strawberries, \$3.50 to \$5; Persimmons, 75c to \$1 per box; Pomegranates, 25 to 75c per box; Raspberries, \$4 to \$5 per chest; Cranberries, \$7 to 8.25 per bbl.

GRAPES—Damp and cold weather has a tendency to restrict trade in this line. Receipts of all kinds keep up well. We quote as follows: Muscat, 20 to 30c; Black, 20 to 30c; Tokay, 20 to 35c per box; Zinfandel Wine Grapes, \$8 to \$13 per ton; White Grapes, \$8 to \$10 per ton.

CITRUS FRUIT—Stocks ample for all requirements. We quote: Mexican Limes, \$3 to \$4 per box; Lemons, Sicily, —; California Lemons, \$1 to \$2 for common and \$2.50 to \$3 for good to choice; Bananas, \$1.50 to 2.50 per bunch; Hawaiian Pineapples, \$2 to \$4; Mexican Pineapples, \$3 to \$4 per dozen.

NUTS—Trade is somewhat quiet, with prices shaping in favor of buyers, as a rule. Almonds are about the only kind that show firmness. We quote as follows: Chestnuts, 12½ to 13c lb; Walnuts, 6 to 7c for hard shell, 8 to 8½c for soft shell and 9 to 10c for paper shell; Chile Walnuts, 8 to 9c; California Almonds, 10½ to 11½c for soft shell, 5 to 5½c for hard shell and 12 to 13c for paper shell; Peanuts, 3 to 4c; Hickory Nuts, 5 to 6c; Filberts, 10 to 11c; Pecan, 8 to 9c for rough and 11c for polished; Brazil Nuts, 9 to 10c; Coconut, \$4 to \$5 per 100.

HONEY—The demand is moderate only. Prices easy. We quote: Comb, 8½ to 9½c; light amber, extracted, 4½ to 5c; dark, 4 to 4½c; water white, extracted, 5 to 5½c lb.

BEESWAX—Quotable at 22 to 23c lb.

BUTTER—Fresh Butter lacks firmness in price, owing to a falling off in the demand, because many consumers are now using packed qualities. In face of this, a great many cows are now coming in fresh, and, in consequence, the output of fresh product is in some sections on the increase. Values will likely have to further weaken in order that dealers can clean up surplus stock. We quote: Creamery, 25 to 27c; fancy dairy, 24 to 25c; good to choice, 22½ to 23½c; common grades, 18 to 22c; pickled

roll, 19 to 21c; firkin, 18 to 20c; Eastern ladle packed, 17 to 18c lb.

CHEESE—Market steady. We quote: Choice to fancy new, 11½ to 13c; fair to good, 9 to 10½c; Eastern, ordinary to fine, 11 to 14c lb.

EGGS—Select domestic stock still commands high prices, the demand being about equal to the supply. Common grades are not in active request, owing to competition from the Eastern article. We quote as follows: California ranch, 40 to 47½c; store lots, 25 to 37½c; Eastern, 22½ to 26 for ordinary and 28 to 30c per dozen for choice.

POULTRY—The market is still heavily crowded with Eastern stock, to the disadvantage of domestic product. We quote as follows: Live Turkeys—Gobblers, 16 to 18c lb; Hens, 15 to 17c; dressed Turkeys, 15 to 18c; Roosters, \$4.50 to 5 for old and \$3 to 4 for young; Friers, \$3 to 3.50; Broilers, \$2 to 3; Hens, \$4 to 5.50; Ducks, old, \$3.50 to 4; young, \$3.50 to 4.50; Geese, \$1.25 to 1.75 lb pair; Pigeons, \$1.25 to 1.50 lb doz.

GAME—Steady trade. More or less stock was in poor order to-day. We quote: Quail, \$1 to 1.25 lb doz; Canvasbacks, \$2.50 to 4; Mallard, \$3.50 to 4; Widgeon, \$1.25 to 1.50; Teal, \$1.25 to 1.50; Sprig, \$1.75 to 2; Small Ducks, \$1 to 1.25; Gray Geese, \$2 to 2.50; Brant, \$1.25 to 1.50; English Snipe, \$1 to 1.50; Common Snipe, 50 to 75c; Hare, 75c to \$1; Rabbits, \$1.25 to 1.50.

WOOL—Values remain low. Moderate trade reported, mostly on scouring account. We quote spring:

California, year's fleece, 7 to 9c; do 6 to 8 months, 7 to 8c; do Foothill, 10 to 11c; do Northern, 12 to 13c; do extra Humboldt and Mendocino, 11 to 13c; Nevada, choice and light, 12 to 14c; do heavy, 8 to 10c; Oregon, Eastern, choice, 10 to 12c; do Eastern, poor, 7 to 9c; do Valley, 12 to 15c. We quote fall: Free Mountain, 6 to 7c; Northern defective, 5 to 7c; Southern and San Joaquin, 3 to 5c.

HIDES AND SKINS—Quotable as follows:

	Sound.	Culls.
Heavy Steers, 57 lbs up, ½ lb. 4½c	4	3
Medium Steers, 48 to 56 lbs. 4	3	2
Light, 42 to 47 lbs. 3	2	1
Cows, over 50 lbs. 3	3	2
Light Cows, 30 to 50 lbs. 3	2	1
Stags, 17 to 30 lbs. 2	2	1
Kips, 17 to 30 lbs. 4	3	2
Veal Skins, 10 to 17 lbs. 5	4	3
Calf Skins, 5 to 10 lbs. 6	5	4
Dry Hides, usual selection, 6c	6	5
Dry Kips, 6c	6	5
Shearling, 10 to 20c each; do, short, 25 to 40c each; do, medium, 40 to 60c each; do, long wool, 75c each; Deer Skins, summer, 25c; do, good medium, 15c; do, winter, 5c per lb; Goat Skins, 25 to 40c apiece for prime to perfect, 10 to 20c for damaged, and 5 to 10c each for Kids.		

PROVISIONS—We quote as follows: Eastern hams, 13½ to 14c lb; California hams, 12½ to 13c; Bacon, Eastern, extra light, 18½ to 19½c; medium, 12½ to 13c; do, light, 13 to 13½c; do, light, clear, 14½ to 15c; light, medium, boneless, 13½ to 14c; Pork, extra prime, \$14 to \$15.50; do, prime mess, \$15 to \$16; do, mess, \$23 to \$24; do, clear, \$25 to \$26; do, extra clear,

\$26 to \$27 ½ bbl; Pigs' Feet, \$12.50 ½ bbl; Beef, mess, bbls, \$7.50 to \$8; do, extra mess, bbls, \$8.50 to \$9; do, family, \$9.50 to \$10; extra do, \$11 to \$11.50 ½ bbl; do, smoked, 10 to 10½c; Eastern lard, tierces, 8½ to 9½c; do prime steam, 12c; Eastern pure, 10-lb pails, 12½c; 5-lb pails 12½c; 3-lb, 12½c; California, 10-lb tins, 11c; do, 5-lb, 11½c; do, kegs, 11½ to 12c; do, 20-lb buckets, 12½c; compound, 8½c for tierces and 9½c for hfl bbls.

San Francisco Meat Market.

Prices stationary. The supply is enough to satisfy all wants. Following are the rates for whole carcasses from slaughterers to dealers:

BEEF—First quality, 5 to 5½c; second quality, 4½ to 5c; third quality, 3½ to 4c lb.

CALVES—Quotable at 4 to 5c for large, and 6 to 7c lb for small.

MUTTON—Quotable at 4 to 5½c lb.

LAMB—Quotable at 6 to 7c lb.

PORK—Live hogs, on foot, grain fed, heavy and medium, 5½ to 5¾c; stock hogs, 5¾ to 5½c; dressed hogs, 8 to 8½c lb.

Tuesday's Sales of California Fruit at the East.

CHICAGO, November 7.—Porter Brothers Company sold at auction to-day five carloads of California fruit at the following prices: Cornichon Grapes, \$2; half-crates Cornichon Grapes, 80 to 95c; Tokay Grapes, \$1.30 to 1.90; half-crates Tokay Grapes, 45 to 90c; Muscat Grapes, \$1.10 to 1.65; half-crates Muscat Grapes 45 to 75c; half-crates Morocco Grapes, 95c; half-crates Verdelle Grapes, 40 to 65c; half-crates Ferrari Grapes, 55c; Coe's Late Red Plums, \$1.35 to 1.40.

CHICAGO, November 7.—The Earl Fruit Company sold California fruit at auction to-day as follows: Tokay Grapes, \$1.50 to 1.75; half-crates Tokay Grapes, 75 to 95c; Black Morocco Grapes, \$1.40; Emperor Grapes, \$1.35 to 1.50; Muscat Grapes, \$1.15 to 1.25; half-crates Muscat Grapes, 60 to 90c; Verdelle Grapes, \$1.15; half-crates Verdelle Grapes, 60c; Malaga Grapes, half-crates, 50 to 60c.

KANSAS CITY, November 7.—The Earl Fruit Company sold California fruit at auction to-day as follows: Winter Nels Pears, \$2.15 to 2.25; half-crates, Tokay Grapes, 85c to \$1.20; half-crates Muscat Grapes, 75c to \$1.15; half-crates Verdelle Grapes, 80c to \$1; half-crates Black Ferrari Grapes, \$1.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos. A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St., San Francisco.

"CANTON CLIPPER PLOWS,"

2 GANG, 3 GANG AND 4 GANG
WITH 8, 10, 12 AND 14-INCH PLOWS.

CANTON CLIPPER TRICYCLE PLOWS,
WITH 12, 14 AND 16-INCH PLOWS.

CANTON ADJUSTABLE LEVER HARROWS,
CUTTING FROM 10½ TO 17 FEET AND OVER.

CANTON ROSE DISC HARROWS,
5, 6, 8, 10 AND 12-FOOT CUT,
WITH 16 AND 20-INCH DISCS.

CANTON CLIPPER Steel Single Walking Plows,
WOOD AND STEEL BEAM, ALL SIZES.

CANTON CHILLED PLOWS,
ALL SIZES.

The above Plows, Harrows, etc., with a full line of Repairs, will be furnished this season at the very lowest prices possible by

P. P. MAST & CO.,
31 MARKET STREET, SAN FRANCISCO.

DEWEY & CO.
AMERICAN AND FOREIGN PATENT SOLICITORS
ESTABLISHED 1860.
OFFICE OF THE
"Mining and Scientific Press"
Pacific Rural Press
No 220 Market St.
TAKE ELEVATOR NO 12 FRONT ST.
SAN FRANCISCO, CALIF.

Patrons of Husbandry.

(Continued from page 334.)

San Jose Grange.

TO THE EDITOR:—King Prune, who for the last two months has been exercising such despotic sway over most of the members of San Jose Grange, has at last succumbed to the energy of the sturdy orchardist and the last remnants of the dethroned monarch are now being hauled in two, four and six horse teams to the fruit depot for shipment out of the State. The result is our members are returning in large numbers to the grange, and it is again in a flourishing condition.

The cranky condition of finances has caused our farmers to work as never they have before, and practice economy on lines heretofore unthought of, resulting greatly to their financial benefit.

An estimate was made in the writer's presence a few days ago that the farmers of Santa Clara county would receive two million dollars for the product of the tree and vine this year.

In answer to an argument that the country was going to the eternal bow-wows on account of hard times and the repeal of the silver purchasing bill, a member said that, so far as Santa Clara county was concerned, the statement was a huge mistake; that never during the many years residence in this county has he known money more plentiful or farmers in a better condition financially; that, while prices are and have been low, the unusually large crops have greatly overbalanced low prices.

Shall the State Grange have an exhibit at the Midwinter Fair was the principal topic for discussion to-day. The fact soon developed itself that the members of San Jose Grange were unanimously of the opinion that a creditable exhibit should be made if free space can be had in the center of the rotunda of the Agricultural and Horticultural Hall Building. The form of the exhibit is to be a representation of the mythical deities—Ceres, the goddess of the cereals and culture; Pomona, the goddess of fruits; and Flora, the goddess of flowers. These are to be represented life size in wax or other material, and to be surrounded by a display of grain, fruit and flowers.

Messrs. Jones and Loucks, a majority of the Executive Committee of the State Grange, are enthusiastically in favor of the project, and are willing that one-half of the expense shall be paid out of the State Grange fund, provided the total cost shall not exceed three hundred dollars. It was suggested that the balance could be readily raised by a few of the stronger granges without calling upon the weaker ones. As an evidence of the sincerity of San Jose Grange, a resolution was adopted appropriating fifty dollars for the purposes above indicated.

Mr. Jones said he had been requested by officials of the Midwinter Fair to present a formal application for space, which he had done, and expected an answer in a day or two. Mr. Jones was appointed a committee of one to ascertain as near as may be the actual expense of the proposed display and report at our next meeting on Nov. 11th.

The young ladies who had been waiting somewhat impatiently for the regular business of the grange to close were given control of the grange. The doors were opened for all comers, and the following programme arranged by Miss Lulu Tenny was given: Instrumental solo by Miss Elvira Stevens; vocal solo by Mrs. Rose M. Owen; reading, "Pleasures of Memory," by Mr. Langdon; recitation in character by Mr. McGinnis; song by the grange; instrumental solo by Miss Nellie Jeffords; remarks by Mr. Pettit and the writer on subjects chosen by the speakers.

Arrangements are being made for an old-time Harvest Feast for Saturday, Nov. 11th, at 10:30 A. M., and you, Mr. Editor, and your better half are cordially invited to be present, bringing with you not your pencil and paper, but a good appetite. Our grange would be pleased to make the acquaintance of the new secretary of State Grange. Invite him to come also and such other members of the order who can make it convenient to attend.

Some of our members feel quite indignant at the remarks reported to have been made by Mr. Morton, Secretary of Agriculture, and declare they will pay their respects to him in the near future.

Mr. J. C. Kingsbury, to whom was referred the duty of revising and condensing the ritual, informed the writer that it would be forwarded to the master of the State Grange at Syracuse, N. Y., also to all subordinate granges in this State the coming week.

AMOS ADAMS.

San Jose, Nov. 4, 1893.

From Yuba City.

A Fine Grange Day and How They Made It—Something Which May Be Accepted in the Way of Suggestions.

TO THE EDITOR:—Yuba City Grange held its regular meeting on Saturday Nov. 4th. The weather was perfect in every respect and the occasion drew a large attendance of members. Besides those of Yuba City Grange there were present representatives from Wheatland, Grimes, South Sutter, March and North Butte Granges.

The hall was most handsomely decorated in honor of Ceres, the goddess of the harvest, with bundles of grain and the products of our gardens, vineyards and orchards. But to the regret of everyone, Worthy Ceres, Miss Ella Meeker, was unable to be present on account of illness. After the usual hustle and bustle of a feast day, Worthy Master Bunce called the meeting to order. Routine business came first, then instructions in the Third and Fourth Degree, after which a procession was formed for the banquet hall where at least a hundred plates were spread upon tables filled with the choicest products of our farms. Presently every chance was taken and all did themselves justice in appeasing the inner demands that had been sharpened by an early breakfast and a ride of many miles through the keen morning air.

After an hour's exercises the march was again resumed toward the business hall and which was soon filled to its utmost capacity with members of the order and their numerous friends, the doors being open to the public during the afternoon exercises. As usual, the program consisted of vocal and instrumental music, recitations of choice and popular selections, all of which were rendered in a highly pleasing and able manner.

The *Gleaner*, after a suspension of several months again made its appearance and the reading was listened to with marked attention. There was apparent a slight departure in its contents from some former issues and the editors had their misgivings as to the reception to be expected. However, the close attention given and the entire absence of frowns, encouraged them to proceed in the readings. There were papers on the Tariff, Hard Times, The Remedy, Successful Leadership, and, What We Do in the Grange. A very meritorious paper was composed and read by Past Master W. J. Hardy, on the subject of Bachelors. The papers were all original hence contained at least some original ideas.

Upon the Tariff Question.—It was held that our paternal kinsman, "Uncle Sam," having a large family to support required the assistance of his numerous nephews and nieces, and that this contribution was made through the laying on of import duties. Now it was thought that all the tariff agitation was about the distribution of the burden to be borne, or the pleasure to be enjoyed. It was pointed out that human nature remained still the same as for many years. Everyone was studying how to cast his burden off and let it fall on whom it may and so enjoy the fun without the labor. The belief was expressed that the western farmers had exhibited the most docile spirit under their burden. It was not claimed that the burden could be evenly adjusted, hence the ever recurring tariff agitation.

Hard Times was thought to be the result of inflation, overproduction, overtrading and the creation of debt, sooner or later demanding a settlement, when, strange to say, money goes into retirement and the panic ensues. The remedy suggested was economy in everything, from implements to clothing, and from pools to whiskey, and stick to it until times improve which always has followed the periods of stringency. Above all, it was held that idleness should be avoided and that all should be compelled to earn their own living, thus helping the overburdened producers and render new enterprises possible, while idleness was a mere consumer returning no equivalent.

Successful Leadership was thought to be embodied in the individual who kept in easy reach of his followers and who was content to labor in any position until wanted at the front. Instances were cited where the most brilliant leaders got so far in advance of the people as to lose their identity when the multitude turned aside and followed the voice nearer by. It was asserted that the most reliable and successful leaders were those in the front ranks of life, but in touch with the common people.

What We Do in the Grange was shown to be nothing more than to seek the good of the members; to labor for the good of mankind generally and supply advantages to the isolated American farmer, heretofore only

enjoyed by the residents of the city. We meet to advance our calling in every way, consistent with honor and the best type of civilization, rendering farm and country life more attractive and our homes more pleasing. These, Mr. Editor, are some of the hints thrown out by the *Gleaner* on the vital questions of the day, but the wise and the droll had their place, and the whole proceeding rendered the day pleasing and profitable.

I write on Monday while the gentle rain drops are descending on the just and the well we haven't any of them. Let it come in sufficient quantity to sprout vegetation and start the plows; but, O, I forgot, there is yet much corn to gather and many second crop raisins to dry; so, for their sake I leave my good friends in the tender care of an all-wise providence. Nevertheless, the meat and bread growers want rain.

Fraternally yours, GEORGE OHLEYER.
Yuba City, Nov. 6, 1893.

Field Day in Enterprise Grange.

Secretary Morton's Criticisms of the Grange Warmly Condemned—Road Question Under Discussion.

Saturday, Nov. 4th, was the date fixed upon by Pomona Grange of Sacramento county to pay a fraternal visit to Enterprise Grange. An informal meeting was held in the forenoon, at which an article was read from the American Grange Bulletin of Oct. 26, 1893, containing extracts from an address by Hon. J. Sterling Morton, Secretary of Agriculture, before the Agricultural Congress at the World's Fair, wherein he opposed the efforts farmers are making to better their condition through organization, while knowing full well that the very position he holds was created through the influence of those organizations. His attitude toward the interests of the agricultural and food producers of the nation has been inimical from the outset, and farmers look with distrust upon his continuance in the Cabinet.

The article was discussed and a committee appointed to prepare resolutions upon the subject.

After an hour spent in enjoyment of the dinner, Enterprise Grange was called to order and routine business transacted. A resolution was presented condemnatory of the Secretary of Agriculture, Hon. J. Sterling Morton, and urging the National Grange to use all honorable means to secure his removal and the appointment of a Secretary in sympathy with the needs and interests of the agricultural classes. The resolution was unanimously adopted and ordered forwarded to our National Grange delegates.

The grange was then closed and an open meeting occurred, at which "Road Improvement" was discussed pro and con, and while there was much opposition expressed to the bonding of the county, a great amount of statistics, bond history and other information was given.

While good roads are a thing greatly to be desired, it is well to consider thoroughly the advisability of incurring a heavy indebtedness to secure them. To many it seems as though the expenditure of the present road tax, under competent supervision, would greatly improve the present condition of the roads. As the shadows lengthened, the many in attendance reluctantly withdrew.

The hall was profusely decorated with beautiful flowers, and Mrs. G. C. McMullen in conclusion said: "There has been an undertone of sadness through our enjoyment of the day. We have missed the kindly greeting of one who was ever wont to be a moving spirit in this grange, and in memory of Sister E. B. Plummer those who brought these flowers wish them placed upon her last earthly resting place as a token of affectionate remembrance."

PATRON.

AGENTS \$50 to \$100 WEEK.
Ladies or Gents. Best seller known. Needed in every home, place of business or farm. They are round. "Home" Electric Motor runs all kinds of light machinery. Cheap as power on earth. Connected instantly to wash or sewing machine, corn sheller, pump, fan, heater, Jeweler's or dentist's machinery, &c. Clean, safe, quiet, lasts a life-time. No experience needed. To show in operation means a sale. Guaranteed. Profit immense. Circulars free.

W. O. HARRISON & CO., Columbus, O.

—THE—
HALSTED INCUBATOR
COMPANY,
1312 Myrtle Street, Oakland, Cal.
Send Stamp for Circular

LIGHTNING LARGEST WELL MACHINERY Works.
All kinds of tools. Fortune for the driller by using our Adamantine process; can take a core. Perfectly Economical. Artesian Pumping Rises to work by Steam, Air, etc. Let us help you. THE AMERICAN WELL WORKS, Aurora, Ill.; Chicago, Ill.; Dallas, Tex.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING OCT. 10, 1893.

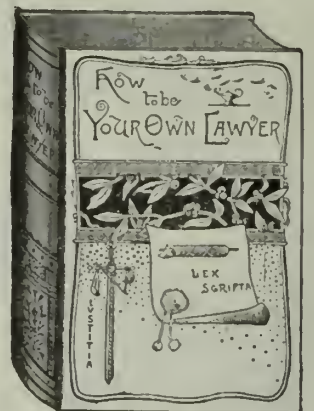
506,356—WATER PIPER—Bedbury & Badgley, S. F.
506,493—PRESERVING WOOD—F. Hall, Tacoma, Wash.
506,504—ITRACOR—O. B. Hollis, Spokane, Wash.
506,508—WHEEL—Jacques & Koster, Spokane, Wash.
506,528—CAR-COUPING—Jas. McHugh, S. F.
506,611—FAUCET—H. E. Thomas, S. F.
506,666—INDEX—Jas. Thorne, Oregon City, Or.
506,694—TELEGRAPH TRANSMITTER—C. Willoughby, S. F.
22,834—DESIGN—D. Walsh, S. F.

FOR WEEK ENDING OCT. 17, 1893.

506,764—WREED-CUTTER, ETC.—A. N. Beebe, King City, Cal.
506,975—WATER HEATER—J. B. Butterworth, S. F.
506,980—CLOTHES-PIN—J. W. Cook, Harrisburg, Or.
506,814—VEHICLE GEAR—A. Dratt, S. F.
506,998—GAGING SAWTREETH—E. J. Gould, Cedar Home, Wash.
506,877—HARVESTER—Benj. Holt, Stockton, Cal.
506,878—CAN BODY MACHINER—R. L. Hume, Gold Beach, Or.
507,072—JOURNAL BOX—J. C. Kilton, Los Angeles, Cal.
506,931—DRILL BRACK—W. P. Nolan, S. F.
506,934—PLUMB LEVEL—John Pettit, San Diego, Cal.
507,045—COLLAR—J. Stern, S. F.
507,048—PLASTER—E. H. Subl, Peninsular, Or.
506,748—PROPELLER—H. Thibault, Stockton, Cal.
506,749—CAR VENTILATOR—C. B. Titcomb, S. F.
506,888—BINDER FOR SEWING MACHINER—C. L. Torr, Petaluma, Cal.
506,891—CASH-REGISTER—F. W. Vaughan, S. F.
506,892—BALING PRESS—John Wiebe, S. F.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast Inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

\$1000 WORTH OF LAW FOR \$1.50.



"How to Be Your Own Lawyer" is the title of a book of over 500 pages, adapted for use in every State and Territory in the Union, and is by far the best and most complete work of the kind ever published. It gives instruction on all the most important law points which a Farmer, Mechanic, Merchant or anybody else would want to know about, and is carefully studied and kept at hand for consultation when needed will save any man, in the course of an ordinary business career, hundreds, if not thousands of dollars. It is a lawyer whose retaining fee (the price of the book, \$1.50) has to be paid but once in a lifetime. Plain and concise directions are given and forms furnished for the transaction of all kinds of business, and the preparation of every description of legal document in common use. A copy of this valuable work, handsomely bound in extra cloth, with ink side-stamp, will be mailed to any address on receipt of \$1.50.

Address THE DEWEY PUBLISHING CO.,
220 Market St., San Francisco, Cal.

VALUABLE

Information relating to orchard tree planting and care of orchards, together with a complete catalogue of the

RANCHO CHICO

NURSERIES, will be sent FREE, postage paid, to any address, upon application to

JOHN BIDWELL,

Chico, Butte County, California.

RANCHO CHICO ORCHARDS EMBRACE OVER 1000 ACRES IN FULL BEARING.

B. F. GODFREY & CO.,

NURSERYMEN,

Davisville, Cal.

Write for Catalogue and Prices.

The BEST POULTRY JOURNAL.

Sent on Trial Six Months for ONLY 25 CENTS. Teaches How to Make Money with A Few Hens. It is well worth \$1.00. Send stamps. Sample free. FARM-POULTRY is the name of it. Mention this ad. I. S. Johnson & Co., Boston, Mass.

California Inventors

Should consult DEWEY & CO. AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists and large practice as Patent attorneys enables them to offer Pacific Coast Inventors far better service than they can obtain elsewhere. Send for free circulars of information. No 220 Market St., San Francisco Cal.

Salt from Reclaimed Sea Lands.

Dr. C. V. Riley, of the Department of Agriculture, to whom the *Scientific American* referred a request to know how to get rid of salt in land reclaimed from the sea, writes as follows:

I received a note from you requesting an answer to a question asked by one of your subscribers, as to what process should be used to get rid of the salt in land that has been reclaimed from the sea and dried, and what plants can be set therein to the greatest advantage. The question cannot be intelligently answered without more detailed information as to the nature of the soil and the latitude. If the land is sandy, there is no better way than by leaching through irrigation, and the natural rains in time will do this, if there is good drainage. If the soil is tenacious, it will, however, be very difficult to get rid of the salt. The plants which would be recommended for a northern latitude would be different from those which might succeed in a more southern climate. There are certain grasses which thrive in salt lands, especially sandy lands; for example, the so-called black grasses, which make fairly good hay and are used for various other purposes. These are *Spartina juncea* and *Juncus gerardi*. Another grass which thrives in sandy soils and helps to prevent the sand from drifting is *Ammophila arundinacea*.

These will all grow in northern latitudes, and the salt marsh grasses, when they once get a good foothold, will thrive in such soil. The barberries and the species of euonymus, especially *Euonymus japonica*, are known to thrive in salty lands. Of cultivated crops, the experience of the Mormons in Utah, near the Great Salt Lake, would indicate that beets, followed by potatoes, are among the most profitable crops in saline lands. It is questionable whether much salt long remains to be of any injury to ordinary plants in reclaimed lands that are not periodically overflowed again by salt water.

Electricity in Gardening.

By the use of electric light the Hon. W. W. Rawson of Arlington, Mass., claims he makes a gain of five days in each of his three crops of lettuce—that is, two weeks in a season; that the gain on one crop pays all the expense of the electric lighting for the season, thus giving him the gain on the other two for extra profit. His attention was first called to the usefulness of the light by the advance made in the growth at the ends of the greenhouse next the street and in the glare of the electric light. This was so marked that he introduced the light through his lettuce and cucumber houses. Dr. Bailey of Cornell University says, as the results of his own experiments, that the influence of the light is greatly modified by the interposition of a glass roof. Plants injured by a naked light were benefited by the protected light. Five hours light per night at a distance of 12 feet hastened maturity a week or ten days, but proved injurious to new plants and those newly transplanted.

Agricultural Electricity.

An interesting example of electricity as applied to farm work is now in operation at a Scotch farm, says the *Scientific American*. The whole of the usual farm machinery, such as thrashing, sowing, corn thrashing and the like, is here driven by an electric motor. The electricity is generated by water-power, the turbine wheel which drives the dynamo being about 1000 yards from the farm. The electric current is conveyed by underground wires to the house and farm, in each of which a storage battery is placed. These supply the electric current for lighting and motive purposes when the machinery is not working. The whole of the mansion is illuminated by electric light, and an electric motor is provided for pumping the water for domestic purposes.

Reducing Weight.

A young English girl afflicted with an undesirable amount of adipose tissue has succeeded in ridding herself of a large amount of it, without injuring her health by following the regime given below. She began by getting up at six o'clock every morning and taking a three-mile walk before breakfast, without considering the weather. At nine o'clock she had a large cup of coffee, with very little sugar and a slice of dry bread. Then she occupied herself as she liked until two o'clock, when more bread and some vegetables composed her meal. At 4:30 she was off for another long walk, followed by a cup of tea and a few dry biscuits. Ninety days of this regime reduced her weight from 185 to 145 pounds.

Commission Merchants.

ALLISON, GRAY & CO.,

501, 503, 505, 507 & 509 Front St.,
And 300 Washington Street, SAN FRANCISCO.

—GENERAL—

Commission - Merchants,
GREEN and DRIED FRUITS,
Poultry, Eggs, Game, Grain, Produce and Wool.

P. STEINHAGEN & CO



404 & 406 DAVIS ST. S.F.

MOORE, FERGUSON & CO.
WOOL, GRAIN, FLOUR

—AND—

General Commission Merchants,
310 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

LINDSAY & CRAIG,

Crocker Building.....San Francisco

Mortgages Bought, Loans Negotiated.

If you desire to sell your farm send us particulars.

CANCER
CURED

WITH SOOTHING BALMY OILS.

WE SUCCESSFULLY TREAT

Cancer, Tumor, Catarrh, Piles, Fistula,
Eczema and all Skin and Womb
Diseases.

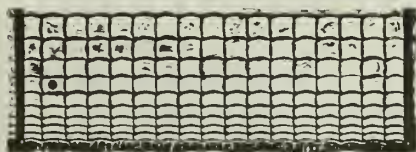
CANCER of the nose, eye, lip, ear, neck, breast, stomach or womb; in fact, all diseased internal and external organs or tissues, successfully treated, without the knife or burning caustic plasters, but with soothing, balmy magnetic oils. Beware of imitations as there are those who hope to profit by advertising an oil cure for these diseases. We are the originators of this system, all others are frauds.

Correspondence solicited. Consultation free. Testimonials furnished. Address

DR. EUGENE BUELL,

Cancer Institute,

ROOM 57, SUPREME COURT BUILDING,
Cor. McAllister and Larkin Sts., San Francisco, Cal.



More Than
Satisfied.

That is the way the General Manager of a Railroad talked about our fence to an inquirer a few days since. He has about 20 miles of it in use. The Superintendent of another road said at a convention of Superintendents in Chicago, that with 65 miles in use, he had no criticism to make.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

HEALD'S

BUSINESS COLLEGE.

24 POST STREET.....SAN FRANCISCO.
FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Book keeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR. E. P. HEALD, Pres. O. S. HALEY, Sec.

Seeds, Plants, Etc.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrabalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond
Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

Santa Rosa
Nurseries.

AN IMMENSE AND WELL
ASSORTED STOCK.

TREES TRUE TO NAME.—Warranted clean and raised without irrigation.

PEARS AND PRUNES at about HALF USUAL PRICES till my surplus is sold.

Price List mailed free.

Address R. W. Bell, Santa Rosa, Cal.

GOLD DUST.

"Gold Dust Cling," says H. E. Van Demau, U. S. Pomologist, "is a yellow cling of medium size, round and regular in shape, and very firm in flesh. The color is very attractive, being dark yellow with a very red cheek. It bears heavily and carries to market with very little damage. Coming as it does before the main peach crop is gathered, it is about the first yellow cling of any special value and therefore finds a ready sale. Each year it gains in favor, but as it is a variety but recently originated the public know little of it. It is a very profitable variety." Price \$1 each, \$5 per half dozen. For sale by SACRAMENTO RIVER NURSERY COMPANY, Growers of HIGH-GRADE Fruit Trees, Walnut Grove, Sacramento County, California. Our Specialties—Genuine Tragedy Prunes, Olyman and Japan Plums on true Myrabalan whole root seedlings—we use no piece roots nor cuttings; price 15 cents each; Sacramento River Bartlett and Peaches—price 10 cents each. Large quantities at lower rates. WE GUARANTEE OUR TREES TRUE TO NAME.

MYROBALAN PLUM

AND

MAZZARD CHERRY SEED.

Fresh Crop Now Ready for Shipment.

FULL PRICE LIST OF

FRUIT STOCKS AND SEEDS

ON APPLICATION.

THOMAS MEEHAN & SONS, GERMANTOWN, PA.

STOCKTON NURSERIES,

—ESTABLISHED 1853.—

FRUIT TREES. FRUIT TREES.

—GRAPE VINES.—

Also Fine Stock of Shade and Ornamental Trees, Shrubs, Palms, Roses and Carnations.

Correspondence Solicited.

PLANTS IN GREAT VARIETY.

E. C. CLOWES, STOCKTON, CAL.

THE
RAISIN INDUSTRY.

A PRACTICAL TREATISE ON THE RAISIN GRAPES,
THEIR HISTORY, CULTURE AND CURING.

By GUSTAV EISEN.

This is the Standard Work on the Raisin Industry in California. It has been approved by Prof. Hilgard, Prof. Wickson, Mr. Chas. A. Wetmore and a multitude of Practical Raisin Growers.

Sold only by the DEWEY PUBLISHING CO. or its Agents at the uniform price of \$3.00, postage prepaid. Orders should be addressed:

THE DEWEY PUBLISHING CO.,

220 Market St., San Francisco.

OLIVE TREES.

ALL KINDS OF
Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,
Pomona, Cal.

OLIVE TREES

In Variety for Nurserymen,
Dealers and Planters.

Will also contract now to propagate Rooted Olive Cuttings for persons who wish to plant them in nursery spring of 1894.

OLIVE CULTURE IN CALIFORNIA,

Sixteen pages, mailed free.

Address:

JOHN S. CALKINS,

POMONA, LOS ANGELES COUNTY, CAL.

CALIFORNIA FRUITS

—AND—

HOW TO GROW THEM.

A MANUAL OF METHODS WHICH HAVE YIELDED
GREATEST SUCCESS; WITH LISTS OF VARIETIES
BEST ADAPTED TO THE DIFFERENT
DISTRICTS OF THE STATE.

PRACTICAL, EXPLICIT, COMPREHENSIVE.

Embodying the Experience and Methods of Hundreds of Successful Growers, and Constituting a Trustworthy Guide by which the Inexperienced may Successfully Produce the Fruits for which California is Famous

SECOND EDITION, REVISED AND ENLARGED.

BY EDWARD J. WICKSON, A. M.

Assoc. Prof. Agriculture, Horticulture and Entomology,
University of California; Horticultural Editor
PACIFIC RURAL PRESS, San Francisco; Sec'y
California State Horticultural Society;
Pres. California State Floral Society; Etc.

Large Octavo—599 Pages, Fully Illustrated.
PRICE \$3, POSTPAID.

FOR SALE BY

THE DEWEY PUBLISHING CO.,

PUBLISHERS PACIFIC RURAL PRESS,

220 Market Street, Elevator, 12 Front Street
SAN FRANCISCO, CAL.

IT TAKES TOO MUCH MONEY TO BUY

Space in this paper, sufficient to show cuts of all the different styles of we manufacture or sell, and as you are not so much interested in seeing pictures as you are in informing yourself where the very best fall and winter implements can be procured during the prevalence of **PLOWS** we have decided, for the present at least, to simply call your attention to the fact that **THESE HARD TIMES** we are fully equipped with catalogues and descriptive circulars of our seeding and cultivating implements, and you can have them sent to you, just as well as not, if you will only ask for them. A postal card addressed to us, with a request for such circulars and catalogues as you desire, will receive prompt attention and the printed matter desired will be forwarded to you by first mail.

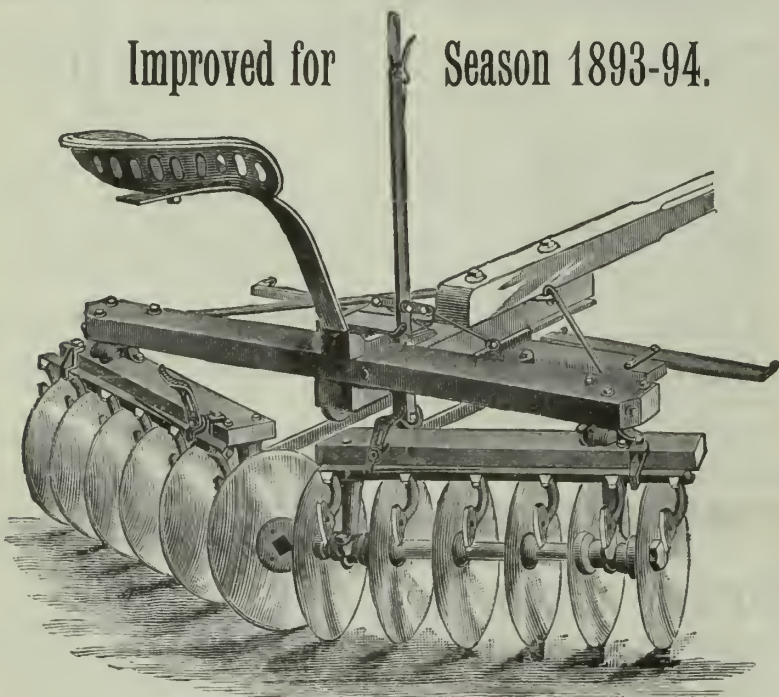
If we can keep our expenses down, we can sell you all the more closely, and we respectfully invite your co-operation. We want your trade, and before buying you want to be fully assured that the articles we carry are what you want. Full descriptive circulars are the best mediums for the dissemination of just such information as you are in search of. Why not try it?

**YOURS FOR
ECONOMY.**

H. C. SHAW PLOW WORKS, STOCKTON, CAL.

NEW CLIMAX DISC HARROWS

Improved for Season 1893-94.



THE CLIMAX will accomplish more work in the same space of time than any Harrow made, and is unequalled for vineyard or orchard cultivation. It is a perfect success, because it does the most and best work with the least labor. It saves time, money, labor and seed grain. It loosens, crumbles and lightens the soil, but does not harden it. It covers broad-cast grain so effectually as to save from a tenth to a fifth part of seed, commonly lost. It takes the soil from below and rolls it upward to the surface, pulverizing and exposing it to the enriching sun and air. Good tillage requires this.

GANG PLOWS—Our line is the largest and best in the State. It includes the Eureka, Peerless, Granger and Reversible Mold Gangs, in all sizes.

SINGLE PLOWS—We furnish the Benicia, Star, Gale, Princess and a score of others. We guarantee their quality.

HARROWS—We have all the various styles, from a common Drag to a Steel Frame Spring Tooth Lever Harrow. Also the Climax and Tiger Disc Harrows.

SEEDERS—Our stock is not equalled; before purchasing some other kind examine our Gem, with Armstrong's patent force feed, Gorham, Triumph, Monarch, Climax and others.

WRITE FOR OUR NO. 27 LATEST SPECIAL 140-PAGE CATALOGUE of Plows, Harrows, Seeders, Cultivators, etc.

BAKER & HAMILTON,

SAN FRANCISCO AND SACRAMENTO.

LOW PRICES ON ALMOND TREES!

California Paper-Shell, Nonpareil, Ne Plus Ultra and I. X. L.

A pamphlet on Almonds mailed free of charge on application. A large supply of the GOLDEN PEACH and FRENCH PRUNE. All kinds of leading fruit trees for sale. No charges made for haling trees.

PRICES: 4 to 6 ft. Trees, 80c; 3 to 4 ft. Trees, 50c.

Address, **PERCY W. TREAT,**

Davisville Nurseries.....Concord, California

Pepper's Nurseries.

ESTABLISHED IN 1858.

For Sale at Low Rates, a General Assortment of Hardy Deciduous Fruit Trees.

I do not buy trees to sell; what is offered is grown in my own grounds and free from scale bugs. No scale bugs of any kind to be found in the Nursery. No agents employed. Order direct from the nursery and procure your trees true to label. Order early, as early planting is the most successful with deciduous trees. Prices furnished on application.

Address **W. H. PEPPER, Petaluma, Cal.**

Trees, Vines and Plants,

— FOR 1893 and 1894. —

Terms on Application.

Address, **L. D. BUTT,**

Pearryn, Placer Co.....California.

WE GIVE ESPECIAL ATTENTION TO

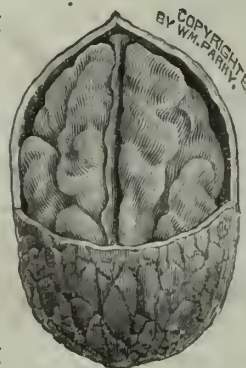
Fruit Trees! Deciduous Fruit Trees!

ALEXANDER & HAMMON'S

Rio Bonito Nurseries, Biggs, Butte Co., Cal.

KAGHAZI

:- SOFT SHELL :-



PERSIAN

:- WALNUT! :-

Our Stock of TREES and VINES is Most Complete in EVERY CLASS of Fruits.

A LARGE STOCK OF THOMPSON'S SEEDLESS GRAPES.

SHIPPING, CANNING and DRYING Fruits of all Kinds.

Best Assortment of RAISIN and TABLE GRAPES in California.

Early Shipping Plums a Specialty.

SPECIAL PRICES FOR TREES IN LARGE QUANTITIES.

DURING the last three years, trees grown on the FEATHER RIVER BOTTOM LANDS, at RIO BONITO, BUTTE COUNTY, have been much sought after, and the demand for them is increasing all over the State where they have been planted. Owing to the peculiar adaptability of the soil and climate of this section for growing nursery stock, the trees making a very large and well-furnished system of root growth, and maintaining a correspondingly strong and vigorous top, maturing the wood thoroughly, we are enabled to supply our patrons with the best of trees, healthy in every respect, entirely free from insect pests, and in perfect condition for transplanting.

If You Are Going To Plant Trees, It Will Pay You To Correspond With Us Before Purchasing.

ALEXANDER & HAMMON,

BIGGS, BUTTE COUNTY. CALIFORNIA.

NAPA VALLEY NURSERIES.

NEW CATALOGUES NOW READY.

Fruit, Nut and Shade Trees, Grape Vines, Etc., Citrus Fruits, Ornamental Shrubs, Flowering Plants, Roses, Palms, Bulbs, Seeds, Etc.

Fruit and Nut Trees propagated from bearing orchards at Sausal Fruit Farm; Unirrigated, Clean and Healthy. Do not fail to correspond before making purchases. Satisfaction guaranteed.

LEONARD COATES, - - - NAPA, CAL.

McKEVITT'S EARLY.

The New Yellow Freestone Peach!
— FIRST AND BEST OF EARLY YELLOW PEACHES. —

RIPENS IMMEDIATELY AFTER THE ALEXANDER (White Cling), which is the earliest peach in market. Fruit is round, of medium size, VERY HIGHLY COLORED, flesh firm and sweet.

THIS PEACH HAS BEEN SUCCESSFULLY SHIPPED EAST FOR FIVE YEARS and is no new, untried variety.

Tree healthy, strong grower, and heavy bearer, never having missed a crop. A limited number of yearling trees for sale this season. Apply early before stock is exhausted.

FRANK B. McKEVITT, : : : : VACAVILLE, CAL.



Vol. XLVI. No. 21.

SAN FRANCISCO, SATURDAY, NOVEMBER 18, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market Street.

The Olive Product.

The early varieties of the olive are ripening fast, and there is great activity among those beginning in this production to possess themselves of the best appliances and information on the handling of the crop. All those supposed to know anything on the subject are beset with inquiries, which no doubt they do the best they can to satisfy. In many places this year's fruit is the first of any amount which has appeared on the trees, and many growers have put off much too long the arrangements for pickling and oil-making. Fortunately, the crop on young trees is small, and perhaps cannot be better used than in experimenting with oil-making and pickling according to the many accounts which have been published. Much can be learned this year, and investment in appliances and buildings can be much more intelligently made after such lessons and such points as can be gained by visits and discussion. Next year should see the construction of several vicinity mills and private establishments.

Owing to the great interest awakened in the olive during the last decade, olive trees have been planted in all counties where our common orchard and semi-tropical fruits are grown at all. The tree will not of course go as high on the mountains as some of the deciduous fruits; but, aside from this, from the rich valley lands to the light and stony hillsides, the planting has extended. It is estimated that about 8000 acres of olives have been thus far planted, of which nearly three-quarters have begun bearing, though only a small fraction of this amount has reached age for large yields. The local product of olive oil is therefore only about ten or twelve thousand gallons and of pickled olives about fifty thousand gallons. These figures will soon be doubled if all goes well. The demand for California oil and pickles has been very satisfactory and bids fair to increase adequately, especially if present practices of adulterating which thrive right in our own cities can be strictly dealt with. It is notorious that the most attractive labels dishonor the name of the State by placing it upon a mixture of base oils for the deception of the public.

Our engraving shows a young olive tree recently having come into bearing. It is a well-shaped tree, and, with a little intelligent attention for the next few years, will assume a very satisfactory permanent form. It is a more erect grower than some varieties and therefore more easily trained; but even the most groveling variety can be raised aloft with patience and staking and utting at the right places. The olive grower has to pay more attention to the use of upward growing shoots from recurving branches than the trainer of any other tree we have to handle. Rising by crooked elbows, as it may be termed, is about the only way some varieties can be handled; cut to an upward shoot on the upper side of a prostrate branch, cutting rather close to the center of the tree perhaps, and the growth will be raised and given a new direction. The shaping of the olive perhaps calls for more contemplative action than any fruit tree which we bring under the knife.

We see it stated in a Chicago paper that the Deere Plow Co., of Moline, Illinois, has engaged space at the forthcoming Midwinter Fair in this city in which to make a historical exhibition of plows. This includes plows in use from the earliest times, models of which have been collected from the fields of Japan, China, Egypt, Syria and other countries. The American plow will of course



YOUNG OLIVE TREE IN BEARING.

be very handsomely finished in this exhibit, and it is aimed to show that this is very superior to all other types. This exhibit shows very decidedly the condition of the manufacture of plows in the different countries, and also furnishes an interesting study of the working of the American and English patent system.

SEVERAL northern and central California counties have agreed to combine in a special building at the Midwinter Fair and have secured a situation.

The Los Angeles Convention of Fruit-Growers.

On Tuesday morning of next week, Nov. 21st, the annual convention of fruit-growers, under the auspices of the State Board of Horticulture, will meet in Los Angeles and continue in session four days. There will be a full array of speakers on all subjects of interest and importance, and an equipment of committees to make recommendations looking to the solution of problems which are most intimately connected with the profitable prosecution of fruit production. The prospect certainly is that the convention will be the most interesting and significant ever held in the State and that its action will be wide-reaching. North and south similarly unsatisfactory conditions of shipment and marketing prevail. It must be acknowledged that we have learned how to grow fruit very well under the new natural conditions which prevail in this State, but we have not learned how to dispose of it so as to give the grower his due proportion of the gross proceeds. Unfortunately, to grow good fruit is naught unless it be well sold, and surely the intelligence which has learned how to secure good trees and protect them from pests can, with proper application, give the product a direct and pirate-free channel to the consumer. To do this is the duty of all who have their time and earnings locked up in this business, and we therefore urge all who can to go to Los Angeles as a matter of duty to ensure the safety and profitability of the investments they have made.

Los Angeles is a delightful city for a sojourn. Those who have not seen it for five years will hardly recognize its main business streets to-day. They will find better accommodations, better means of transportation and a more cosmopolitan spirit prevailing than existed five years ago. And the Los Angeles greeting and hospitality—they are warm as its sunshine, sweet as its gardens of flowers and generous as its conception of its own future. Let the State go to Los Angeles next week.

It is stated that Montana is being cleaned out of cattle so that next year's supply must be reduced. Along 175 miles of the Montana Central division of the Great Northern, from Cascade and Armington to Havre, there have been loaded 1749 cars, or 206 trainloads. This would make a continuous train twelve miles long, and does not include the number of cars from points farther east on the Great Northern or along the North Pacific. Of this amount 75 per cent was cattle and 25 per cent sheep. By way of comparison, it may be stated that the Montana Central last year handled only 130

trainloads. Stockmen say that the number of cattle marketed in 1894 must be greatly below the average because of the rush of 1893.

ONE of the largest creameries in the State will soon be established at San Geronio, near Pescadero. A company has been formed with \$20,000 capital, and the contract for building a factory has been let. It will handle the milk of 2000 cows. This enterprise will, no doubt, add greatly to the resources of San Mateo county.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco., Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half Inch (1 square).....	1.00	2.50	6.50	22.00
One Inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Registered at S. F. Post Office as second-class mail matter.

Our latest forms go to press Wednesday evening.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, November 18, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—Young Olive Tree in Bearing, 341.
EDITORIALS.—The Olive Product: The Los Angeles Convention of Fruit-Growers; Miscellaneous, 341. The Week; Corporation or Colony; Two Great Land Deals; Miscellaneous, 342. From an Independent Standpoint; The Projected State Fruit Exchange, 343.
CORRESPONDENCE.—Mr. McCoppin Recounts the Facts; Potatoes in the San Joaquin, 344.
MISCELLANEOUS.—A Strong Growers' Organization Necessary; California vs. Spanish Grapes; Sulphuring for Red Spider; The Southern Vine Disease, 344.
HORTICULTURE.—Pickling Olives; Pruning the Olive; Fruits and the Mines; Renovating Old Orchards, 345.
FLORIST AND GARDENER.—Dutch Bulbs in California, 346.
CEREAL CROPS.—Value of Summer Fallow, 346.
POULTRY YARD.—Make Them Scratch; Value of Fresh Bone for Fowls, 346.
SWINE YARD.—Hogs in San Joaquin Valley, 347.
THE STABLE.—Education of Young Horses, 347.
THE IRRIGATIONIST.—Importance of an Adequate Water Supply for Plants, 347.
THE HOME CIRCLE.—Miscellaneous, 348-349.
DOMESTIC ECONOMY.—Miscellaneous, 349.
PATRONS OF HUSBANDRY.—Editorial Observations; The Grange as an Organization; Mr. Brigham in Reply to Secretary Morton; From Tulare Grange; The Secretary's Column, 350. From Pescadero; From Live Oak; At Rest, 354.
AGRICULTURAL NOTES, 351.
MARKET REPORTS.—The Local Produce Market, 353.

BUSINESS ANNOUNCEMENTS.

(NEW THIS ISSUE.)

	PAGE.
Plows—Deere Implement Co.....	356
Agricultural Implements—Baker & Hamilton.....	353
Dairy Machinery—A. J. Van Drake.....	354
Olive Trees—C. F. Loop & Son, Pomona, Cal.....	355
Prune Trees—Balfour, Guthrie & Co.....	355
Spark's Apricot—N. B. Smith, Ventura, Cal.....	355
Jersey Cattle—L. F. Eaton, Florin, Cal.....	352

See Advertising Columns.

The Week.

If all the gossip of the dailies prove true, California will be somewhat crowded this winter. It is estimated that the overland roads will bring in as many people as we now have in our regular population. If our arithmetic is any good, this would mean 12,500 per day for 100 days, which strikes us as rather a high figure; but, supposing it to be true, and each one brings \$100 or \$1000, wouldn't it make a lot of people and a heap of money? If any one feels blue with hard times and depression, let him juggle with these figures a little and see how jolly he will feel.

Hard times do not seem to discourage large enterprises. Greater enterprises for development and colonization are rife than usual, which shows that some people have plenty of confidence. As a matter of fact California has done remarkably well for such times, and the lessons learned are likely to be more profitable in the long run than the larger receipts of coin which a few months of ordinary activity would have brought. It is just as well to put a cheerful face on the matter. It will make one handsomer when the better times come.

FRUIT-SHIPPERS should not draw wrong deductions from the activity of the Chicago market for California fruit this year and argue that there should be any relaxation of the effort to develop other outlets. A Chicago merchant has written that Chicago need not be expected to do so well in the future, and uses these words: "Chicago is indebted to the World's Fair for her big boost this year. She certainly has taken a lot of fruit at fairly good prices, especially the last of the season. She has had the benefit of money drained from all parts of the United States dumped into her lap." The masses of the people in other cities denied themselves luxuries that they might be able to go to the World's Fair and their purchases of California fruit were probably restricted. The lesson from these statements is plain; and it is true, whether these statements are correct or not, that California shippers must develop other Eastern markets and not look upon Chicago as adequate to the handling of our vast product. It is an old story, but a true and important one.

A SPECIAL TRAIN of 17 cars of dried and canned fruit and raisins was sent East from Ontario in one day.

Corporation or Colony.

Californians who are not widely read in Eastern agricultural discussion may be surprised that there is now being earnestly argued at the East the advantages which might accrue from the substitution of large corporate enterprises for the individual farm ownership which is now the rule. One writer on the subject is so much in earnest that he has produced a book on the subject, of which we have seen notices in Eastern journals. The idea is so much at variance with California experience, and in such direct conflict with our ideals of methods by which the highest prosperity can be secured for our State that it will be timely and interesting to make allusion to it.

It seems that the attention of agricultural theorists has been drawn to the subject by the frequent mention of the abandoned farms in New England and the ever-constant reports that the small farmers are poor and distressful, crushed beneath a weight of unprofitable labor and carried almost to the point of desperation by deprivation and hardship. In glowing contrast to these cases of industrial darkness are seen a few instances in which, by the amassing of capital by corporations or the enlistment of millionaires with agricultural tastes, large areas of land have been furnished with the finest live-stock, buildings and machinery, and abundant working capital, and are now, it is claimed, yielding a fair interest upon the vast investments required for such equipment and improvement. A case in point is that of Havemeyer, the great New York sugar king, who began more than fifteen years ago the improvement of large tracts of land in New Jersey and established a dairy enterprise which for sumptuous equipment and adornment might have figured in the agricultural appendix to the Arabian Nights. Current reports are that this great venture is profitable and has made as high return as \$250 per acre in the products of the establishment. A few other great farms of the East which have passed from private ownership into corporate control and have been endowed with great capital, are cited as evidence that such great affairs are to be the coming fashion in farm economy and that the escape from existing poverty and hardship is to merge individual ownership in corporations in which the old land-owner takes shares of stock up to the agreed value of the land which he turns over to the corporation. After having thus lost his identity as a land-owner he is to lose his individuality as a home-maker and business man for the great corporation will provide for the living of its shareholders and employes in its own hotel, for the manufacture and repair of its implements in its own shops, and we suppose the outfit would be completed by the establishment of a corporation church and graveyard or crematory. Thus from the cradle to the grave the human creature would be a part of the corporate body, would be managed in all his doings for the corporate interest and would die to divide his share among his progeny which were born under the corporation's roof and carried to their fractional inheritance through the corporation's hotels and schools.

The dreamers to whom this vision of glorified corporate agriculture has been revealed seem to have no doubt that what may have been done with vast capital in marketing fancy-food products to wealthy epicures or fancy animals to wealthy connoisseurs may also succeed in producing staple products at ordinary market rates. They do not seem to question but that management suitable to conduct such affairs may be had at any intelligence office, or else they imagine that any one of a dozen men who cannot make a living from a small farm could enrich the whole community if he had all the land in the vicinity under his supervision. They do not seem either to see any difficulty about getting a lot of men who like to have their own way taking orders like a gang of serfs, or a score or two of women, and their complement of children, living in quiet and harmony under one roof, and perhaps under the direction of the queenly wife of the corporation's manager.

Really, it seems to us that this latest production of the closet agriculturists is the grandest and most peculiar in the line of impracticability which has ever wasted ink and paper. It ought to have had a World's Fair medal hung about its neck as the biggest fool-notion of the century. But instead of such award we find the World's Fair congress sitting at the feet of Secretary Morton and applauding his theory of the farmer forsaking association with his fellows and advancing his interests by individual efforts. Of the two schemes—the agricultural incorporation or the agricultural cloister—it is difficult to say which is the most impracticable and visionary as a general rule of action.

We do not, of course, inveigh against incorporation, as such, among agriculturists. Under certain conditions it is unquestionably the most important form of association and co-operation, and a form which we constantly advocate and endeavor to promote. But incorporation as urged by Eastern doctrinaires is a very different thing, as we have endeavored to indicate above. Even corporations

for production and development of lands are most valuable means of action, but they, in almost all cases, will be a means to a higher end and that is to make it possible for the individual to acquire profit-yielding property and establish his own home and his own productive enterprise. Such homes and such holdings are the units of the country's strength, prosperity and permanency. They produce not only valuable merchantable crops, but they produce citizens of thrift, intelligence and probity, which are the hope of the country's future. California's chief growth has been attained by the establishment of such homes and holdings, and the multiplication of them is universally accepted as the best means to advance the State. Almost daily large areas of land which have been reclaimed from aridity by corporate effort and capital are opened to individual purchase. Groups of desirable people from all parts of the world come to make homes upon these lands. Colonies are established and advance into cities, towns and wealth-producing regions. The same amount of land held and operated by a corporation would render insignificant service to the State as compared with the accomplishments and influence of a prosperous colony of individual holders.

California may afford space for many prosperous corporate enterprises in agricultural production. We have no warfare to wage upon them, but to proclaim such enterprises as a means by which unsuccessful private owners can be lifted into comfort and affluence, and they and their families be fed and groomed to sleekness like the animals in a menagerie, is to charge the public with the materials that dreams are made of.

Two Great Land Deals.

Southern advices speak of one of the most extensive land deals ever consummated in that part of the State. The property concerned is the entire La Sierra Sepulveda Rancho and several thousand acres of the Rancho Jurupa, lying south of the Santa Ana river. Both tracts are close to the city limits of Riverside. They contain 20,000 acres and the price agreed upon is \$700,000. The Riverside Sierra Company, the real purchaser, is mainly composed of New York and Chicago capitalists, who propose, as soon as water is on the land, to sell it to colonists in tracts of ten acres and upward.

Another great land and water transaction has been affected in Merced county. The sale involves the transfer of a half-interest in 40,000 acres of land in Merced county, the Crocker-Huffman canal and Commercial and Savings Bank, and the complete transfer of 4500 acres of land belonging individually to Mr. Huffman. The price paid is in the neighborhood of \$2,000,000. Over \$3,000,000 has been expended on the property within the last few years. It was Mr. Huffman's plan never to sell the water outright but make the land-owner sign a contract to take the water perpetually at a fixed rental of \$1 an acre annually. This contract was a perpetual incumbrance upon the land, and could not be abrogated. Whether the farmer wanted the water or not he was compelled to pay for it. Very few land-owners would take the water on such terms, though most of them wanted it badly, and for several years the Crocker-Huffman canal has poured a vast volume of useless water through parched fields that sorely thirsted for the fructifying flood. All this will be changed now that Mr. Huffman has retired from the ownership in and control of the company. The lands will be cut up into small holdings and sold on reasonable terms, with inalienable water rights attached.

CALIFORNIA weather, for the next six months at least, will be regulated by B. S. Pague, who comes from Portland to the Weather Service office in this city. Mr. Pague has made an excellent record, not only as an all-around weather sharp, but as a devoted student of crop statistics as connected with weather business. He has been in the service on this coast since 1885 and has thus obtained an insight into Pacific coast phenomena. If he can bring down Oregon weather enough to give California a good soaking this winter we shall be obliged.

RICHARD GIRD, the great beet sugar man of Chino, states that during the present season 55,000 tons of beets have been used in the Chino sugar factory, and that between 15,000,000 and 16,000,000 pounds of sugar have been made. The first year only 11,000 tons of beets were used. Last season the number had increased to 28,000 tons. Mr. Gird is strongly in favor of the bounty. "If it is not disturbed," said he, "the whole of southern California will be filled with beet-sugar factories."

A VERY LARGE SALE of Palo Alto horses has recently been made for shipment to Guatemala. Another lot purchased for the same destination has arrived from Chicago. Guatemala seems to be acquiring much in the line of higher agricultural arts. Recently there have been shipments of well-bred dairy cows from this port.

From an Independent Standpoint.

Fuller returns from the elections of the 7th inst. increase the Republican majorities in all the northern States. In Ohio, McKinley's majority is between eighty and ninety thousand, or about seventy-five thousand greater than his majority of two years ago. In New York the range of Republican pluralities is about twenty-five thousand where last year they were forty-five thousand the other way. Maynard, the corrupt judge, is beaten by a round hundred thousand votes, falling seventy-five thousand behind his associates on the Democratic ticket. In Iowa the Republican pluralities range about thirty thousand; and so the story goes. It is a result so marked and emphatic that attempts to explain it by talk of local and special conditions are ridiculous. It means just one thing, and means it so plainly that nobody in his senses can fail to comprehend it. It is that the people want the tariff let alone; they want no changes that will add further confusion and stress to the troubled state of business. In Ohio, Massachusetts and Iowa the tariff was practically the only issue; in every other northern State it was the chief issue. With this state of facts it is difficult to see how anybody can be so infatuated as to deny or disregard the significance of the result. If the Democratic party is wise, it will accept the verdict and regulate its course in accordance with it; if it is pig-headed, it will pretend not to understand the result. It will proceed in the scheme of tariff resolution; and three years hence it will be thrown headlong from power. Those among the Democrats who recognize the full significance of last week's voting, but who still urge the tariff propositions of the Chicago convention because the promise of the party has been given, fail to estimate the difference between the obligation imposed by a party platform and the obligation imposed by a direct, positive and emphatic declaration of the sovereign people expressed at the polls.

One of the surprises of the election is the slender figure made by the Populists. In Ohio they polled about twenty thousand votes, an increase of four thousand over the vote cast last year for Weaver. In Kansas, the chief stronghold of the party, where last year they carried everything, they are this year overwhelmingly beaten, losing ninety out of one hundred and five counties. In Virginia, where the prospect of a Populist uprising threatened Democratic success, their vote cut no figure at all; in fact they got but one member of the legislature out of one hundred. In Nebraska, where last year they carried the legislature and elected a United States Senator (Allen), they were beaten by the Republicans by a plurality of about eight thousand. In that State, however, they cast a large vote, aggregating nearly one-third of the whole poll. In Iowa, the home of Weaver, the Populist vote was only twenty-five thousand. In Colorado their vote was light. Briefly stated, the Populist vote was merely an incident of the election. Nowhere did it affect the result, and only in Ohio, where the total number of votes cast was twenty against sixteen thousand last year, did it make an advance. By those who assume to be politically wise, this is taken to imply that the Populist party is practically out of the field. Color is lent to this view by a report that Mrs. Lease and others of the Kansas leaders have decided to abandon the movement. We can offer no assurances as to the truth of this report, and give it only as an item of current political gossip.

But whether the Populist party be vigorous or dying it has done a useful work, for it has turned to the study of economic questions, and to an active interest in public affairs, a vast body of good citizens who ought to have a close connection with the political life of the country. Hitherto the producers have been too willing to leave economic thinking and political domination to the professional and commercial classes. Out of this unsafe policy they have been lifted through the agency of the Farmers' Alliance and the Populist party. We do not wish to be understood as being in sympathy with the revolutionary proposals of the Populist party. We have not been with it for the land-loan bill, for the sub-treasury plan, for free coinage, for fiat money, or for half a score other equally extreme and (as we regard them) impractical notions of reform. On the other hand, we have been heartily in sympathy with its demand for a legitimate increase in the currency, in its policy of government control of the Nicaragua Canal, in its theory of governmental control of railroads, in its opposition to combinations against the public interest, in its fight against gambling in fictitious commodities, in its appeals for honesty in politics and economy in government, and in its demand that the producers of the country shall have a hand in the direction of public affairs. We have been in sympathy with its wish to bring the government closer to the people. We have believed and have not failed to declare that many of its projects

were ill-conceived and ill-based, but we have felt that the cure for the immature suggestions of newly awakened political thought was more study and more thought; and in the apparent decline of the Populist party we read the confirmation of this judgment. The original Populist has for the past two or three years been a close student of public affairs, and has grown too intelligent in a political sense to believe in the schemes which he once warmly approved. For example, how many of those who were ardent Populists three years ago, to-day believe in the sub-treasury plan? We venture to say not one in ten!

Equally important with the work of economic and political education done by the Populist movement is its accomplishment in the way of partisan emancipation. Those who went into the movement have not only learned to study and think for themselves, but they have learned to vote without regard to party domination. The decline of the strictly Populist vote in the late elections is not a more notable fact than the increase in the forces of political independence. In no former election which we can recall has there been so large a proportion of votes cast upon the basis of economic intelligence and moral purpose. The results as to Judge Maynard in New York, as to the anarchist issue in Illinois, and as to the gambling issue in New Jersey, abundantly illustrate this fact. Much of this new spirit of independence is due, in our judgment, to the direct and indirect influence of the Populist movement, which has done more than anything since the war to call the minds of men away from the prejudices and direct them to the realities of politics.

It is, after all, the independent voter who is the real power in politics. It was the independent voter who beat Maynard, again it was the independent voter who downed the forces of social disorder at Chicago, again it was the independent voter who beat the New Jersey gamblers, again it was the independent voter who made the triumph of the Protective principle in Ohio, Massachusetts and Iowa. The Republicans call it a Republican victory, but it was in a truer sense the victory of the independent voter. We have opposed third party organization in the interest of the farmer, first, on the general grounds of objection to the class idea in politics; and second, because we believe that the vote of the farmer will be more effective for political reform and for justice if held subject to individual conscience and judgment than if subjected to party control, no matter what the party or what its purposes. When once it becomes known that the farmers of the country are out from under partisan rule; that they will not vote under the party whip for bad men; that they cannot be made to vote for bad principles, then political reform will be an accomplished fact.

The Administration has at last promulgated its policy in the matter of Hawaii. It came out last Friday in the form of a letter by Secretary of State Gresham addressed to President Cleveland. In this letter—as a matter of fact not so much written to as written by the President—ground is taken that the late revolution was organized with the connivance of the American minister (Stevens), and that a display of armed force on the part of the American Government was a factor in bringing it about. In plain words he says that the Provisional Government was established by the action of the American minister and by the presence of troops landed from the warship Boston, and its continued existence is due to the belief of Hawaiians that in the effort to overthrow it they would encounter the armed forces of the United States. This assumption as to the facts of the revolution is based upon the report of Special Commissioner Blount, who says that the Boston's forces were landed before the act of revolution, and that the whole formal proceeding was transacted under the range of American guns; and that the thing could never have been done if such had not been the facts. Arguing from these presumptions, Mr. Gresham (that is the President) holds that a great wrong has been done a feeble independent State by an abuse of the authority of the United States; and he proposes, as the easiest way to right this wrong, to restore the conditions which prevailed before the revolution, or, in other words, to re-establish the deposed queen upon the Hawaiian throne. The assumption is that the present minister to Hawaii and the naval forces now there have been ordered to carry out the closing suggestion of this letter—that is, to forcibly re-establish the deposed queen upon her throne—but nothing is given out at Washington, and there is no means of finding out what is going on at Hawaii, so the public mind is in a state of interested suspense. Naturally, this matter has made a great sensation. Mr. Stevens declares Mr. Blount's account of the revolution to be wholly and grossly false; that he (Stevens) had nothing to do with the movement in its inception or organization or execution; that his relation to it was that of an interested spectator; that his

ordering of the troops ashore was simply to protect American property; that the troops did not, in fact, land until the deposition of the queen was an established fact. An issue of veracity is thus raised between Mr. Blount and Mr. Stevens. The Administration accepts the Blount story; the public is at liberty to make its choice as between the witnesses.

There is something poetically fine in the attitude of a great and powerful nation declining to make its advantage out of an injustice done to a small and weak one; but, on the other hand, it is very far outside of the American idea to employ the armed or even the moral power of the United States Government in the cause of monarchy, and especially in the cause of the least efficient, least respected and most ridiculous monarchy on the earth. It strikes the American people as being both absurd and monstrous; if it did not, it would be a sign that we had lost the spirit and political virtue of the founders of the Republic. If, as the Administration assumes, a wrong was done, then the course rightly to be followed is to disclaim it and decline to profit by it; but to go further and by force or by influence to reseat upon the Hawaiian throne that mountain of unclean fat called Queen Liliuokalani would be an act unnecessary, silly and shameful. It would bring the blush to every American cheek and make our Government the butt of universal contempt. It is not creditable either to Mr. Gresham or his chief that the proposition has been made; and if, as common assumption has it, orders have been given to carry it into effect, a great outrage has been done. This matter of American policy as to Hawaii is not Mr. Cleveland's business, but the business of Congress. Congress has been in session and might be in session now if Mr. Cleveland wished it. If he has, indeed, ignored Congress and done the arbitrary and foolish act accredited to him, there will be an accounting by the people in a way to make future presidents remember that the people rule this country.

We are frank to confess a prejudice against ex-Minister Stevens. His whole course as we view it gives the lie to his disclaimer of interest or part in the Hawaiian revolution. He thought he saw, we believe, a chance to do a brilliant stroke and attempted to do it at the cost of every consideration of international and personal propriety; but before he is condemned, before we as a nation disclaim his work, the facts ought to be settled beyond the shadow of a doubt. Certainly the report of one man, even though so extraordinary an official as the President's private commissioner, should not be accepted as final in a grave matter of international concern.

The Projected State Fruit Exchange.

The second meeting of the Fruit Exchange Committee appointed by the State Horticultural Society at its San Jose meeting was held last Saturday in this city. During the week preceding, each of the committeemen had talked more or less with leading fruit-growers in his community, the consensus of opinion being that the proposition for a Produce Exchange at Chicago on the co-operative principle is a thing easily practicable. At Saturday's meeting the idea was to organize in time to begin with the crop of next season. The session was devoted to general discussion of ways and means, its definite results being embodied in the following resolutions adopted just prior to adjournment:

Whereas, The State Horticultural Society of California did, at a regular meeting held in San Jose on Oct. 27, 1893, adopt a resolution appointing a committee to organize a State Fruit Exchange to dispose of California fruit products; and

Whereas, The committee named in said resolution, having met on divers days and fully considered the subject, have appointed the following named persons to serve as directors of a State Fruit Exchange until their successors are elected and qualified, and with full power to fill vacancies in their own body: A. L. Bancroft, Frank H. Buck, John Markley, Geo. F. Ditzler, H. P. Stahler, A. B. Butler and E. A. Wheeler; and

Whereas, It is expedient and necessary to proceed to prompt organization, that the exchange may be ready for the business of 1894, and also that the exchange may receive the support and indorsement of a large number of fruit-growers, deliberately assembled for that purpose and having a voice in the election of directors;

Now, therefore, it is agreed and recommended by said committee that the above-named persons, as directors, proceed to organize themselves as a corporation to organize and manage the California Fruit Exchange, with the following distinct understanding:

1st. That the directors now appointed shall serve only until January 1st, 1894.

2d. That some day previous to January 1, 1894, the California Horticultural Society do, and it is hereby requested to, appoint a meeting, which may be one of its regular meetings, to which they shall invite all orchardists of the State to be present and take part in the approval or modification of the proposed plan of organization, and in the election of directors to succeed those now appointed by this committee.

3d. That the said directors shall incur no personal liability of any kind, as such directors, for expenses incurred, and that they shall be expected to proceed only so fast as funds are secured to pay the expenses.

That it is the present opinion of this committee that when the new board of directors is elected in December that the number be increased to eleven.

The above is an extract of the minutes of the committee. The board organized by electing John Markley president, A. B. Butler vice-president, A. L. Bancroft treasurer, and E. F.

Adams' secretary and manager; and A. L. Bancroft, E. F. Adams and John Markley a committee on by-laws and incorporation, to report next Thursday at 2 P. M., to which time the board adjourned.

The projected convention will probably take the place of the regular December meeting of the Horticultural Society in this city.

Mr. McCoppin Recounts the Facts.

TO THE EDITOR:—Until a friend called my attention to your last issue I had supposed that the controversy touching the introduction of the Australian bug was forgotten and buried out of sight long ago. But it seems it will not down. I observe that Professor Riley is still defending himself—quoting the before quoted testimony of his subordinates in his own behalf and making such use of my name as he thinks will suit his personal purposes. Personally, I have no desire for further controversy with this very sick and much overworked scientist, and agree with Secretary Morton that he ought to be allowed to repose and recuperate his health. I do object, however, to your editorial comments upon me. You say: "The attack made upon him (Riley) by Mr. McCoppin was wholly inspired by personal interests. * * * We are frank to admit that Professor Riley might have been less exacting on his part and could have let Mr. McCoppin have his brief glory as the 'discoverer of the Vedalia.'"

Now, Mr. Editor, these two statements are wholly unwarranted by the facts of the case—all of which have been published in your paper. I made no attack upon Prof. Riley and had no personal interest to subserve; neither have I ever pretended to be the discoverer of the Vedalia.

On the 11th of April, 1887, Professor Riley, being then in California, addressed the seventh Fruit-Growers' Convention, held under the auspices of the State Board of Horticulture, at Riverside, San Bernardino county. Said the professor:

"I would not hesitate, as United States Entomologist, to send some one there (to Australia) with the consent of the Commissioner of Agriculture, were the means for the purpose at my command; but, unfortunately, the mere suggestion that I wanted fifteen hundred or two thousand dollars for such a purpose would be more apt to cause laughter and ridicule on the part of the average committee in Congress than serious and earnest consideration, and the action of the last Congress has rendered any such work impossible by limiting investigation to the United States."

Thus stood the matter in 1887. The professor had a vague idea that it would be well to send an agent to Australia, but he had no funds. California would not supply them, the fruit-growers of the State did not supply them, and the mere mention of the subject in Washington would only have caused roars of derisive laughter and ridicule. Meantime the cottony cushion scale was destroying the orange orchards of California, and those engaged in their cultivation were in despair.

In 1888 Congress appropriated \$50,000 for representation at the International Exposition about to be held in Melbourne, Australia, and the President appointed a Commissioner to represent the United States in that country. The Commissioner had control of the funds appropriated as above, and by a stretch of his authority set apart \$2000 for the expenses of two agents or employees of the Department of Agriculture, to and through Australia and back to the United States. One of those agents found the bug and reported his discovery to the Commissioner, who, as in duty bound, made said report a part of his final report to the State Department. These reports were subsequently, by order of Congress, printed in book form, and have been distributed throughout the country.

That is the whole story and there never should have been any controversy about the matter, nor would there have been but for Professor Riley. He attempted to inject matter into the Commissioner's report when it was passing through the Government printing house in Washington—matter which would have falsified the report—and because the State Department would not sanction his proposals in this regard he carried his supposed grievances into the press of the country, indeed, of all the countries having a press, and because some papers in California happened to mention my name in terms of compliment and gratitude in connection with the introduction of this beneficial insect, he labored in your columns to damn me with faint praise in order to glorify himself. It was then, and not till then, I first noticed the professor.

FRANK MCCOPPIN.

[We did not say that Mr. McCoppin claimed to be the "discoverer of the Vedalia." If we remember correctly, those words were used by a kindly country journal and he was "hailed" as the "discoverer," etc. This over-officious friend of Mr. McCoppin precipitated the whole trouble so far as public discussion is concerned. We are glad to know that Mr. McCoppin has let go. According to the first paragraph in Mr. Cooper's letter it is fair to infer that he has not been long off the warpath. However, if all will quit now the country may possibly be saved.—ED. PRESS.]

Potatoes in the San Joaquin.

TO THE EDITOR:—Will some of the subscribers of this paper give us some items on potato-raising, both of early and late varieties: when to plant and the time they should be ready to dig, or how long it will take them to mature? Also on sweet potatoes, and what time to put in the sweet potatoes to start plants from for next season?

Our soil is a blackish sandy loam, and was originally an old watercourse.

If we can have potatoes ready between the very early and the late crops we can get a good price.

I have asked several people. Some don't know, and others say it's all guesswork. I want actual experience, and so think the RURAL the best to get it. I don't think

Eastern culture will do for this part of the country, as it is so hot and dry in the latter part of the season, after the irrigation water is stopped. MRS. D. E. ROBERTS. Tulare.

[We would like letters on these subjects. Not only do Eastern methods fail to meet the case, but coast methods are not best suited. Can we not have a general consideration of potato-growing in the interior valleys, and especially in the upper San Joaquin where there are many newcomers anxious for the facts?—EDS. PRESS.]

A Strong Growers' Organization Necessary.

As the evils in fruit marketing are now more forcibly than ever brought to the attention of producers, we present a portion of an essay on "Co-operation Among Fruit-Growers" read at the recent meeting of the Southern California Pomological Society by W. E. Collins of Ontario:

The orange-grower is now beset with the same difficulties which enthralled the deciduous growers of the north and from which our deciduous fruit-growers and raisin men are now suffering. The very existence of the industries in which they are engaged is threatened by the vicious methods practiced by those to whom they entrust the marketing of their products. Not only is his income reduced to a state of imperceptibility, but the investment, the capital, is threatened with compound division, an operation which always results in the depletion of his exchequer and the aggrandizement of his obliging friend, the commission man. Unaided and alone, what can the grower do? He sees that his neighbor who produces enough to market a number of carloads is able to handle his crop without the intercession of the middleman. Dismayed by his utter helplessness, what is more natural than to turn to his neighbor who is in like plight, in the hope that together they may be able to devise some means whereby they may be able to retrieve their waning fortunes. Thus the nucleus of a co-operative movement is formed which, if faithfully carried out, promises relief for the present and complete disenfranchisement. It cannot be accomplished in one season's operations. It can only be achieved by a solid organization embracing every grower. The small grower must not be left out. Every one must feel that his interests, small or great, will not be allowed to suffer. A few carloads, the aggregate crop of a number of small growers, in the hands of a skillful manipulator can be made to seriously affect the benefits which would otherwise accrue to the growers as a result of organization.

A promise not to consign is not sufficient, for when the grower disposes of his crop it passes beyond his control and may be used in the very manner he has promised it shall not be. Nor is an expressed intention to sell only f. o. b. sufficient for the same reasons; and further, that the dealer can afford to pay even a higher price than otherwise would be profitable in the hope of breaking up this movement. Again, to sell at association prices means nothing, because there is no intention of interfering with the freedom of the market as regulated by supply and demand. Hence, the market price at the time of sale is that at which the association will sell its fruit, while the price realized to the grower is the average for each variety and grade throughout the entire season.

Yet again, one says, "I am in hearty sympathy with the association and its objects, but I fear there is so much machinery the expense connected with its management will more than offset the advantages it offers." Let us compare figures.

What did it cost last year to market our oranges? The necessary materials and labor have to be paid for whether the work is done under the supervision of an association or packer, together with all transportation charges; but we ought not to have to pay any profit on these fixed charges, but only for the service rendered. In the first place, the charge for packing, including materials, last year was 35 cents to 50 cents per box, which involved a profit of from 8 cents to 23 cents, assuming the cost of handling and placing on board the cars to be the same in different places. Then a commission of ten per cent was paid on the gross sales, which we will place at the low price of \$2.50 per box for the season, or 25 cents per box commission, which, added to the profit on packing, makes the cost paid for marketing from 33 cents to 48 cents per box, while the most liberal estimate of expense I have heard in connection with the association is ten cents per box. The gross sales upon which the commission is calculated, let it not be forgotten, embraces the cost of boxing materials and labor of packing as well as the freight and icing, which means of course that the grower furnishes the commission man with capital and pays ten per cent for doing business with it.

I have said that it would not meet the requirements if an individual or an association agreed only to sell f. o. b., i. e., not to consign. Suppose all agreed to this proposition and sales f. o. b. were restored without any further organization, would the same results be accomplished as by co-operation? Let us see. Suppose, for illustration, the price of Navel to be \$1.50 f. o. b. California. The commission man already has a profit in it of ten cents per box on the packing, out of which he offers the dealer at the other end five cents per box rebate from the market or sales price to handle his fruit instead of his competitors. That will secure him the order every time. Thus, while ostensibly maintaining f. o. b. prices, he is cutting under them, and, as soon as his competitors discover it, they are compelled to meet it with a straight cut. If this practice is resorted to on consigned fruit, the commission man has in addition his margin of commission to work on. When his cut is met he of course charges the man who makes the open cut with being the aggressor. In any event, f. o. b. sales are brought to a sudden termination, and we are again on a commission basis, just where the commission man delights to get us, for is it not to his interest to obtain the very highest market price for his patron's fruit in

order to swell his commission? At least so he would have us believe.

Nor do I think we want to entrust our fruit to the auction-rooms after the exposure of their business methods. Combinations are there possible among purchasers which effectually prevent competition. Almost countless illustrations of the devious methods resorted to by commission men might be given, but I desist.

Now to recapitulate: If we would succeed, it is not sufficient to agree not to consign. To sell f. o. b. outside the association is not sufficient. To sell only at prevailing prices is not sufficient. The expense is greater outside the association than in it. If these objections are admitted as insufficient, then every grower should at once ally himself with the association. Remaining outside is jeopardizing the success of the movement and is placing the selfishness of the individual above the welfare of the community.

The individual who declines to subscribe to the association prefers to trust his property in the hands of a stranger, whose business methods and probity are an unknown quantity, to entrusting them to the known integrity of himself and neighbors. The responsibility of failure must rest with those growers who decline for these or other reasons to ally themselves with the association. The largest measure of success can only be attained by a solid organization embracing every grower.

Now, if the absolute necessity for a change from past methods has not been demonstrated to the complete satisfaction of every grower, it may be necessary for those who have been convinced by their experience and that of others to endure passively the evils of another season or two like the past until all are satisfied. Then what shall be the method? Co-operation pure and simple. By this, I mean that the handling of the crop from start to finish shall be done wholly in the interest of the grower, and practically under restrictions and regulations which they shall impose.

The Southern Vine Disease.

Ethelbert Dowlen, the expert of the Viticultural Commission, who has been studying the "mysterious vine disease" for several years, has the following in his last report, dated October, 1893:

This disease remains as vexatious as ever, so far as cause and cure are concerned, but it appears to be slowly losing its deadly power. It also evidently starts a little later each year; in fact, it is now scarcely possible to make any reliable estimate of the amount of disease present in a district before November, whilst a few years ago its presence was fully declared in August, and the first symptoms were observable much earlier than that. This year the disease is present over a larger area perhaps than it was last year, but it does not appear to be doing so much injury; here and there, purely local conditions seemed to have favored a stronger attack, but on the whole it seems to be slowly decreasing in violence. This is certainly the case in some places where vines which last year showed a considerable proportion of foliage having the usual yellow markings, have this year entirely recovered and are bearing a good crop of fruit. In the Santa Ana district also some vines were seen which were apparently quite healthy, although the original vineyard had been dug out some years since on account of the disease; the ground since then has been regularly cropped with hay, and some of the old roots have regularly sent out a new growth, which has never yet shown any sign of sickness.

California vs. Spanish Grapes.

E. H. W. writes from Worcester, Mass., to the Fresno Republican, as follows:

California grapes are in the market here and retail readily at 15 cents per pound. They are nice and clean and show up to good advantage beside a more abundant supply from Italy, which come packed in cork-dust, in barrels, and are filthy looking and in not nearly as good condition as the California variety, which have been preserved by the cold-storage process. When asked why he and others did not deal exclusively in the California product, inasmuch as they were of the same variety as the other, the fruit man confidentially informed me that it was more profitable for him to sell the foreign grapes, as they cost less—that was the only reason.

Then I felt like taking the stump and adding my voice in behalf not only of the existing tariff, but in favor of even a higher protective duty on the imported article, or a lower freight rate; perhaps both. Certainly something is wrong when our own people cannot compete, in their own markets, with foreign countries in one of the most prolific products of our own soil. It is the same way with other varieties of fruit. California fruit is sold the year round in all the Eastern cities, but it is higher than that from other countries. Nevertheless, people who can afford it, prefer it, because it is nicer in every way. But poor people generally huy the inferior foreign article.

Sulphuring for Red Spider.

C. J. Berry, horticultural commissioner for Tulare county, has the following paragraph in a recent report:

The remedy for red spider is to dust dry sulphur on the leaves of the tree or plant, and if the leaves are too dry to retain the sulphur they should be wet by sprinkling. In large orchards I advised the use of a Gorham seed sower, on a wagon and one side closed driving against the wind, operating it at 3 A. M., when there is some dew on the plant leaves. This is a very efficient remedy, and as this pest breeds in dry, hot weather on nearly all our forest and hedge trees and is carried by the wind, our orchardists are forced to use it for their own protection. Our vineyards were affected with this pest this season, and wherever sulphur was properly applied to the vine the remedy was effectual.

HORTICULTURE.

Pickling Olives.

TO THE EDITOR:—Mr. Lelong's valuable article on Pickling Olives, in your issue of Oct. 7th, reminds me that there is one question concerning this industry which should be fully discussed. I refer to the question whether or not the lye process is the best. It is because that process seems to be adopted, almost as a matter of course, by most people who are going into the pickling of California olives in market quantities, and because I believe its use to be fatal to the best results, that I think it timely and perhaps important to call attention to its shortcomings.

It has become a commonplace with California fruit-growers, that the success of their business in future will depend on their ability to satisfy an increasingly critical demand for the best products, and the olive is perhaps specially subject to delicate discrimination as to flavor on the part of consumers, whose perception of differences of quality will grow with their growing taste for the olive.

I have really but one objection to offer against the use of lye. I have heard another, but am not sure that it is well founded. It has been suggested that the lye-cured olive will not keep firm as long as that cured without lye. But I incline to think that if all other conditions are well filled, it can be made to keep indefinitely in good condition. My objection thus refers only to the eating quality of the product, and it is based chiefly on my own experience as a consumer and on that of my acquaintances.

The object of the lye treatment is, of course, simply to remove the bitterness. It does this promptly and thoroughly; but it does more. It removes at the same time the larger part of the olive flavor. If the process is perfectly performed, so as to leave no trace of soapy flavor, arising from the combination of the lye with the oil of the olive, the resulting product is an innocent article to which the novice could not positively object, unless on the ground of time wasted in its consumption. To one accustomed to eat olives so prepared as to retain the chief part of their peculiar racy flavor, without the bitterness, the lye product is a disappointment. The form, the semblance, perhaps the texture is there, but the life is gone.

The process of extracting the bitter without lye is absolutely simple. It consists in keeping the olives in fresh water, which is changed every day or two, until the bitter is gone. The objection to it is the length of the operation, as it takes two or three months with the hard water of our mountains; but, when the tanks or barrels are conveniently arranged for running water in and out of them, as of course they should be in any establishment making a business of olive-pickling, the labor is very slight.

When the bitter is extracted by this process, there remains an olive full of zest, which, when properly pickled in brine, improves continually for many months, constantly strengthening its claim to be the only olive worth a man's while to eat.

There is no trouble about its keeping firm, if the brine is strong. Sometime before using, the excessive salt may be removed by substituting fresh water for the brine. The olives that we have just now on our table were picked two years ago and are better now than ever before. They were ripe when picked and the pickling and keeping has been done in the roughest and easiest way without great pains of any sort.

I think that anyone who is satisfied with the lye-pickled olive has not really learned to know and like the olive flavor, and it is doubtful whether any great market success can be built on an article, which, in the process of its preparation, has parted with so large a share of its virtue. There is not enough left in it for any strong liking to grow on.

It is likely that methods may be found to shorten the process without the use of lye. It can be done by stabbing each olive with a small knife, but that is too much work. Soft water will do the work more quickly than hard, and perhaps alkali enough to soften the water might be used without robbing the olive of its flavor. Our students of organic chemistry should help us in the matter. A curious thing that I have noticed in regard to the bitter principle of the olive is that drying on the barn floor for a few weeks will remove the bitter. I do not know whether this is of any significance as to its nature.

But, without any improvement in the water process, it is clear to me that its results make it the better process to use and I hope it may be followed by some of the people who are taking hold of this new industry, so that with its beginning may begin the market demonstration that the California ripe olive, prepared as it should be, is entitled by its high and delicate flavor, as well as by its wholesomeness, to hold an esteemed place on the table.

Nordhoff, Nov. 9, 1893.

E. S. THACHER.

[This communication is very pertinent and the subject of the highest importance. We hope a general discussion will follow.—ED.]

Pruning the Olive.

The following paper on pruning olive trees, by John S. Calkins of Pomona, was read at the meeting of the Southern California Pomological Society held last week at Ontario:

The task before us is to take olive trees, with their bushy habit of growth in the nursery, and train them so that they will become upright, symmetrical and fruitful in the orchard. I will briefly outline a method which will be found suited to the natural bent of the tree, and if followed will accomplish the desired object.

The trimming off the side branches of olive trees close to the stem or body, as is commonly done, at the time of transplanting them into the orchard, has proved unsatisfactory, as trees so treated grow slender and top-heavy, being unable to stand erect; and, thus divested of their branches,

they will sometimes twine around the stakes to which they may be tied, plainly indicating that the practice is counter to their peculiar nature. As olive trees naturally grow bushy in the nursery, often without an upright leader, purchasers unacquainted with their habit of growth are apt to think, though without cause, that they have been imposed upon if some of the trees sent to them are found to be not as shapely as deciduous trees; if it is attempted to grow them straight by cutting off the side branches, they will become slender and have to be staked in the nursery rows. They will also be deficient in roots, as the less branches the less roots. It is better, then, to leave the branches on while in the nursery, even if some of the trees are not as straight as they would be if trimmed and staked up. As the trees have lost some roots in the digging, it is necessary to reduce the foliage at the time of transplanting; to do this, shorten in all of the side branches to within a few inches of the body; if there is no upright leader, leave one of the strongest branches as a substitute. The growth from these shortened branches or stubs will clothe the stem with foliage and protect it from the direct rays of the hot sun, and cause it to grow stocky. Strong stakes should be set on the leeward side of the trees, to which they should be securely tied. If any of the trees are crooked, they may thus be made to grow straight. If there is a late growth on the tops of the trees, not fully matured, it should be cut off; otherwise, it is best not to cut off the tops, as it would increase the tendency to grow bushy, which, at this stage, we are trying to overcome. No other trimming will be required the first year, except to remove all sprouts that may start to grow near the ground.

In this section, where the prevailing winds during the growing season are from the same direction, the branches grow stronger and more plentiful on the leeward side of the trees; by having the stakes on the leeward side, and occasionally shortening in the strongest side branches during the growing season, this tendency, in a measure, may be overcome.

The little branches along the stem of the trees, having served the purpose of protecting it from the hot sun and causing it to grow stocky, may be removed gradually from year to year, commencing with those nearest the ground and continuing upward until the desired height of trunk is attained.

After the first or second year the trees will require a little annual pruning, which should be done during winter, when the trees are dormant. The inside branches should be thinned out when they are small, that light may enter freely into the interior of the trees; all dead twigs and limbs should be removed. As the trees grow older they will take on a more upright growth, which should be cut back and the side branches shortened in if necessary; by pursuing this course the fruit will be borne mainly on the outside of the trees, and if they are kept low-headed it may be conveniently gathered. The annual pruning need not be expensive, and may be done with knife or pruning shears without the use of saw or ax.

While I have not attempted to treat the subject fully, it is hoped that the suggestions offered will be useful, at least to those not experienced in pruning olive trees, who may engage in the work of planting and raising olive orchards.

Fruits and the Mines.

The attention of California producers has in recent years been so largely devoted to fruit culture that it has become the foremost State in the Union in almost every manner of fruit production. Deciduous fruits of all varieties find the highest excellence here, and citrus fruits are produced in great abundance. Prunes, grapes (table, raisin and wine), peaches, nectarines, apples, cherries, pears, apricots, plums, figs, olives, berries of all kinds, and a great many others too numerous to mention are included in the list which attain the most systematic and successful cultivation in California. There are some States which produce a greater abundance of particular fruits—Florida more oranges, many States more apples and pears—but in the mass of fruits California has no peer. It is safe to assert that the value of all its fruit products is several times greater than that of any other State; and the industry has by no means reached the limit of its growth.

California is the only State which is the largest producer of more than one variety of fruit. More prunes are raised here than in any other State; more peaches, more grapes, more olives, more figs, more nectarines, more apricots. The time will probably come when it will raise more oranges. It produces more wines than all others put together. Apricots, raisin grapes, figs and olives are raised in no other State.

California ranks high as a producer of wheat and barley, and exports perhaps a greater relative surplus than any other State. California is a large producer of wool, and one of the largest of hops. And so the list might be extended indefinitely. All these things are excellent, and go to make up a great commonwealth. All contribute to the wealth, prosperity and happiness of the people. May no branch of industry ever be diminished! May all grow to the maximum predicted by their most hopeful followers!

But it is not amiss to call attention to the fact that in all this development of fruit and other interests one other branch of industry has not been surpassed in value or importance. There is an impression in some quarters that the mining industry has been relegated to the background, and that its value is exceeded by the later and newer interests. It is true that the production of gold has been restricted in recent years, largely owing to the paralysis of hydraulic mining. But California produces many other minerals—silver, lead, quicksilver, borax, chrome, antimony, manganese, lime, marble, building stone, petroleum, asphaltum, bituminous rock, clays, coal, salt, alum, asbestos, bismuth, tin, cement, plumbago, gypsum, iron, infusorial earth, kaolin, metallic paint, mica, nickel, ochre, rock soap, slate, sulphur, talc and other substances. The chief product, however, is gold; of which in 1892 there was taken from the earth \$12,571,000. The product of other minerals

will swell the total output to \$20,000,000 at a safe estimate. Now let us see what the producers of fruit (including wines) realized in 1892. The following figures are the result of a careful computation, and are gleaned from exact sources:

PRODUCTION IN 1892.	
Citrus fruits (3435 carloads @ \$350)*	\$1,254,600
Prunes (28,000,000 lbs @ 6c)	1,680,000
Dried fruits (65,000,000 lbs @ 6c)	3,900,000
Raisins (53,000,000 lbs @ 4c)	2,120,000
Wines (12,000,000 gallons @ 16c)	1,920,000
Green deciduous fruits (5600 carloads @ \$330)†	3,528,000
Canned fruits (1,600,000 cases @ \$2)	3,200,000
Miscellaneous, fruits consumed at home, etc.	1,000,000
Total	\$18,602,600

*On a basis of \$1.50 per box for oranges.

†This is based on the average price received by shippers of 1894 carloads through the California Fruit Union and is the maximum. No separate account of the shipment of peaches, apricots, grapes, etc., was taken, and it cannot therefore be given. The large proportion was of course peaches.

It will thus be seen that the product of gold alone in California (\$12,571,000) is larger than any three of these items combined, and the relative values of the fruit and mineral interests of California are therefore as follows for 1892:

Mines	\$20,000,000
Fruits	18,602,600
Balance for mines	\$1,397,400

The fruit industry is growing rapidly. So is the mining. The year 1893 has not been a very profitable fruit year; but it has for the mines. There is room, and plenty of it, for both industries in the State; but it is well enough not to lose sight of the fact that California proposes to retain its character as the chief producer of gold in the United States, having yielded more than twice as much as any other State in 1892. It will do better in 1893.—Mining and Scientific Press.

Renovating Old Orchards.

There are many old orchards in this State which are worth overhauling and giving a new lease of life. To those who have such trees the following careful essay by E. L. Von Gohren of East Sound, Washington, will be found suggestive:

It will merely be tried here to give an outline of my own experience in reclaiming old and neglected orchards where they are not past redemption.

In top-grafting large trees, select about two-thirds of the large branches for top-grafting, taking care to have them in such position as will make the tree with as even balance as possible; cut them off from two to five feet from the body of the tree, taking care to saw them off without splitting the limb or loosening the bark; then with a grafting iron split the end of the limb in the middle, set two scions (one on each side), being very careful to have the inner bark of the limb and scion connect. The scion should be set on a slight angle outward. Then wax the end of the limb and the opening around the scion. Scions should be cut in the fall for spring grafting, tied in small bundles and kept in a cool cellar, putting the lower end of the scions on the ground so they will keep moist. The first part of April is the best time to graft the large trees. [Grafting should usually be done earlier in California—say just at the time that the leaf buds are bursting.—ED. PRESS.] Each scion should have three good buds when set. If the grafting is properly done they will make from one to three feet growth the first year. In the spring (one year after grafting) the remaining limbs that were not grafted must be entirely removed; if the grafts have not made a good growth or a part of them have died, those limbs that were not grafted the first spring can be grafted to replace those that have died. After a tree has been grafted there will be numerous shoots start out from the body of the tree and limbs, which must be rubbed off at least every week or ten days during May, June and July, and, if required, also during August. The number of scions set in a tree varies with the size of the tree. Some may require 50 or more. If the work is carefully and properly done, in six years after grafting the trees will have as large a head as before grafting, and in some instances larger than before. They will commence bearing the fourth year after grafting.

The best grafting wax is made as follows: Take three parts, by weight, of rosin, two parts beeswax, one part tallow (the least particle of salt in the tallow will spoil all). Melt the rosin in an iron kettle slowly. When thoroughly melted add beeswax and tallow, stir until thoroughly melted, then while boiling hot pour into a tub of cold water, take out and pull it in the hands until white as if it were taffy candy. To prevent its sticking to the hands use a very little lard on the hands. This wax is used cold, and working it in the hands when hard will soften it so it can be spread on with the thumb and fingers.

In renewing old or neglected orchards the most essential points are cultivation and pruning, and, if required, also top dressing with fertilizers. If the orchard has been in grass, plow about the last of April or the first of May, not more than four inches deep. Plow to the center, using short singletrees and as short doubletrees as possible. Use no hames that extend above the collar, but such that will not catch in low limbs and twigs to bruise and bark them. By being careful plowing can be done within two or three feet of the trees, so that which remains can be plowed out with one horse. Then use a common harrow to level down the sods, and follow with hoe or spade, removing all the sod around the trees remaining after plowing. After this use a Clark spading harrow (six-foot cut), going over the ground first the same way it was plowed, then crosswise, and continue this every week or two until it is thoroughly pulverized, using the common harrow now and then to level it.

If the sod is very tough it may need a second plowing about the last of June, plowing crosswise the second time and plowing to the center as before. The Clark spading harrow will gradually work the soil to the trees again.

Pruning and trimming is something that must be learned

by experience and requires more care, judgment and practice than any other part of the work. It is recommended, before plowing in the spring, to go over every tree in the orchard with a small pruning saw, pruning knife and a light ladder ten or twelve feet long, taking out all limbs that interfere with others, and those that interfere when plowing and cultivating with a team; also limbs that have drooped to the ground or are so low that they interfere with cultivation from being continually overloaded with fruit. Cut off the drooping portion back to a fork in the limb where one fork tends upward, cutting all limbs at right angles to the limb removed, so the wound will be as small as possible, never cutting a limb off closer to the body of a tree or to the main limb from which the limb is taken than one-fourth of an inch. All wounds must be waxed with some good grafting wax. Limbs that are too long or too high for balance of the tree should be shortened back to a fork, thus making as near a round head as possible. Trees that are badly broken down, or where limbs are beginning to die from the tips back toward the body of the tree should be regrafted at once. In such trees there have been taken off every limb on the tree and two scions set in each limb at from two to four feet from the body of the tree. They are doing well now, making a good growth of from two to three feet.

Under the above treatment an orchard of 700 apple trees 25 years old, having been in sod for the greater part of 15 years and more, which had borne large crops of fruit, but was failing rapidly until the apples were small and scabby, trees having ceased growing, not making more than a few inches growth each year, and a great many actually making no growth at all for several years—such orchard was taken charge of one year ago last April, and to-day it is one of the finest-looking old orchards I have seen in the State, trees making this year a healthy growth of from two to four feet, with an abundance of large, healthy leaves. While the crop of fruit is small this year, as it is nearly everywhere, it is safe to say that the crop on this orchard next year will be larger than it has ever borne in its best days. In addition to the cultivation and pruning I used a top dressing of 600 pounds of bone meal and one ton air-stacked lime per acre last spring. It will take two or three years to get an old orchard pruned properly. All sprouts from the base of the tree, or water sprouts from the body or main limbs must be carefully cut off, as they will draw the sap from the tree and thus weaken the growth in the main limbs. If the orchard is affected with scab it must be sprayed with sulphate of copper, vitriol and lime (Bordeaux mixture) or hyposulphate of soda during the growing season. The first spraying should be given with hyposulphate of soda as soon as the apples are well set, or about the size of marbles, using one pound of the soda and one pound of soap to 20 gallons of water (the soap is added to make the solution spread well on the leaves). The second spraying use the sulphate of copper and lime when the apples are about the size of walnuts, in formula of six pounds of the sulphate of copper and nine pounds of fresh lime to 40 gallons of water. If this solution is used while the fruit is very small, it will give the fruit a rough, rusty coat, and some varieties will crack open, but if used when the fruit is large it will not have this effect. The third spraying should be about three weeks after the second with the same solution. If the above method is followed for a few years it will be surprising to see the results. Instead of having small, scabby fruit, the apples will be large, abundant and smooth, and an orchard may be had that will be a pleasure to see. Remember that constant cultivation, pruning and spraying when required will have the desired effect.

FLORIST AND GARDENER.

Dutch Bulbs in California.

I have a Scotch friend whom I have visited since I was a boy, who, in changing his home, brought with him that love of flowers so nearly universal here, and in his new home in these California mountains surrounded himself with the flowers he had grown in the home across the seas. The pans of hyacinths, tulips, and many other bulbs which he had in the spring were at once my admiration and despair. Each spring I promised myself that my own would be as fine. Each resolve I made a good start by buying the bulbs, but try as I might my hyacinths would bloom too soon with short stalks, my tulips lacked the size and height, and all of my other things fell short of those aimed to equal. But I tried again, each season doing a little better, until at last I excelled my standard.

I felt then, and I think yet, that I had just reason to be proud. There are people who seem to grow flowers by a sort of intuition and to achieve results with ease which we poor mortals can only reach after repeated failures.

Dutch bulbs can be grown in California to as great perfection as, and with no more effort than, at any other place. We cannot go at it just as is done in colder climates, but by adapting our methods to the changed conditions we can do as well. Few are grown here, however. Narcissus are often seen, hyacinths less frequently, while tulips are rare, and the notice a first bud receives is at once a tribute to their beauty and an index to their rarity. When you pass on to the long list of other fine bulbous plants, it can be said that most are rarely seen and only a few are commonly grown. This is not as it should be. Here in our mild winters the bulb beds can easily be made to give bloom every day in the year unprotected, and in what realm of floriculture is there a vaster treasure house of beauty to draw from? To me no class of plants have such charms, and I would urge every Californian to commence this very season to buy and plant at least a few. The money will be well invested, and a culture commenced which has an ever-growing fascination.

There is not the inducement for forcing bulbs in California that there is in colder climates, for especially near the seacoast there is always some bloom out of doors. I prefer to take each bulb in its natural season, and, besides, one who is busy is apt to neglect potted stuff much to its

injury, while plants in the ground would not suffer from a few days' neglect.

Directions as to soil for bulbs are to be found in all catalogues and elsewhere, and in that need California does not differ. Such directions always urge good drainage, and I would even more strongly emphasize its necessity in successful bulb culture in California. A bulb starts here with the fall rain in October, and there is no cold to stop vigorous root growth throughout the winter as well as an early leaf growth. All moisture comes in the form of rain, and it is especially necessary that the drainage leave the soil loose and warm. I use broken brick, sharp sand or gravel, a layer of several inches under the soil of the beds, with a free vent to a drain so the soil will not stay wet and soggy an hour. I use enough sand and mold in soil to always have it loose and porous. A leaf from my experience will well illustrate one essential point:

A few years ago I had an especially fine lot of bulbs and prepared a large bed in the best possible shape, selecting the most open, sunny spot in my garden. All went well until February, when there came on a warm spell. The nights were frostless and day after day was clear, and still with the thermometer at over 70° in the shade. My hyacinths and tulips fairly jumped out of the ground, and while the leaves were still half grown, buds were forced a few inches and bloomed. I shaded them, to some purpose, but one-half the beauty went in this premature bloom. Then came a long cold storm, and my poor pets were whipped and bedraggled unmercifully. I learned a lesson, and my tulips, hyacinths and narcissus went to a cold place on the northwest corner of my house, where they were forced to make a heavy root growth and hide the proper season for flowering. This one point of choosing a cool exposure, where they will be shaded fully half of the winter days, and seeing to good drainage, are the only especial points in bulb culture in which we are peculiar. One other warning: The gopher is all too plentiful and he loves bulbs. He is a burrowing rodent, a better digger than a mole and hungrier than a rat. If you want bulbs you must either exterminate him or protect your bulbs. I will give no recipe for his extermination, for he is still with me, but a box of two-inch plank, sides and bottom, stops him and in the long run is the best place for your bulbs; otherwise, poison, traps and eternal vigilance will be needed to save your bulbs.

All bulbous plants are so pretty that I would not care to name one as best, but no bulb-grower should fail to buy liberally of Ranunculus and Anemones; they are so pretty and so cheap, and can be bloomed from November till May.—Carl Purdy, in Success with Flowers.

CEREAL CROPS.

Value of Summer Fallow.

The following affirmation of the value of summer fallowing was read by M. Premo at the last meeting of Tulare Grange:

First, I want to give you my experience with summer fallowing. In 1884 I plowed 50 acres in March and plowed it again in May and sowed it to corn. In the fall of the same year, after the first rains, I plowed it again and sowed it to wheat, which was harvested in 1885. As you will remember, that was the grasshopper year all over the State. I thought the hoppers cut off nearly half of the wheat and then I harvested nine sacks to the acre, and the winter sowing, two and one-half sacks.

In 1889 I, with a great many others, got the vineyard fever, so I prepared 25 acres for vines. I plowed these in the latter part of November and again in January, 1890.

This land was plowed eight inches deep and harrowed both times; then the vines were set out and the land cultivated both ways and a light harrow run over it. Then the hoppers came and ate the vines, which left me with a fine piece of summer fallow.

These 25 acres were located in the northwest corner of a 160-acre field. I plowed east and west, so I plowed the summer fallow at the same time, and in the same manner as that which was in wheat the year before. I sowed it January 1, 1891. I harvested from the summer fallow 14 sacks per acre and, as near as I can remember, I got two sacks per acre off the other land. This was all done without any irrigation whatever, except that I hauled about one bucket of water to each of the vines after they were set out.

Last year (1892) I plowed my summer fallow in February; then along in April and May I irrigated, plowed and sowed 298 acres to corn, which yielded nine sacks per acre. After the rains came, sufficient to start all the vegetation, I plowed this land again, and in January, 1893, I sowed it to wheat and harrowed it. I did not irrigate this year. I harvested from these 298 acres 4500 sacks of wheat, one piece of 52 acres making 24 sacks per acre. Part of these 52 acres was the 25 acres spoken of that made 14 sacks without irrigation.

Now, some say that summer fallow don't pay. I don't know of any land that will not pay to summer fallow. It pays well up north and it will pay here. I think there has been summer fallow here that did not pay, for this reason: It was plowed when it was too late and too dry to seed any more; then there was no moisture to retain and the ground broke up rough. Then in the fall they think that land will raise a good crop, no matter how it is put in, so they will take the implement with which they can do the work the fastest. That is generally the Randall harrow, as some think that it will plow and harrow at the same time, but that is a mistake. I do not think there is any implement in use that will take the place of the plow. The misuse of the Randall cultivator has cost the farmers a great deal. With or without water, I think farmers ought to summer fallow one-third of the land they farm, and raise two crops in three years. It will produce more in the two years than it will if put in every year, and it will save the expense of putting in and harvesting one crop, if properly cultivated.

I don't think our lands require to be plowed so very

deep. I think from five to six inches is deep enough. It is more important to have the work done at the right time than to be deeply plowed. The first plowing should be done in the winter and cross-plowing along in May, when the rainy season is over, and then along in the fall after it has rained enough to start the vegetation. Then you will have a crop of wheat without weeds, anywhere west of Tulare. Don't sow before January. I have followed this principle for three years and I find it is good. It will make more wheat and less straw than the early sowing.

POULTRY YARD.

Make Them Scratch.

TO THE EDITOR:—I noticed an article in your paper of October 28th, taken from the Fresno Republican, and written by one who signs himself "Cochin-Leghorn." I should have answered it before, but the fact is I have been very busy making scratching pens for my poultry. Yes, Mr. C. L., I have these pens in all of my yards and nothing gives me more pleasure than to stand and watch 50 or 100 fowl making the straw fly as they scratch for their breakfast, for it is at that meal that I give them grain, after they have had a good night's rest and sleep. When I used to feed the warm mash in the morning, I noticed that they would sit around and doze for two or three hours after eating. Now, that is what C. L. considers all right, but I didn't. If they had to sit around and doze to digest their food, I thought that a good roost in a warm house at night was just about what they needed, so I reversed the order of their feeding on soft feed and soon felt rewarded by having about me a more active, healthy, wide-awake fowl and receiving a larger number of eggs. "Just fancy a farmer working and toiling from sunrise till noon," says C. L., "coming home weary, tired and hungry, his better half presenting him with a pick and a shovel and telling him, 'I have buried your dinner six feet under this mound; dig it out and eat it.'" Now this seems to me an absurd argument. No poultry-breeder who knows anything about a hen would see her scratching all day until she was tired out, and then bury her evening meal so she would have to work hard to dig it out. No fowl will keep up a continual scratching where there is nothing for her to scratch for. If you have a place where there is no limit to the range, they might find something to work for every day, but keep grain always before them on the ground and they will soon get too lazy to scratch and will not lay as many eggs.

Cochin-Leghorn—and by the way, these are my two special breeds, so I know something of their habits—further says: "I have now a flock of 150 very profitable chickens, and give them every morning a bountiful early breakfast, after eating which they seek a commodious place to rest (rest from what, pray?), or dust themselves in the sun or in the shade, as the temperature commands, and they manufacture eggs. A hen scratching all day without any peace of mind or rest, handicapped by a constant hunger, cannot and does not lay well; hence complaints. I do the same thing an hour before sundown, and always see that there is grain or food on the ground in the barnyard."

Just fancy a farmer getting up in the morning, eating a bountiful early breakfast, and after eating, seeking a commodious place to rest, or bathe himself in the sun or shade, as the case might be. What an elegant frame of bone, muscle and solid flesh he would build up for himself; how elastic would be his step, and—well no fleas would dare alight on him. Also fancy his food always before him; don't you think he would be glad to dig a hole six feet deep, get into it and pull the hole in after him?

No, my fellow would-be chicken raisers, don't be misled by any such sentimental nonsense as the above. If you would have strong, healthy chickens, if you would have a good supply of eggs from your flocks, throw your grain in straw or something of the kind every morning and make them scratch for it; that is the time they are manufacturing eggs; then comes the rest and dust bath.

Fruitvale, Cal.

H. F. WHITMAN.

Value of Fresh Bone for Fowls.

Green bones, that is, fresh from the butcher, says the Poultry Keeper, cannot be surpassed as a poultry food. They are easily procured, are much cheaper than meat, contain a large proportion of the elements that enter into the composition of eggs than any other material, as they are more concentrated.

Dry ground bones have long been on the market as poultry food, and they have served the purpose intended; but while the poultrymen and farmers were resorting to the use of dry bones, they also witnessed the waste of much better and far more valuable food every day in the shape of more nutritious, more digestible and more highly relished fresh, green bones, simply because there was no method by which the tough, green bones could be reduced to a condition to render them acceptable to poultry.

But with the advent of the mill for cutting green bones all of this valuable material is now made to form a portion of the food for poultry. The bone mill grinds the hard, dry, brittle bones, but it is unserviceable in reducing green, fresh bones, as green bones cannot be ground. Only the bone cutter is capable of converting the green bones into poultry feed. The bone cutter and the clover cutter have revolutionized the method of poultry management.

What is the difference between the green, fresh bones from the butcher and those that have become hard and dry? Though a comparison of a green bone with a dry bone, side by side, will show there is a difference, yet an explanation is not out of place here. The green bone contains the natural juices (the water being a solvent), and upon the evaporation the bone becomes very light. By weighing a fresh bone and again when it is dry, the difference will be found astonishingly great. The green bones

contain meat, blood, gristle, oil and mineral matter in soluble condition. Upon exposure to the air, not only does decomposition occur, but the chemical changes are such as to rearrange the particles of the bone itself.

All animal substances upon decomposition are finally converted into ammonia, which is volatile, while the evaporation of the water not only liberates all gaseous formations, but permits of chemical changes which convert much of the soluble material into that which is insoluble. The green bone, though tough, is soft compared with the hard, dry bone. Insects also clear away from the bones all that is unaffected by exposure to the air, and in place of the juicy, succulent green bone, rich in phosphate, nitrogen and carbon, we have the hard, dry, insoluble bone, brittle and bleached, and composed of but little more than phosphate of lime and earthy matter, all of its real nutritious matter having passed away.

The value of all foods depends upon their digestibility. The green bone, containing its natural juices, is digestible, especially by birds, and when in a very fine condition it is also digested by animals, because its particles are less dense; but the dry bone, having lost its solvent agent, has become harder, its particles rearranging closer together, and is only slowly digestible, if at all. Bear in mind that it is not the amount of food eaten that gives the best results, but the amount digested. Nothing will make a chick grow as rapidly as will green bone—in fact, the growth seems marvelous. There are several bone cutters now in the market, and they are all that is claimed for them. The object of this is to impress upon all who keep poultry the necessity and importance of utilizing the waste materials. The bone cutters are labor-saving; they permit the use of valuable bone, and they pay back their cost in short time.

There are many things which cannot be explained, but which present themselves as facts. Take a bone, fresh from the butcher, go in your hen yard, pound the bone with a hammer on a stone, and although you may have fed your hens on dry ground bone, and have filled their troughs with grain, each will take the risk of a blow on the head with a hammer to secure a bit of fresh bone, and they will swallow pieces so large as to occasion surprise. The fresh bone serves a special purpose, for it contains the materials for the white of the egg, the yolk and the shell, all in a concentrated form, and in a partially soluble condition, while the dry bones remain untouched—that is, as long as fresh bone is supplied. Thus we have not only egg food, but also grit for grinding the egg food in the gizzard.

The cheapness of bone is another factor to be considered—many butchers give them away or sell them for a small sum. But the bone cutter is the agent that renders them valuable, and converts them into the most desirable of all foods. With bone and cut clover, but very little other food will be required, and hence there is not only a gain in nutritious matter, but a saving of grain also.

SWINE YARD.

Hogs in San Joaquin Valley.

The *Expositor* has heretofore called attention to the fact that the raising of hogs in this county might be made a valuable industry. It is not meant by this that it should or could be made the one great source of revenue, but it certainly is capable of helping out wonderfully.

Any man who will look into the matter will see that hog-raising here would find many things in its favor. A gentleman who has experimented says that hogs can be raised here at less cost than in Kansas. This may be placing it a little strong, but it may not be very far out of the way. Experiments come very nearly proving it.

Fresno county has plenty of water, which is an essential to hog-raising in a hot climate. The food supply is abundant and cheap. It is seen that there is some good hog feed in season nearly all the time. In Kansas they feed corn, and little else. Corn ripens only once a year. In Fresno the hogs can eat alfalfa early in spring, and they do well on it. While they may not fatten on it for market, they grow finely and keep in good order. When the fall begins to draw nigh, food of a more substantial sort comes on. As it is now, there are enough pumpkins, turnips, melons and other truck of that sort go to waste to fatten many hogs. But if people would prepare for it they could easily have much more of this sort of feed at scarcely any more expense. One 20-acre field would produce pumpkins enough to feed a large drove of hogs a long time. In fact, it would be difficult to guess how many tons of pumpkins would grow on a piece of land of that size. Pumpkins keep till late in the winter, and hogs could depend on them for four months.

Melons would answer the purpose about as well, but would not keep so long. Some hog-raisers boil pumpkins in a cauldron, and, when cooked, they put fat on hogs nearly twice as rapidly as when raw. Turnips and beets are excellent food for swine, and grow bountifully in Fresno.

But when it comes to fattening hogs for market, the second crop of grapes, of which there is practically no limit, is just the thing. Hogs in ordinary condition will take on enough fat to fit them for market by eating grapes which would otherwise go to waste. They do not hurt the vines.

The people in Kansas feed their hogs corn. In Fresno, Egyptian corn can be produced as cheaply as ordinary corn, and it is just as good. Hogs can be fed on it with as good results.

But the point is, that hogs fed on what now goes to waste in this county would produce an income of no small amount. The thrifty people of the East would get rich from what goes to waste here. The waste is enormous. The people should accustom themselves to pick up these odds and ends. The raising of hogs on a large scale, and as an extensive and exclusive business here, might not be found profitable, but as a sort of side issue it certainly would help bridge over many a rough place in the farm

economy of Fresno. Many industries are what is needed. Raising swine should be one of them.

Perhaps the home market would have to be depended upon for sales, as it would scarcely be expected that any foothold could be obtained in the Eastern market for bacon. But the market of the Pacific Coast is a considerable consideration, and the bacon of this State and other coast States could hold that against all comers.

THE STABLE.

Education of Young Horses.

The well-known trainer, John Splan, after his return from Vienna, where he had taken a consignment of American horses, said of the Austrian horsemen:

"There is a thoroughness about their methods that is entirely lacking here. When a man has talked or written here during the past few years about breeding and breaking road records, the reply has always been: 'Oh, life is too short to bother five or six years over a horse,' and this has been the characteristic feeling all through in regard to the business of breeding." "Aside from speed, our horses hear no comparison to those I saw in Vienna," said Mr. Splan, "and during all my stay I did not see a horse wearing a check-rein, nor yet one with a curb; in fact, I never saw such a high average of soundness, and yet horses are as plentiful as the leaves in the forest, and I believe there are four times as many horses in Vienna as in any place in this country of the same population, not excepting Kentucky."

"Every horse is bred or educated for a special purpose," continued Mr. Splan, "and the time spent in the education would astonish a breeder here. As a result, they not only breed fine horses, but they are perfectly broken and educated in this manner, and the highest excellence is attained. I can almost tell what use a horse is designed for in Vienna the moment I see him," said Mr. Splan; "even the tram or street-car horses are a distinct type, and an excellent type, too."

Commenting upon the above, Mr. J. C. Underhill writes for the *Country Gentleman* in this suggestive way:

The reader can see from the above that in Europe horses are bred for a special purpose, and breeders here should understand that this is the only course that promises success. If a farmer likes handling horses, and has a natural gift or tact for breaking and training young horses, by all means let him breed light-harness horses. No branch of farming offers better inducements for profit, or is productive of more real pleasure.

The range of harness horses covers many types. If a breeder finds he has no taste for the trotters, but likes a showy outfit, let him breed the Hackney type. No line is more remunerative, and such horses are broken and fitted for market at one-half the labor and expense that must attend the breaking and training of trotters. The time has passed when a trotter can be sold on his pedigree; the first question a buyer asks now is: "What can you show?" This is the all-important question, and the breeder that is not willing to develop every colt he breeds can scarcely hope for success.

There is an old saying that "well begun is half done," and in nothing is this more true than in breeding. One great fault and a source of failure has been the haphazard methods pursued by our breeders of light-harness horses. Breed for a special type. By following this course success is assured, and to deviate from it is almost to invite failure.

When you have produced the type of horse, the next important thing is the education. Readers will note what Mr. Splan says about the thoroughness of education. Here is a point wherein so many of our breeders, large and small, fail. The man who breeds extensively must leave the matter of education in the hands of his employees, but it is to the large class of the small breeders that I speak and urge upon them more thorough methods. Do not produce an inferior colt if possible to avoid it. Have done with cheap stallions or those having defects that if transmitted are fatal to the highest success. If you have not sufficient interest or information to know just the ideal points you wish to produce, do not breed at all. There will be "misses" enough when every precaution has been taken.

Again, when a man has produced a really high-class colt he feels more interest in the development, and one will always find the most promising youngsters getting the most attention. What greater pleasure to a breeder than to watch the high-bred colt mature, and when the proper age is reached to begin the education and watch the advancement of the pupil day by day? Speaking from experience, I know my greatest pleasure is found behind my youngsters on these clear crisp autumn mornings, when the colts seem to have new life and added vigor, and step away so carefully compared to their actions during the heat of summer. This is the ideal time to make speed with the colts, and it is also a season when farmers, as a rule, have leisure to devote to handling their horses.

I believe a man can "make speed" and teach young horses good road habits at the same time. I also believe a man can develop speed and bring a colt to that point where an expert can form an intelligent opinion and buy accordingly, without the advantage of the track. Of course a track is better, and I should greatly appreciate having one on my farm, but I have not, and many readers are situated in the same way. I use a smooth stretch of road for speeding, having measured 660 feet, or one-eighth of a mile, and by carrying my timing watch I can tell accurately how fast a horse is trotting. Probably every reader of these lines has access to some smooth stretch of good road for at least that distance, and if a quarter of a mile can be measured off so much the better, although an eighth is far enough to speed a colt until enough speed has been made to cover it at a 2:40 gait, and when a youngster reaches that, with moderate handling, you are sure of a trotter.

I may as well say right here that nothing can be accomplished in the way of making speed until a colt is balanced. I know many readers that have been accustomed to send-

ing horses to the shop and having almost any kind or weight of shoe put on, will think this statement bordering on fastidiousness, but it is not. It is simply impossible for a horse to trot fast when he is out of balance and when every effort and movement is not as true as the beat of a watch. If any reader doubts this let him test the subject for himself, and after he has wasted enough time trying to get some unbalanced colt or even aged horse to trot, he will be convinced that the statement is correct.

There seems to be no rule applicable to all horses. It is purely a matter of experiment, which of course must be guided by judgment and some knowledge of the business. Even the pure-gaited colt is often as troublesome to balance as one having a mixed gait, but, as a rule, the purer the trotting gait, bred or inherited, the easier will the youngster be balanced and taught to trot. The weight necessary to balance a mixed-gaited colt or horse is apt to prove trying to the legs. Directum, the famous four-year-old, with a record of 2:06½, wore a 16-ounce shoe and a four-ounce weight on each front foot to balance him when his training began, but this year he is wearing only a plain 12-ounce shoe. The weight, however, made one leg "ailing" during his hard campaign as a three-year old, and it still bothers him at times. Billy Wilton, 2:20, trained and driven by the owner's son, wears only a four-ounce plate on each foot, making the four shoes weigh but one pound. On the other hand, the well-known trainer, Horace Brown, once told me of a young horse he trained that nearly drove him to desperation before he succeeded in getting him balanced. "At last," said Mr. Brown, "when I had 32 ounces on each front foot and eight ounces on each foot behind, his action was as pure as rippling water and he was a trotter." Mr. Brown, by the way, gave the horse a record of 2:26½. I mention these facts to show readers the wide range that has been found necessary to balance horses and enable them to trot fast. It would be as impossible for Billy Wilton to trot to his record carrying the 32 ounce shoes and toe weights, as for the other horse to trot wearing the four-ounce shoe all around.

THE IRRIGATIONIST.

Importance of an Adequate Water Supply for Plants.

It will interest our readers to know that the advantages of irrigation are now being quite earnestly agitated at the East, where a few years ago the idea would have been scouted as unnecessary or visionary. It is interesting also to know that Eastern experiments are clearly approving conclusions which we reached in this State long ago by practice. Recently we gave an outline of such conclusions concerning cultivation as a conservator of soil moisture, and we have now a review by the *Rural New Yorker* of results reached by Prof. King of the Wisconsin station as to plant requirements of water and the advantage of constantly enjoying an adequate supply. The plants mentioned are barley, oats and peas. The following table, omitting fractions, shows the amount of water required to produce one pound of actual dry matter in the various crops; also the yield per acre in pounds, and the tons of water needed on an acre to give that result. These figures may well astonish those who have not studied the matter:

	Barley.	Oats.	Corn.	Clover.	Peas.
Pounds of water per pound of dry matter.....	375	525	316	564	477
Yield, in pounds, per acre.....	14,196	8,189	11,184	12,436	8,617
Tons of water needed per acre 2,663	2,152	2,842	3,367	1,913	

The corn gave a heavier yield per acre than any of the other plants, and yet required less water to produce a pound of dry matter. Prof. King gives as a partial explanation the fact that much less water is lost from the soil by direct surface evaporation in the corn field because the surface cultivation arrests such evaporation, as we have often explained. He also calls attention to the fact that the oats require more water per pound of dry matter than the barley. That indicates that the oat crop is more exhaustive of moisture than barley, and explains somewhat why seeding to clover with barley is likely to be more successful than with oats. See, too, what an immense amount of water is demanded by the clover. This is very true of all the grasses. It shows how quickly the hay crop is injured by a drouth, and how quickly it responds to a soaking either by rain or irrigation.

This matter of artificial watering or irrigating was also investigated by Prof. King. The following table tells its own story. In the field, the crops receive simply the natural rainfall, while in the cylinders water was added as it seemed needed by the plants. The table, therefore, indicates what the crops yielded when supplied with the water they needed, and only what they could get.

	Natural rainfall.		Water added.	
	Dry matter, Ins. of per acre.	water.	Dry matter, Ins. of per acre.	water.
OATS—				
1891.....	6,083	13.93	8,861	19.6
1892.....			8,189	19.
BARLEY—				
1891.....	4,157	11.27	7,441	13.19
1892.....			14,196	33.52
CORN—				
1891.....	8,190	12.26	19,845	25.39
1892.....	7,045	11.34	19,184	25.09

It is understood that an inch of water means the amount that would cover an acre to the depth of an inch. What could show better than that the advantage of having a perfect supply of water? Under natural conditions we seldom have water enough in our soils to get the best out of our crops. If we could irrigate and supply water at will, it is easily seen how our crops could be increased. You can see that the corn crop was doubled by the application of water just at the right time. Water not only makes up a great proportion of the bulk of all plants, but it gives the only medium in which plant food can be absorbed. We see from these studies that roots and water are the two chief items in producing a crop. Plant food is of less importance than water, because it cannot be made useful until water is supplied.

THE HOME CIRCLE.

The Children's Room.

How peaceful at night
The sleeping children lie,
Each gentle breath so light
Escaping like a sigh!
How tranquil seems the room, how fair
To one who softly enters there!

Whose hands are those, unseen,
That smooth each little bed?
Whose locks are those that lean
Over each pillowed head?
Whose lips caress the boys and girls?
Whose fingers stroke the golden curls?

Whose are the yearning eyes,
And whose the trembling tear?
Whose heart is this that cries,
Beseeching God to hear?
Whose but the mother's, in whose face
Love shows its sweetest dwelling place?

Here hopes in beauty bloom,
And heaven sends down its light,
Which lingers in the room
Where mother says, "Good night."
Soft treading by the sleepers there,
Her very presence seems a prayer!

—Exchange.

The Fool with the Gun.

There are many fools that worry this world,
Fools old, and fools who're young;
Fools with fortunes, and fools without,
Fools who dogmatize, fools who doubt,
Fools who snigger, and fools who shout,
Fools who never know what they're about,
And fools all cheek and tongue;

Fools who're gentlemen, fools who're cads,
Fools who're greybeards, and fools who're lads;
Fools with manias, fools with fads,
Fools with cameras, fools with tracts,
Fools who deny the stubbornest facts,
Fools in theories, fools in acts;

Fools who write Theosophist books,
Fools who believe in Mahatmas and spooks;
Fools who prophesy—races and Tophets—
Bigger fools who believe in propbets;
Fools who quarrel, and fools who quack;
In fact, there are all sorts of fools in the pack,
Fools fat, thin, short and tall;

But of all sort of fools, the Fool with a Gun
(Who points it at someone—of course, "in fun")
And fools all around till chance murder is done—
Is the worst fool of them all! —Punch.

Hetty's One Talent.



NOW mother," said Hetty Sprout, one sultry June morning, as she was getting out the ironing-board preparatory to beginning the week's ironing, "don't you think I had better stir up a batch of molasses cookies before I begin ironing? Bert likes them so well for his luncheon; and he don't have much variety, poor fellow!"

"Yes, perhaps you had," said her mother. "We ain't had any in a good while, and there's enough 'drippins' for short'nens' that come out of the stewin' piece we had a Sunday."

"All right, mother; and I'll have to hurry with the work, too, for the King's Daughters meet this afternoon at Miss Denham's. She came home Saturday from New York, and wants us all to be at her house at three o'clock this afternoon, for she has something to tell us special."

It was a busy morning for both Hetty and her mother, for there was plenty of work besides the baking and ironing.

Hetty was just sixteen—the eldest of a family of nine children—and, the family fortune not being sufficient to make it possible to keep a servant, the task of looking after the wants of the family of eleven devolved on Hetty and her mother.

A half-holiday necessitated swifter feet and faster flying fingers; but at last the final piece was ironed, the baking done, the dinner eaten, and the dishes washed. And at three o'clock Hetty, in a blue print gown and a wide shade hat, was walking happily along the shady road that led to the village, lifting her skirt carefully from the dusty grass and choosing the cleanest path to walk in; but it was a very different-feeling Hetty that returned the same way two hours later. This Hetty walked along heedless of the fact that her best shoes were becoming white with dust and her fresh print gown assuming a grayish tinge along the edge. She was thinking busily, and her thoughts ran something after this fashion:

"Yes, every one of the girls has talents but me. I never had time to find out whether I had any or not, for there's always so much for me to do at home. Now there's Julia Brennan does drawn-work handkerchiefs and table mats; and Emily Carter embroiders in silk, and makes all sorts of lovely things. Coralyn French paints in water-colors, and Margaret Houghton makes paper flowers that one cannot tell from real ones hardly. Oh, dear! I wish Miss Denham had never heard of the Fresh Air Mis-

sion. I can't earn anything for it, and I wish now I had handed the money straight back to her, and told her so; but I was ashamed to when all the girls were telling what they would do." And Hetty opened her hand and gazed ruefully at a bright, new fifty-cent piece which she held in it.

This was the cause of her trouble. Miss Denham, the leader of the little band of King's Daughters, had just returned from a visit to New York, where she had become deeply interested in the Fresh Air Mission, and had called this meeting of the girls to tell them about it and interest them to help the cause. When she had finished her story she took seven bright new fifty-cent pieces from her purse and laid them on the table.

"Here are seven fifty-cent pieces," she said, "one for each of us. Let us see how much we can make them earn for the Mission before the 1st of August. We can invest the money in material—you can all make pretty fancy things—and manufacture articles to sell. The hotel at the point is filling up with summer visitors; and I think we can find a market there for our work, especially if people know we are doing it for the Fresh Air children. Here is the money and here are seven little books in which to keep account of expenditures and receipts."

As soon as the meeting adjourned the girls began talking about the way they were going to make their talent grow; for so they called the bright silver pieces. All but Hetty. She said nothing, but thought the more, not about the way she could make her talent grow, but the many reasons why she could not; and as soon as possible she slipped away from the meeting.

"Look at my pudgy fingers," she thought, as she glanced scornfully at the brown hand that held the silver. "I couldn't hold a crotchet needle in those and twist up thread into pretty lace things; and as for embroidering, why, when I picked up Miss Denham's silk scarf this afternoon, it stuck to my fingers like a burr to my gown. My hands were made for hard work, and nobody wants them but just mother. She wants—Why, goodness me! there's the six o'clock bell, and I told mother I'd hurry home; and here I've been poking along like an old cow!" And, without another thought of her lack of talent, Hetty hurried home.

There was indeed need of willing hands in the little brown house running over with children; for Mr. Sprout was the village blacksmith, and his steady labor scarcely sufficed to keep his family in food and clothes. The older boys were earning a little—one in a box factory, and another churning for a farmer. There had been some talk of Hetty trying for a district school; but, as Hetty said, "mother could never get along with all those young Sprouts without her help." For they needed much judicious pruning. After the supper things were cleared away, and the younger children in bed, Hetty went out to where her eldest brother Bert was working industriously at the woodpile.

"Say, Hetty," he said, taking off his hat and beginning to fan himself, "I was just thinking when you came out, when I got rich, how I'd—"

"Oh, don't talk of being rich!" interrupted Hetty, impatiently. "We never will be rich, and there isn't a bit of use in saying what we would do if we were." And she sat down on a grindstone, and pulled at some long timothy.

"Whew-e-e! Hetty, what's struck you? Ain't sick, are you?" For Hetty was always ready to help him raise Spanish castles. Then Hetty told him about the meeting and Miss Denham's plan.

"Sure, I don't see what you can do to earn money," said Bert, after they had discussed the pros and cons. "Why don't you ask Miss Denham?"

"Oh, I can't ask her. She's nice and all that; but she's one of those persons that you don't want to tell about the darns in your stockings."

"Well, I guess you don't have much time to fuss, anyway; but I'll think it over while I'm in the factory to-morrow, and maybe I'll light on something."

"Maybees don't fly this time of year, Bert."

"Yes, they do, too," he replied laughingly. "Here's one now," as a great clumsy maybug, booming along in the summer twilight, struck him in the face.

The box factory where Bert worked was in a large town three miles away, and he had to start betimes in the morning. The sun was just touching the tip of the maple by the gate the next morning when Hetty stood by the table putting up Bert's dinner.

"O Bert," she said, just as she was going to fold the napkin over it, "I made some of your favorite cookies yesterday. I'll put in a couple for your dinner." And she went into the pantry and brought out a plate of brown, spicy cakes.

"Here I put in half a dozen," said Bert. "Two is only a taste."

"A taste! O Bert, these big, fat cookies!" But she put in the half-dozen, and folded the napkin over the top of the basket. Bert took it and hurried away to his work.

When he came home at night, he handed Hetty a little packet. She undid it, and out rolled eight pennies.

"What's this money for, Bert?" she asked.

"For your Fresh Air Fund," he said. "Hold on, I'll tell you," as Hetty was about to ask another question. "I was eating my lunch to-day, and when I took out the cookies, Fred Hendon—who, I told you, brings such dingy-looking dinners—says: 'Say, Bert, what'll you take for one of those cookies?' 'Two cents,' I said; and he out with four cents and tossed them to me. 'Give me two,' he said; and then another fellow wanted two, and if I had had four dozen instead of four I could have sold them. The fellows board mostly, and their dinners don't look very appetizing. Fred ate up every crumb of his cookies, and said they tasted like his grandmother's."

"They're made after our grandmother's receipt. Say, Bert, do you s'pose?"

"Yes, I s'pose," said Bert. Then, changing his bantering tone, "I thought, coming home, perhaps you could bake cakes and pies and sell 'em."

"Dear me! I can't bake anything but cookies and bread. We don't have cake and pies once a dog's age."

"That's so, Hetty; but if you can get mother to let you have the cookies you baked yesterday, I'll take 'em to the factory to-morrow and sell 'em."

"We can't afford it, Bert. Mother can't afford to give away those cookies."

"Who's asked her to give 'em away? Buy 'em of her and then sell 'em for what you can."

When Mrs. Sprout heard Hetty's story, she was quite willing to sell the cookies. Hetty counted the cost, and found that the material for the cookies came to about four cents a dozen. She said her mother twenty cents for the forty-four cookies left, and packed them ready for Bert to take in the morning.

"You don't mind taking them, do you?" she said.

"Dear me, no! I'll tell the boys what you want to do with the money."

"I sold every one," Bert reported to Hetty at night, "and here is eighty-eight cents, and they want more to-morrow."

"How fine!" said Hetty. "I baked some more to-day; but if they want more, what shall I do for wood? It takes a hot fire to bake 'em nice."

"I'll work up enough of those old stumps to last awhile; they don't cost anything."

The demand for Hetty's cookies increased steadily, and found a ready sale at two cents apiece, or twenty cents a dozen.

"There's more in one of these cookies than there is in four you get at the baker's," remarked Fred Hendon one day, as he took a generous mouthful from one of the toothsome cakes.

It was a very happy Hetty that sat on the grindstone bench Saturday night, at the end of two weeks of labor, and counted up the pennies, five and ten cent pieces and quarters, and announced triumphantly to Bert that her fifty-cent piece had grown to eight dollars and ten cents.

Bert finished demolishing the stump at which he was working before replying.

"There," he exclaimed, as he stuck his axe in the block, "those pesky stumps are done, and it will be nothing but fun to work up those old rails that Farmer Brown gave Ben. Yes, Miss Hetty, you've done well with your cookies, and I'm proud of you. And now I've got something to show you." And he slipped a package from under a broad burdock, and, opening it, held up a pretty white box, labelled in gilt on the cover, "Grandmother's Cookies."

"Fred Hendon," he began, before Hetty could say anything, "was in Faxon & Faxon's fancy grocery last night, and he

spoke to the foreman about your cookies, and he wants Fred to bring him a sample; and, if the Faxons take a fancy to them, they'll buy 'em, and Fred made this box for you to put your sample in."

Monday morning the pretty box was filled with a dozen "selected cookies," their crisp, golden-brown surface showing to advantage through the lacy paper that edged the inside of the box.

Tuesday night Bert brought word that Faxon & Faxon wanted a dozen similar boxes for their Saturday's trade.

"When I told the foreman at the factory what you wanted the boxes for, he said he'd give the work and sell the material at wholesale. You'll make a lot of money, won't you, Hetty?"

"I? You better say *we*! I couldn't have done a thing if you hadn't thought of it."

"Well, if you weren't always thinking of something nice for my dinner, I shouldn't have had any cookies to sell."

The first of August came, and Hetty prepared to attend the meeting of the King's Daughters. The hot, stifling mornings in the tiny kitchen were forgotten, as she emptied her box of money on the bed, and counted it again to see if it was all there. Yes, \$35.75 was the sum total to which the modest fifty-cent piece had grown.

Miss Denham was more than surprised when Hetty gave in her account. None of the girls had made over ten dollars, and every one was eager to know how she earned her money. Hetty told her story, asserting, however, that she couldn't have earned a penny if Bert hadn't thought of it and helped her.

That was two years ago, and Hetty is still baking cookies, not for the benefit of the Fresh Air Mission now, though she remembers it every year, but a market had been made for "Grandmother's Cookies," and Hetty was the only one to supply the demand. The business begun in so humble a way has prospered beyond any one's thought or expectations, though we have not space enough to tell how.—Elizabeth Flint Wade.

Women in Greenland.

Dr. Frederick A. Cook, the returned explorer, tells a *Brooklyn Eagle* representative of some curious customs among the inhabitants of far-away Greenland:

Unbecoming as is the costume of those northerners, it is graceful and becoming as compared with their customs, if all the stories told about them be true. They never wash; their clothes are worn from generation to generation, and their general habits are indescribable. When Peary and his followers washed their faces in melted snow, the natives thought it a religious ceremony and stood silent in amazement. When, from seeing the operation performed several times, they began to understand that it was an every-day occurrence, they summoned their friends from far and near to witness the sight. There is but little difference between the dress of the men and women of the North.

The woman's hood is separate from the coat, which hangs loosely in the back to afford a resting place for her papoose. The papooses wear no clothes at all. When the mother's hood is in place no breath of air can touch the little one. The skin coats hang to the thighs. The man's trousers reach from the knees to the edge of his coat, where they fit tightly. They are not fastened in any way, and if the wearer leans forward or backward he exposes his flesh to an atmosphere that would freeze a white man. From the knees down the legs are protected by long boots of sealskin. The trousers are made of the skin of the polar bear, and are practically indestructible. One pair will last a man a lifetime and will then serve for a younger generation. The woman's trousers are much shorter than the man's and the boots she wears proportionately longer. The boots are made of sealskin with the fur dressed off. A pair of them will last about four months. The

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder
ABSOLUTELY PURE

women make the shoes and other clothing, and in fact do all the work. The men hunt and fish and sleep. The method of dressing the seal and bird skins is effective if nasty. As soon as an Esquimaux takes off his boots his wife proceeds to soften them for him by chewing them. The shirt of aux or eider-duck skin contains from 100 to 150 skins, all of which have to be chewed into condition and then sewed together with gut. A shirt will last 18 months before it falls to pieces, so that, what with sewing and chewing shoes and shirts, the time of the women is pretty well occupied, without any allowance for the manufacture of stockings from the skin of the Arctic hare. Dr. Cook has a native-made quilt of eider-duck skin, for which he was offered \$400.

When the white men first reached Greenland they were as much a curiosity to the Esquimaux as the Esquimaux were to them. Manahsee, of one of the most northern tribes, walked 200 miles to gaze at a white man. During his trip he met a young Esquimaux girl, with whom he fell in love, and Dr. Cook thus describes his love-making and the subsequent marriage ceremony: "As soon as Manahsee was attracted to the girl he asked her parents to give her to him. They were willing if she was. Manahsee then, according to Greenland custom, instead of telling her that she was the most beautiful creature under the sun, said to her, 'Mahmakdochsoa,' which means, 'You smell good to me.' If she had run away it would have signified that Manahsee must look elsewhere for a wife, but she did not. She repeated, 'Mahmakdochsoa,' and the couple rubbed their noses together in the presence of the girl's relatives. That concluded the ceremony, and, according to the custom of the country, they were married for a probationary term of three months. At the end of three months the groom is compelled to return his bride to her parents and not to see her for a year. If at the end of a year he desires to claim her, she must go to him. If he does not care to claim her, he is free to desert her and he is not thought to have done anything dishonorable. It is, however, very seldom that an Esquimaux deserts the girl he has once rubbed noses with.

Among many other relics that Dr. Cook brought back with him are the mummified skeletons of an extinct race, disinterred by his party from their ancient graves at Omanok fjord. The entire contents of the rifled graves were packed in cases and are now in Brooklyn awaiting scientific examination.

Pleasantries.

"At what age were you married?" asked he, inquisitively. But she was equal to the emergency, and quietly responded, "At the parson-age."

"Do you know," said the man who was going to have a tooth pulled, "I don't think 'dental parlor' is a good phrase." "No?" "Drawing-room would be much better."

Little Girl—"I am going to buy my mother some oranges." "She likes oranges, does she?" Little Girl—"No, ma'am. She gives them to me."—Yankee Blade.

An Irish journal has this gem in answer to a correspondent: "We decline to acknowledge the receipt of your post-card." Which is very much like the Corkonian who traveled into Kerry to an insulting enemy to "tell him to his face that he would treat him with silent contempt."

"My wife will bear witness," said the prisoner at the bar, "that, at the very time I am accused of burglarizing Mr. Smith's premises, I was engaged in walking the floor with my infant child in my arms, endeavoring to soothe it by singing 'Rock-a-bye Baby.'" "The prisoner is discharged," remarked his honor, "he can prove a lullaby."—Bazar.

"Your husband is the editor of the Bugle, I believe?" said the neighbor who had dropped in to make a friendly call. "Yes." "And, as you have no family, and have a good deal of leisure time on your hands, you assist him now and then in his editorial work, I dare say?" "Oh, yes," answered the little wife of the young newspaper man, hiding her strawberry-stained fingers under her apron, "I edit nearly all his 'inside matter.'"—Selected.

THE BACHELOR.

Returning home at the close of day,
Who gently chides my long delay
And by my side delights to stay?
Who sets for me my easy chair,
Prepares the room with neatest care,
And lays my slippers already there?
Who regulates the evening fire,
And piles the blazing fuel higher,
And bids me draw my chair still nigher?
When sickness comes to rack my frame,
And grief disturbs my troubled brain,
Who sympathizes with my pain?
Nobody.

Why Our Girls Lack Stamina.

If Nature be left to herself she is to the last degree careful to supply an abundance of stamina to growing girls. Not only are girls who are really strong less liable to contract disease than are boys of the same age, but healthy young women, if they contract a disease will, as a rule, have the less violent attack. In what is called the fever belt in Central and South America, more young men than young women of the peon class catch the malarial fever. The deaths from yellow fever in such observed centers as Rio de Janeiro are less among the peon women from fifteen to twenty-five than among the men, and the percentage of those who recover is larger, the exposure being about equal. Now, recovery from such a disease as yellow fever means that the patient has a reserve of strength which, when the disease has run its course, is sufficient to bring the patient back to health. Among these peon girls this reserve exists to a greater extent than among their brothers. But it is the fact that no such difference is observed between the girls and boys in this country. If anything, the results show the girls less able to endure any very exhausting disease. I am unable to find any reason for this reverse in Nature's methods unless it be in the tax which by our system of education we put on these girls. It is true, of course, that they are subject to hundreds of influences besides that of the schools; some of which are to be found in society, others in the press and jostle of American life, others, again, in the many sources of mental excitement which have their effect on all of us. Still, no one of these involves such a direct tax on the energies as is found in study, as our girls understand the word, although their combined effect must not be left unmentioned.—From "American Life and Physical Deterioration," by Cyrus Edson, M. D., in North American Review for October.

Gems.

The feathered arrow of satire has often been wet with the heart's blood of its victim.—Disraeli.

We are our own worst and most dangerous society when we are in trouble.—Celia P. Woolly.

A kind heart is a fountain of gladness, making everything in its vicinity freshen into smiles.—Irving.

The chains of habit are generally too small to be felt until they are too strong to be broken.—Johnson.

DOMESTIC ECONOMY.

BRAISED BEEF.—A slice from the top of the round weighing about three pounds and cut an inch and a half thick was used for this. Wipe, season with salt and pepper, gash and fill the gashes with stuffing made as directed below. Roll and skewer, putting in a few stitches if necessary. Season again, dredge with flour and brown in salt pork fat, being careful not to pierce with the fork in the process. Place in a deep pan, on a bed of vegetables, using for this one-third of a cupful of carrots, cut into dice, three slices of onion and a bit of bay leaf. Pour on three cupfuls of boiling water, cover tightly and cook three hours, basting occasionally, and turning over the piece of meat a short time before it is done. Serve with a brown sauce, and using the strained liquor from the pan, of which there should be about a pint. The sauce will be found nicely flavored by the vegetables used.

Braising will be found a very good way in which to use the cheaper cuts of meat which require a long, slow cooking to make them thoroughly tender, it being a combination of baking and stewing. The top of the round will cost in the market about 25 cents a pound, but is more inexpensive in the end, from the fact that it is free from bone, has but little fat, and not much waste. The cheaper parts of the meat are better for this way of cooking, as the more tender parts are rendered dry and tasteless, as a rule, by the long, slow cooking.

STUFFING.—To one-third of a cupful of cracker crumbs, add one scant tablespoonful of butter, one saltspoonful of salt, quarter of a saltspoonful of white pepper and half a teaspoonful of poultry seasoning. Moisten with four tablespoonfuls of hot milk or water. If the poultry seasoning is not liked, use such herbs as are most agreeable.

BAKED SQUASH.—Cut a Hubbard squash into quarters, remove the seeds and pulp, scrape thoroughly, place in a dripping pan, with the shell up, and bake in a moderate oven from one and three-quarters to two hours. No water will be required. When done, remove from the shell, put through a colander and season to taste. A good por-

portion is two teaspoonfuls of sugar, three of salt, three heaping tablespoonfuls of butter and a teaspoonful of pepper to a seven-pound squash. The sugar will be found an improvement if tried.

STEAMED GRAHAM BREAD.—Sift together three cupfuls of graham, one cupful of flour and one teaspoonful salt. Add a scant cupful of molasses (Porto Rico, medium grade, being the best for this) and two and a half cupfuls of sour milk, with three and a half level teaspoonfuls of soda. Steam three and a half hours, setting the tin on a trivet or standard of some sort in a kettle, with the water coming half way up the sides of the tin. The water should be boiling when the bread is put in, and, if it needs to be replenished, boiling water must be added. Tie on the cover of the tin and weight it if necessary. The same directions for steaming will apply to the pudding given below. The graham meal used by Miss Farmer in this case was the Arlington Mills, although the Health Food graham is usually used at the school, being more nutritious and finer. In this case, however, the Arlington Mills will be found to work better. It should be sifted before measuring, and a part of the bran left in the sifter put back into the flour. If sweet milk is used in place of the sour, only three teaspoonfuls of soda will be necessary. The soda may be added to the flour if liked, and the full strength of the soda will be secured, as a little is lost in adding to the milk first. This steamed bread will be found very good, and can be eaten by many who are not able to eat the Boston brown bread, which is such a favorite in many families.

TOMATO SALAD.—To one can of stewed and strained tomatoes add one teaspoonful of salt and three-quarters of a box of gelatine which has been soaked in half a cupful of cold water and dissolved in half a cupful of boiling water. Mould in round cups, having the shape as near like that of tomatoes as possible, and filling the moulds only two-thirds full. Serve on lettuce leaves, and garnish with the mayonnaise dressing given below. To prepare the lettuce, wash and dry each leaf carefully, not allowing it to stand at all before serving. If it is necessary to prepare the lettuce some time before, remove the leaves from the ice-water in which they have been kept, lay on a towel over a cake cooler, cover, and set in a cool place until needed. This makes a very good winter salad, and the bright red tomatoes, resting in their delicate green cups of lettuce, and garnished with the dressing, make a very pretty and palatable dish.

MAYONNAISE DRESSING.—Mix half a teaspoonful each of salt and dry mustard with a few grains of cayenne and a quarter of a teaspoonful of powdered sugar. Add the yolks of two raw eggs. Add slowly, drop by drop at first, half a cupful of oil, also a tablespoonful each of lemon juice and vinegar. After the dressing begins to thicken up, the oil may be added faster, beating with a Dover egg-beater and thinning with the vinegar and lemon juice. Just before serving, add one-quarter cupful of heavy cream whipped. The oil should be chilled first and the bowl set in ice-water while the oil is being added. The sugar may be omitted if not liked, and tarragon vinegar used in place of the common vinegar, giving variety. Lacto-lemon, a new product, can also be used to advantage in place of the lemon juice, a teaspoonful and a half being sufficient instead of the tablespoonful of lemon juice. If, when the oil is being added, the mixture should curdle, the process must be gone through with again, the curdled mixture being added to the yolks of the eggs in the same manner as the oil was added.

MRS. M. H. OBER,

Phelan Block, 816 Market, S. F.

Branch, 1236 San Pablo Avenue, Oakland.

All qualities Ypsilanti Union Suits for ladies and children. Headquarters for the Coast. JAROS Hygienic Union Underwear.

Sample pieces and Catalogue sent free.

TIGHTS.

Knee and ankle, open and closed seat, \$1.25 up. All qualities.

Fine Black Hosiery for ladies and children.

Seamless Silk for underwear.

Cleopatra and Delsarte Girdles.

R. F. Sensible Waists for ladies and children.

MRS. MILLER'S PUBLICATIONS.

Book on mother and babe, a few hints for expectant mothers. Send for circular.

Also Physical Beauty. Treats on the care of the body. Monthly Magazine, \$1 a year.

Physical Culture by Mabel Jenness, 50 cents.

Only authorized agent for EQUIPOISE WAIST and JENNESS MILLER GOODS.

DIAMONDS!

GENUINE AND FIRST QUALITY.

Warranted Pure White and Perfect, and of Extreme Brilliancy.

This diagram shows the approximate sizes of the stones



I will retail these stones at the above wholesale prices and mount them in the latest styles in Rings, Pins, Studs, Ear Screws, Combination sets, etc., at cost of gold and labor.

Diamond Engagement Rings a Specialty.

DIAMONDS, WATCHES and FINE JEWELRY sent C. O. D., with privilege of examination, on receipt of \$1.00 to guarantee charges, or sent express or post paid if cash accompanies order.

Correspondence solicited. Particular attention paid to mail orders.

Jewelry of every description in stock and made to order. Strictly First-Class work. No Imitation Goods.

JOHN H. DRUMGOLD,

Manufacturing Jeweler, Watches and Diamonds,

Room 113, Phelan Building, S. F.

VALUABLE

Information relating to orchard tree planting and care of orchards, together with a complete catalogue of the

RANCHO CHICO

NURSERIES, will be sent FREE, postage paid, to any address, upon application to

JOHN BIDWELL,

Chico, Butte County, California.

RANCHO CHICO ORCHARDS EMBRACE OVER 1000 ACRES IN FULL BEARING.

ACTUAL BUSINESS PRACTICE.

Established 1866

PACIFIC Business College,

320 POST ST. SAN FRANCISCO.

Re-established 1898

LIFE SCHOLARSHIPS, \$75.

Bookkeeping, Penmanship, Shorthand, Typewriting, English Branches, etc. Graduates aided in getting positions. Send for circulars. T. A. ROBINSON, Pres.

DOUBLE Breech-loader \$6.00. RIFLES \$2.00. WATCHES

GUNS

BICYCLES \$15. All kinds cheaper than elsewhere. Before you buy, send stamp for catalogue to POWELL & CLEMENT CO., 166 Main St., Cincinnati, O.

ST. JACOBS OIL

MAKES A Perfect Cure of BURNS, BRUISES, SCALDS, CUTS AND WOUNDS.



THE HOLLENBECK!

THE LARGEST AND BEST HOTEL

— IN —

LOS ANGELES.

Will be Headquarters for the Members of the STATE HORTICULTURAL SOCIETY During Their Coming Convention.

IT IS A WELL-KEPT HOUSE AND CONDUCTED IN

AMERICAN AND EUROPEAN PLANS.

Most Central Location. Reasonable Charges.

A. C. BILICKE & CO., Proprietors.

PATRONS OF HUSBANDRY.

Editorial Observations.

So far as we can learn the wish for representation at the Midwinter Fair is general throughout the granges of the State. Every Patron we meet speaks of the project with enthusiasm, and every subordinate grange that has had anything to say about the matter is in favor of it. San Jose has voted a donation of forty dollars. Stockton, we are told by Mr. Huffman, who spent last Thursday in the city, proposes to be equally liberal; and there is no doubt that others of the larger granges will give according to their means. If the voluntary contributions should aggregate a sufficient sum to pay for the proposed symbolic feature of the exhibit—a group of statues, representing the mythical deities Pomona, Ceres, Flora, etc.,—then the Executive Committee will, we hope, feel justified in supporting a grange office or headquarters at the fair. This is a proposition which we conceive to be of the greatest importance; first, because it will be a supreme convenience to members of the order; second, because it will be evidence to the public at large that the grange is a wide-awake and practically useful organization. Patrons who attended the Chicago Fair cannot say enough in praise of the grange headquarters. There was a place where they were certain of welcome, fellowship and useful information; there they received their mail; there they met grangers from every part of the country. And so it will be here, if an office can be maintained. If the choice should lie between keeping an office and displaying a group of statuary we much prefer the former, because we believe it would do the order more good. If a few more granges will imitate the generous policy of San Jose and Stockton, both projects may be carried out.

On Wednesday of this current week (we write on Tuesday) the National Grange will meet in annual session at Syracuse, New York. California will certainly have four representatives present, namely: Worthy Master and Mrs. Roache, Mr. B. F. Walton of the Executive Committee and Past Master Davis. Mr. Davis is the Overseer of the National Grange and it is among the things highly probable that he will be chosen to succeed Mr. Brigham as Master. One of the probabilities of the session is a fight between the radical and conservative elements—that is, between those who would have the grange go into the field of social and political agitation now occupied by the Alliance, and those who would hold it to its present conservative policy. Another probability is a contest over the Ritual. There will be a strong party in support of the proposition for revision and curtailment of the ritualistic work and probably an equally strong party against it. This matter, it will be remembered, came up in our State Grange at Petaluma upon a recommendation to revise from San Jose; and after a warm debate was voted down. The talk at that time developed the fact that both Mr. and Mrs. Roache (our voting members at Syracuse) are favorable to revision, from which it may be assumed that they will stand in the National Grange with the revisors. Mr. Walton is also favorable to revision. Mr. Davis is, we believe, in favor of holding to the old practice. From the treatment which this matter has had at the hands of former National Granges we are led to believe that no change will be made.

A note from Secretary Mills states that a meeting of the Executive Committee will be held in this city to-morrow (Wednesday) to further consider the matter of representation at the Midwinter Fair. So many masters of subordinate granges as could be hastily notified, will meet with them. No other business is named, but there can hardly be such an assemblage of leading grangers

without results of general interest and importance. The times are ripe for a grange revival. Can't this meeting do something to put such a movement on its feet?

The Grange as an Organization.

Some Reflections Suggested by Secretary Morton's Assault Upon the Grange.

The latter half of the nineteenth century will go down in history as the age of combination, of which history furnishes no parallel. True, great measures always required powerful accessories, but these were found in limited numbers, the great bulk of the people being content, willingly or otherwise, to be the vassals of the ruling classes. This refers chiefly to the civilization of the older countries, under which progress was so slow as to be almost unobservable, if it did not retrograde at times. It was this galling line between wealth and poverty, between ruler and ruled, and between the imaginary grades in society, that peopled the new world, where every station in life was open and attainable by the most humble citizen. Here, then, was the opportunity for free thought and action; and, although the seeds of progress were slow to germinate, they were there, and only needed the fructifying smiles of nature to blossom forth in a crop of intelligence that astonished the world.

Agriculture became the necessary and leading industry; but its votaries being isolated, they knew not their strength. So, while these toiled in the fields, the master again appeared in the cities and market-places eager to enrich himself beyond his deserts. Combinations of every kind and description were formed against the producer, which, being highly profitable, caused a rush of values from the farms to the cities, leaving to the producer a bare living, and at best a meager share of the comforts wrought out by his labor.

As fire is often necessary to subdue and control the devouring flames, so organization and combination among the producers was the one remedy available. The example stared them in the face. Would they emulate the methods? Had they the intelligence and cohesiveness to successfully unite their forces? These were questions to be answered then; and, although answered in the affirmative, the query is still propounded from time to time, demanding *our* answer. Anti-grange methods were too well rooted to be routed in a day, a year or a decade, but counter organization was possible any time the intent was forthcoming.

The necessity produced the men, and the attempt at rural organization became the wonder of the time; and the social, political and business world paid it homage. It was just and moderate in its demands and only insisted on an equitable division of the fruits of its labor. Its reasonableness was its strength, and, though many became weary of waiting, one by one the objects for which they contended were attained, and the grange was never so weak as when its work seemed finished.

Among the triumphs of the organization during its brief existence may be mentioned the following: A farmers' organization such as the world has never produced. It has brought light, recreation and good cheer to hundreds of thousands of homes. It has broken or prevented "corners" in many necessities of the people. It has taught transportation corporations and other combinations that they are the servants of the people and not their masters. It has raised agriculture to the dignity of a Cabinet position, and is honored and respected throughout the land. It has added vastly to the social relations of the rural population, rendering isolation less irksome, their occupation more pleasing and their homes more attractive. It is aiding in the construction of roads, halls, school-houses, libraries and reading rooms. It renders possible and profitable all deserving co-operative enterprises which abound in all the land. It has produced writers, readers, speakers and parliamentarians without number. Such, briefly, is the outgrowth of the grange as an organization, but the list could be prolonged indefinitely. It has no apology to make for its acts or existence, and should make none. Its record is before the world and deserves the respectful consideration of all, whatever may be their calling.

Ah! But it is not perfect! No, neither is any other human organization. The dark beyond is the only abode for the perfect; but let all be assured that it is the constant aim of the Patrons of Husbandry to come nearer and nearer the goal of human perfection.

GEORGE OHLEYER.

Mr. Brigham in Reply to Secretary Morton.

At a recent meeting of farmers Mr. J. H. Brigham, master of the National Grange, spoke as follows with reference to Secretary Morton's recent assault upon the grange:

I have read with astonishment the report of the address delivered by the Secretary of Agriculture. The language used in reference to the grange and its work can only be excused on the ground of profound ignorance of the purpose and work of this organization—ignorance so profound that in comparison therewith Egyptian darkness would seem like the light of noonday. The grange is accomplishing every day a greater work for the farmer and agriculture than the Secretary of Agriculture can hope to accomplish in a lifetime of efforts such as has been accredited to him. Had it not been for the organized and persistent efforts of the grange there would be to-day no Secretary of Agriculture.

I do not know the reasons which prompted him to make this unprovoked and uncalled-for assault upon an organization, the members of which would gladly co-operate with the secretary in any well-directed effort to advance by proper means the interests of agriculture. It may be another attempt to do what was sought by himself and others connected with the great railway corporations of the country; viz., to elevate the creature above the creator. The efforts (thanks to the grange) failed then and will fail now.

The secretary, knowing well that every other class in our country is organizing for the protection and advancement of individual and class interests, advises the farmers to refuse to help one another. "The farmers do not need to pool their efforts into vast associations." "Less association in alliance and grange and more individuality is the farmer's greatest need." "The most insidious and destructive foe to the farmer is the professional farmer, the promoter of granges and alliances." So says the man who has grown wealthy in the employ of corporations, and who, by some strange freak of politics, has been placed at the head of one of the most important departments of the Government. Is it possible that the long-continued efforts of the farmers to establish this department is to result only in calling men who have no interest in common with the average farmer from comparative obscurity and placing them in a position where they can insult the intelligence and betray the interest of those earnest, patriotic workers?

If the secretary, magnifying his own individuality and importance because of holding temporarily a position to which he should never have been appointed, thinks for one moment that he can destroy the Grange and turn the farmers aside from their efforts to help each other by organizing granges, he is wonderfully mistaken. When there is not a ripple upon the "Ocean of Time" to show that the individual who is now Secretary of Agriculture ever lived, the grange will be marching steadily onward in the grand work which has been so well begun.

From Tulare Grange.

TO THE EDITOR:—Tulare Grange still lives and holds regular meetings on the afternoon of the first and third Saturdays of each month. Tulare Grange is in good financial condition and has among its membership as bright and zealous patrons as any subordinate grange.

At its meeting on Saturday the 4th, afternoon, Bro. Premo read a paper on summer-fallowing. Bro. Premo's remarks were both interesting and timely and were approved of by every brother present. [Mr. Premo's paper is printed on another page in this issue.—ED.]

Comments were made on cultivation and irrigation by Bros. Premo, Nelson, Moore, Mackie and Forrar, the general conclusions being that for summer-fallowing purposes where water can be had the land should be flooded, then plowed, then if desired a crop of beans can be raised and the land left in as good condition for a crop of wheat the next year as though no crop of beans had been raised. That flooding grain after it is up is not desirable, but the best time to flood standing grain is while the weather is cool, not later than March.

In reply to a question of Bro. Moore, who reports for the Department of Agriculture, as to the yield per acre of cereals, Bro. Premo reported a yield per acre of twelve sacks of Egyptian corn, that he grinds it up and feeds it with alfalfa hay to his work horses, his stock do well on it, and fed in that way he likes it better than barley. Bro. Forrar said a variety of Egyptian corn called *Sorghum vulgare* yields very much better than the variety usually grown here, does not grow near so tall, and has a first and second crop. Bro. Forrar also exhibited a specimen of the *Bullfinch* Smyrna fig partly caprifigged from pollen obtained from a tree of the wild male fig in the Shinn orchard at Niles. With caprifigging the fig perfects itself and is an excellent fruit; without it the fig falls before maturity. The tree is a good grower, a good bearer and stands cold well. Bro. Forrar read a report of the temperature for October from a self-recording thermometer; highest, 100; lowest, 32; mean for month, 62.80.

Bro. Shoemaker, from the Farmers' Institute Committee heretofore appointed by the grange, reported that the committee had

arranged for holding the next Farmers' Institute at Armory hall in Visalia and the time the second week in December. He also reported a programme which will be published later on. All of which was approved by the grange and the committee directed to perfect the necessary arrangements.

At the next meeting of the grange, on the 18th, Sister Ingham will read a paper written by herself and the enclosed communication will be considered and discussed by the grange, it having been laid over from this meeting for that purpose.

At the first meeting in December the future price and markets for grain will be considered.

The opinion was generally expressed that a portion of the \$1500 a year appropriated by the State to district agricultural societies should be set apart to help defray expenses of Farmers' Institutes.

Tulare Grange asks suggestions from sister granges as to how best to make grange meetings interesting, instructive and useful.

OCCIDENTAL.

The Secretary's Column.

This office is indebted to Bro. E. C. Shoemaker, worthy steward of the State Grange, for an account of a recent meeting of Tulare Grange [reported elsewhere in a letter from Tulare], and for the following programme of the Farmers' Institute, to be held in Tulare under the auspices of the grange on Dec. 12th: Opening address, John Tuohy of Tulare; "Adaptability of the Soils and Climate of Tulare County to the Production of Fruits," Major C. J. Berry of Visalia; "Reclamation of Alkali Land and its Uses," Julius Farrar of Tulare; "Growth and Production of Prunes," Frank Buxton of Tulare; "Pruning Trees," C. S. Riley of Visalia; "Production of Fruits and Vegetables for Use on the Farm," Thomas Jacob of Kaweah; "Orange and Lemon Culture," Captain A. J. Hutchinson of Lindsay; "Insect Pests and Remedies," I. H. Thomas of Visalia; "How Shall Tulare County Be Represented at the Midwinter Fair?" E. O. Newman of Porterville; "What Kind of Wheat to Produce, and How," John Roth of Woodville; "Marketing of Fruits," N. W. Motherall of Hanford; "County Roads," P. M. Norboe of Visalia; "Drying Prunes," George Nunemaker of Hanford. In the evening Professor E. J. Wickson of the State Agricultural College at Berkeley will deliver an address, and Mrs. A. P. Roache of Watsonville will probably be present. She is a wonderfully clever talker. Mrs. Samuel Dineley, Mel P. Frasier and Fred W. Ward have charge of the musical programme. An effort will be made to induce a large number of people to attend the evening session of the institute. It promises to be very interesting. A number of Tulare musicians will participate.

This office acknowledges receipt of Journal of Proceedings of the twentieth annual session of the Oregon State Grange held at The Dalles, May 23 to 26, 1893.

Report from Vaca Valley Grange that on November 4th they voted to surrender their charter. It is hoped, however, that they will continue to work for the interests of the order, and, during the winter, conclude to reorganize.

This office has sent to the secretary of each subordinate grange blank quarterly reports for December quarter, 1893, and it is requested that when their last meeting is held in December the secretaries promptly fill out the blanks and forward same to me, before the beginning of the new year if possible.

Woodbridge Grange reports that they have 81 members, and that their grange is in a good financial condition.

An informal meeting of the masters of several granges and members of the executive committee will be held at the Russ House, Wednesday, Nov. 15, 1893, to consider the Midwinter Fair proposition.

Bennett Valley Grange reports that their last meeting, held Saturday evening, the 11th, was the most interesting held for six months. Don't forget that this grange celebrates the anniversary of the order Dec. 2, 1893. All members of the order are invited.

The next regular meeting of Santa Rosa Grange will be held at Hakman's Hall in the evening, seven o'clock sharp, November 25, 1893. A literary and musical programme is being prepared; a good time is assured. All members of the order are cordially invited to be present.

Address all communications for the California State Grange to

DON MILLS, Secretary,
Santa Rosa, Cal.

Santa Rosa, Nov. 13, 1893.

Continued on page 354.

AGRICULTURAL NOTES.

CALIFORNIA. Alameda.

Large shipments of apples have been made to China from Alameda county this fall, the buyer being a Chinese who purchases the apples direct from orchardists and has them packed and shipped to his country. He undoubtedly makes a good thing out of the speculation.

Kings.

Hanford Sentinel: A rancher said to us the other day that he believed much of the trouble among the hogs of the valley is brought about through being permitted to eat up other dead animals and following cattle that are diseased. We would like to see a law compelling the burial of every animal that dies from disease, and providing a severe penalty for all violation of the act.

Grangeville letter: There is some talk of circulating a paper among the growers for them to sign, binding each to forfeit \$1000 or some such sum in case he should consign his raisins to any commission packer or merchant. We have heard quite a number say that they were willing to sign it. It will probably all depend on the prices and treatment the growers receive at the hands of the commission packers. We hear that some of the packers are packing the raisins altogether too wet. We have heard old raisin men say that it is impossible for the goods to keep for any length of time in such a wet condition.

Hanford Sentinel: The news of McKinley's election had hardly reached Hanford when six big wagon-loads of wool came rolling into market. Our free trade friends will now accuse us of summing the "woolen shirt."

Los Angeles.

The meeting of the citrus growers of Los Angeles county held in Los Angeles on the 8th and 9th inst., resulted in the organization and incorporation of the Semi-Tropic Fruit Exchange. The following officers were selected: Albert Duffill of Rivera, H. R. Smith of Vernon, Cyrus Brown of Downey, D. M. Smyth of Pasadena, J. W. Hunt of San Fernando, J. C. Sherer, Glendale.

Pomona Progress: The nine members of the San Antonio Fruit Exchange held a meeting in this place yesterday and organized by the election of the following officers: L. S. Dyar, Ontario, president; F. J. Smith, Pomona, vice president; P. J. Dreher, Pomona, treasurer; W. E. Collins, Ontario, secretary.

Mendocino.

Ukiah Press: There are now stored in the warehouse at the depot 300 bales of wool, exclusive of 50 bales of spring clip. There have been sold of the spring clip about 500 bales, which brought an average of eight cents a pound. The fall clip this year was only about half as large as that of last year. The great falling in price was due to the prevalent depression, and the contemplated placing of wool on the free list. In view of this fact many growers did not shear.

The Willits News reports that the potato yield of the year in its neighborhood will reach 300 or 350 tons.

Placer.

The newly organized Horticultural Society has already begun its work. From a report of a meeting of the society given in the Rocklin Representative we quote: Complaint was made of the excessive water rates which the fruit-growers were obliged to pay, and upon motion a committee of three was appointed to wait upon the representatives of the water company. It was claimed that the company had been charging a rate equal to a good interest upon the cost of construction, which was very high, owing to the prevalence of high wages and expensive material at the time the ditch was built. It was argued that the company should revise their scale of prices so as to make them conform more to the present prevailing conditions.

Riverside.

A man with a bag of jackrabbit scalps dropped in on the Riverside County Clerk the other day and asked what they were paying for them. On being told that 10 cents was the price, he seized the bag and took them over to San Bernardino county and got his 20 cents each for them.

San Benito.

Pumpkins sell for a dollar a ton at Hollister, and at this low price are said to pay the producer better than grain.

San Bernardino.

At a meeting of the Rialto local horticultural society last week officers were elected as follows: President, John W. McCracken; vice-president, H. D. Sibley; secretary, Geo. A. Brua; treasurer, A. L. Wright; committee on programme and query box, Dr. O. T. Pratt, M. H. Mills, A. H. Holt. Some 12 or 15 new members handed in their names and the society gives promise of growing rapidly.

The Redlands Facts says that Eastern parties have recently purchased 2000 acres, for which they paid \$100,000. The tract will be at once subdivided and colonized by Eastern settlers.

Redlands Facts: At the recent Pomological Convention at Ontario an interesting paper on "Poultry and Fruit-Growing," by H. G. Keesling, the well-known farmer of San Jose, was read. The essay brought out a varied discussion bearing upon the importance of poultry-raising as an adjunct to fruit-growing. Many growers express the opinion that the industrious hen was the means of tiding them over till their orchards came into bearing. Dr. Edson Smith's testimony was to the effect that

his hens paid him better for the time and money expended than anything else on his ranch. He said that while his trees were reaching a productive stage the barn-yard fowl was the mainstay of his family.

Santa Barbara.

The following resolution was adopted by the Santa Barbara Horticultural Society at its last meeting: *Resolved*, That the Horticultural Society will give \$1000 to the city of Santa Barbara in aid of a building for a museum, provided that the society may have in said building a suitable room for a permanent meeting place.

Santa Cruz.

One of the largest creameries in the State will soon be established at San Geronimo, near Pescadero. A company has been formed with \$20,000 capital, and the contract for building a factory has been let. It will handle the milk of 2000 cows.

Pajaronian: The hop-growers of Pajaro valley effected a temporary organization at a meeting held last Saturday, and appointed a committee to draft rules to govern the organization. The growers have united for self-protection in the purchase of supplies and handling of crop. It can do good service for all of the growers. The example set by the hop-growers could be profitably followed by our orchardists.

Solano.

Vacaville Reporter: Several of our fruit-raisers are quite enthusiastic over feeding of grapes to hogs. J. W. Gates maintains that they are better for fattening pork than barley, wheat, corn or any other kinds of grain. He regrets that he sold some of his fruit at the figures realized, as he could have made more money by feeding it to a large herd of swine.

Sonoma.

Healdsburg Herald: The season has not been exactly what the growers would have it, yet this has not been the worst year and there is consolation in the fact that all the grapes that were uninjured were disposed of at prices which netted a moderate profit. In spite of the financial depression existing throughout the country, the grape-growers would have fared well had there not been any damage done to the crops by the rains in the latter part of September, which ruined fully one-half of the Zinfandels. The wine men anticipate a successful season, and every winery in this vicinity is fully taxed with the vintage of this year. Thus far, however, no sales of any consequence have been made.

Healdsburg Tribune: James Hood of Knight's valley is canvassing among the growers of Alexander valley for the purchase of Muscat and Carrigan grapes. In these varieties there is considerable demand, and he made some very tempting offers.

Sutter.

Durham Letter in Sutter Farmer: There are now several hundred acres of orchard in this immediate vicinity, mostly prune orchards, and more will be planted. Among those who are interesting themselves in horticulture are W. W. Durham, with 40 acres of bearing trees; Peter Jones, with a fine bearing orchard and a portion of his fine 250-acre farm laid off for more planting the coming season; Mr. Hensley also has 15 acres of prune trees, which have made a fine growth. The prune-growers here expect to realize about \$5 per tree from their orchards.

Tehama.

The last visit of Mrs. Stanford to Vina has put the people of that enterprising town in a pleasant humor, says the Red Bluff Sentinel. The Copeland and Downey tracts of land have been leased to Elliott Brothers of Vacaville and this means much for the business interests of Vina. The Chinese are wrathful over this unexpected move and are inconsolable. Mrs. Stanford has expressed herself in favor of leasing to white people in preference to Chinamen, and will carry out that plan as far as strictly practicable. All Vina is elated over this commendable action of Mrs. Stanford, and she is held in higher esteem in this county than she ever was before.

Tulare.

Tulare Citizen: In discussing Egyptian corn in the Tulare Grange last Saturday, Mr. Premo reported an average of 12 sacks per acre, which he ground and fed to his horses, preferring it to barley. Mr. Forrar of the Experimental Station said that he had a variety called *Sorgum Vulgaris*, which has a shorter stalk and yields better than the common. Samples of seed can be had of him at the Station. Egyptian corn for a second crop is profitable in this part of the county.

Citizen: Some very fine specimens of apples brought in for the Midwinter Fair show the presence of codlin moth. There are but few things that hold the moth in check more than to allow hogs to run in the orchard and pick up all the fruit that falls, thereby destroying the larvae for the next year's crop of moths.

Yolo.

Woodland Democrat: Bidwell & Co. are still shipping grapes to the Eastern markets and will continue to do so for two weeks longer if the weather continues favorable. The varieties they are now shipping are Emperors, Cornichons and Tokays. Until this week the average shipments have been three carloads a week. This week they will ship but two carloads. The prices realized are very satisfactory.

PIANOS A. L. BANCROFT & CO.
303 SUTTER ST., S. F.
KNABE, HAINES, BUSH & GERTS, and others.
Cash or installments. Please call or correspond.
SAN FRANCISCO, **BANCROFT**

Horse Owners! Try

GOMBAULT'S
**Caustic
Balsam**



A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

HATCH CHICKENS BY STEAM

With the Improved Excelsior Incubator. Simple, Perfect, Self-Regulating. Thousands in successful operation. Guaranteed to hatch a larger percentage of fertile eggs at less cost than any other Hatcher. Lowest priced first-class Hatcher made. GEO. H. STAHL, Quincy, Ill.

RELIABLE INCUBATOR

And Brooder Combined. 4C. In stamps will bring you Catalogue and book of hundreds of testimonials of successful artificial hatching by the "Reliable." The best, most durable, easiest operated, made of best material & workmanship—A conceded fact. Reliable Incubator & Brooder Co., Quincy, Ill.

A Small THRESHING MACHINE of great capacity for Light Power. The Columbia something NEW. EVERY FARMER can now DO HIS OWN THRESHING, with less help and power than ever before. Send for free illus. Catalogue. BELLE CITY MFG. CO., Racine, Wis.

BACK FILES of the PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes) \$4. Inserted in Dewey's patent binder 50 cents additional per volume.

GRANGERS' BANK

OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874.



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 500,000
Dividends paid to Stockholders.... 720,000

OFFICERS.

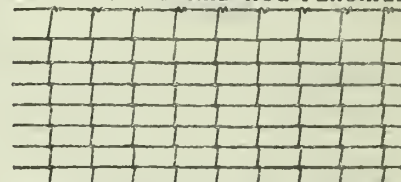
A. D. LOGAN.....President
I. O. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK MCMULLEN.....Secretary

General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on wheat and country produce a specialty.

January 1, 1893.

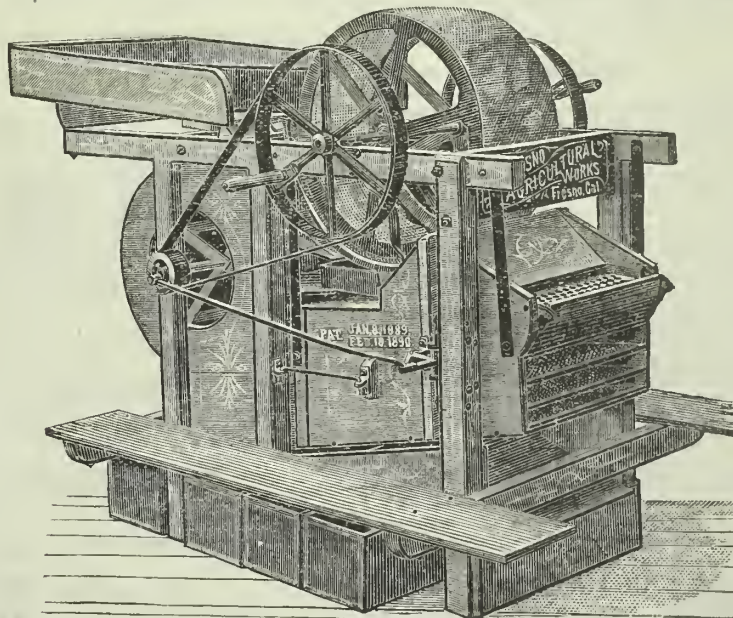
A. MONTPELLIER, Manager.

CABLED FIELD AND HOG FENCING.



Also Steel Web Picket Fence and Steel Wire Fence Board. Write for circular. DEKALB FENCE CO., 33 High St., DeKalb, Ill.

JNO. WOODLOCK, 26 Beale St., SAN FRANCISCO, CAL., General Agents for Pacific Slope.



SEND FOR CATALOGUE OF RAISIN MACHINERY TO
FRESNO AGRICULTURAL W'K'S, FRESNO, CAL.

GRANGERS' BUSINESS ASSOCIATION, GENERAL COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.
Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

T. R. BALLINGER, Grain Salesman.

FRANCIS SMITH & CO.,

MANUFACTURERS OF

SHEET IRON & STEEL PIPE

FOR TOWN WATER WORKS.

Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes.

NO. 130 BEALE STREET, SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

L. F. EATON, Breeder of A. J. H. R. Jerseys. Choice young stock for sale to make room for others. Florin, Sacramento Co., Cal.

JERSEYS AND HOLSTEINS, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. William Niles & Co., Los Angeles, Cal., Breeders and Exporters. Established in 1876.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Siles, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER SAXE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS—The best A. J. C. C. Registered Prize Herd is owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

WM. NILES & CO., Los Angeles, Cal., Breeders of nearly all varieties of Poultry, Dairy Cattle and Hogs.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

R. H. CRANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

SWINE.

H. J. PHILPOTT, Niles, Cal., Importer and breeder of Tecumseh and other choice strains of Registered Poland-China Hogs.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, new Prices.

BERKSHIRES & POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. William Niles & Co., Los Angeles, Cal. Established 1876.

MONROE MILLER, Eliso, Ventura County, Cal., Breeder of Registered Berkshire Hogs.

P. H. MURPHY, Perkins, Sac. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.

CHAS. A. STOWE, Stockton, Regist'd Berkshires.



In These Dull Times

You Can Largely Increase Your Income by buying an Incubator and engaging in the chicken business. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember, the best is the cheapest. **PACIFIC INCUBATOR CO.** 1317 Castro St., Oakland, Cal.

FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank.) Wants you all to write to him for prices on Young Stock.

MINORAS: White and Black.
LEGHORNS: White, Brown, Black, Buff.
B. P. ROCKS.

Mention the age desired and when shipped. Circular Free.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.



THE HALSTED INCUBATOR COMPANY,
1312 Myrtle Street, Oakland, Cal.
Send Stamp for Circular.

LIGHTNING WELL MACHINERY WORKS.
All kinds of tools. Fortune for the driller by using our Adamantine process; can take a core. Perfected Economical Artesian Pumping Rig to work by Steam, Air, etc. Let us help you. **THE AMERICAN WELL WORKS,** Aurora, Ill.; Chicago, Ill.; Dallas, Tex.

RED SEAL GRANULATED 98% LYE

HAS NO EQUAL

FOR DESTROYING SCALE BUGS AND OTHER INSECT PESTS ON TREES AND PLANTS.

FOR TREE WASH!

—USE—

One pound to 5 gallons of water.

Thousands of Orchardists testify to its value, using it in preference to all other preparations. Where the Red Seal is applied it kills the insects and at the same time forms a coating through which others cannot penetrate. When used in the above proportions, it is a

GREAT BENEFIT TO THE TREES.

Put up in SIFTING-TOP CANS, so that any quantity may be used and the balance preserved uninjured.

MANSFIELD LOVELL,
124 California St., San Francisco.

P. C. TOMSON'S



SOLD

—BY—

ALL GROCERS.

FOR HOUSEHOLD PURPOSES

The Red Seal Lye is indispensable.

USED AS DIRECTED it will take the place, and at 75% less cost, of all other alkaline preparations, soaps, etc., now on the market. ONE CAN will make 10 to 25 lbs. of Hard Soap, or 200 lbs. of Soft Soap. See directions in can.

It cleans floors, kills roaches and bugs of all kinds, cleans milk vessels, tin or wood; keeps farming implements bright and free from rust; is a perfect disinfectant; softens water, washes dishes and clothes; and can be put to a thousand uses in place of soap or other preparations.

P. C. TOMSON & CO.,
Manufacturers, Philadelphia, Pa.

CALIFORNIA PRODUCTS.

P & B

ROOFING.
BUILDING PAPER.
ROOF PAINTS.

First Prizes at the World's Columbian Exposition, 1893.

PARAFFINE PAINT CO., - 116 Battery Street,
SAN FRANCISCO.

E. G. JUDAH, Agent, - 221 South Broadway,
LOS ANGELES.



ONLY 25 YEARS OLD
AND A GIANT!

THE H. H. H. LINIMENT

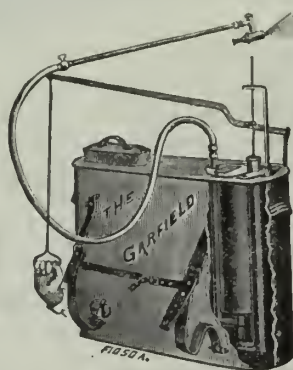
HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.



SPRAYING PUMPS.

Ours always the best—We lead others follow—Our Double Empire Barrel Pump has brass cylinder, plunger and rod, brass valve seat, and brass spout. Our

CARFIELD KNAPSACK

is made of heavy sheet copper, concaved to fit the back, with metal valves, and furnished with the latest improved Vermorel Nozzle. The very best Knapsack Sprayer on the market. Our Little Gem pail pump is all brass with metal valves, heavy hose and the improved Vermorel Nozzle. Special prices to offset high transportation rates. Catalogue free.

FIELD FORCE PUMP CO.,

141 BRISTOL AVE., LOCKPORT, N. Y.



BERKSHIRE SWINE.

Prize Herd of Southern California.

PIGS OF ALL AGES FOR SALE.

SESSIONS & CO., Los Angeles, Cal.

P. O. Box 686.

Send for Price Lists

OF GUNS

And all Articles used by Hunters and Anglers.



GUNS SENT ON TRIAL.

OLD GUNS TAKEN IN EXCHANGE.

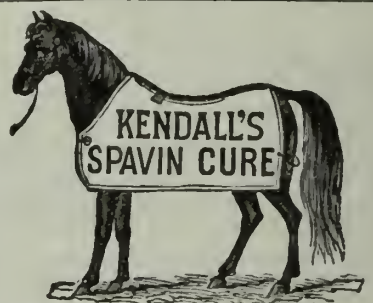
GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.



The beginning and end of the Horse Blanket question is 5/A. That mark has the same significance on a horse blanket that the seal of the government has on a gold certificate—it's an absolute guarantee of value. 5/A Horse Blankets are made with a special view to strength, durability, and comfort for the horse. Once you get a 5/A Blanket you will not need another for many years; perhaps not for a life time—your horse will last longer, too. Ask the dealer for a 5/A and be sure the trade mark is in plain sight.

Made only by

WM. AYRES & SONS, Philadelphia.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STAR, LANE CO., OREGON, Feb. 8th, 1892.

DR. B. J. KENDALL CO.,

Dear Sirs:—I have used your KENDALL'S SPAVIN CURE for the last twelve years never being without it but a few weeks in that time and I have made several wonderful cures with it. I cured a Curb of long standing. Then I had a four year old colt badly sweened; tried every thing without any benefit, so I tried your liniment, and in a few weeks he was well and his shoulder filled up all right, and the other, a four year old that had a Thoroughpin and Blood Spavin on the same joint, and to-day no one can tell which leg it was on. These statements can be proven, if necessary; the four year olds are now seven and can be seen any day at Cottage Grove, Or.

—Price \$1.00 per bottle.

DR. B. J. KENDALL CO.,

Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular

E. FOUGERA & CO.,

30 North William Street, New York

California Inventors

should consult **DEWEY & CO.** AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists and large practice as Patent attorneys enabled them to offer Pacific Coast Inventors far better service than they can obtain elsewhere. Send for free circulars of information. No 220 Market St., San Francisco Cal.

S. F. MARKET REPORT

Market Review.

WEDNESDAY MORNING, Nov. 15, 1893.

The local wheat market is even duller and weaker than last week. The immediate wants of shippers are well supplied and the burden of business is put upon the seller, though exporters seem willing to take all offerings at the current quotations, which are as follows: Good to choice shipping, \$1.02½@1.03½ per cwt; milling qualities, \$1.05@1.07½. We hear of many who are holding for better prices, but we can see no immediate prospect of an advance. The following table shows the range of the speculative markets during the week:

LIVERPOOL.

(Per cent.)	Nov.	Dec.	Jan.	Feb.	Mar.	May
Thursday	50.24d	50.31d	50.41d	50.51d	50.61d	50.71d
Friday	50.24d	50.31d	50.41d	50.51d	50.61d	50.71d
Saturday	50.24d	50.31d	50.41d	50.51d	50.61d	50.71d
Sunday	50.24d	50.31d	50.41d	50.51d	50.61d	50.71d
Tuesday	50.24d	50.31d	50.41d	50.51d	50.61d	50.71d

To-day's cablegram is as follows: Liverpool, Nov. 15.—Wheat—Downward tendency. California spot lots, 5s 6½d; off coast, 27s 6½d; just shipped, 27s 9½d; nearly due, 27s 6½d; cargoes off coast, very slow; on passage, weaker; Mark Lane wheat, at w; Wheat and Flour in Paris, quiet; weather in England, wet.

NEW YORK.

Day	(Per bushel)	Nov.	Dec.	Jan.	May
Thursday	60 1/2	60 1/2	60 1/2	60 1/2	60 1/2
Friday	60 1/2	60 1/2	60 1/2	60 1/2	60 1/2
Saturday	60 1/2	60 1/2	60 1/2	60 1/2	60 1/2
Sunday	60 1/2	60 1/2	60 1/2	60 1/2	60 1/2
Tuesday	60 1/2	60 1/2	60 1/2	60 1/2	60 1/2

The following is to-day's telegram—per bushel: New York, Nov. 15.—November, 65; May, 73½.

CHICAGO.

Day	(Per bushel)	Nov.	Dec.	May
Thursday	61 1/2	61 1/2	61 1/2	61 1/2
Friday	61 1/2	61 1/2	61 1/2	61 1/2
Saturday	61 1/2	61 1/2	61 1/2	61 1/2
Sunday	61 1/2	61 1/2	61 1/2	61 1/2
Tuesday	61 1/2	61 1/2	61 1/2	61 1/2

The following is to-day's telegram—per bushel: Chicago, Nov. 15.—November, 60½; December, 61½; May, 68½.

SAN FRANCISCO.

Day	(Per bushel)	Nov.	Dec.	May
Thursday	61 1/2	61 1/2	61 1/2	61 1/2
Friday	61 1/2	61 1/2	61 1/2	61 1/2
Saturday	61 1/2	61 1/2	61 1/2	61 1/2
Sunday	61 1/2	61 1/2	61 1/2	61 1/2
Tuesday	61 1/2	61 1/2	61 1/2	61 1/2

The following are to-day's recorded sales on Call: Morning Informal Session—May, 100 tons, \$1.20½; 200, \$1.20½; 600, \$1.21. December, 100 tons, \$1.06½; 100, \$1.06½; Seller 1893, 100 tons, \$1.06½; 100, \$1.06½; 10, \$1.06½ per cwt. Regular Session—May, 100 tons, \$1.06; 200, \$1.06; 600, \$1.06. May, 300 tons, \$1.20½; 600, \$1.20½; 1,000, \$1.20½ per cwt. December, 500 tons, \$1.06½; 100, \$1.06½; 400, \$1.06½ per cwt.

Barley.

The market has been weak for several days and there seems no prospect for any immediate improvement. Prices are considered low enough to invite much trading on speculators' account, but, somehow, buyers keep in the background, and the market moves along in more or less sluggish fashion. We quote: Feed, 67½¢@70¢ per cwt for fair to good quality, and 72½¢ for choice bright; brewing, 85¢@95¢ per cwt. The following table shows the prices which have ruled during the week in the San Francisco speculative market:

Day	(Per bushel)	Nov.	Dec.	May
Thursday	76 1/2	76 1/2	76 1/2	76 1/2
Friday	76 1/2	76 1/2	76 1/2	76 1/2
Saturday	76 1/2	76 1/2	76 1/2	76 1/2
Sunday	76 1/2	76 1/2	76 1/2	76 1/2
Tuesday	76 1/2	76 1/2	76 1/2	76 1/2

The following are to-day's recorded sales on Call: Informal Session—May, 100 tons, \$1.06 per cwt. Regular Session—December, 100 tons, 74¢; 100, 73¢; 200, 74¢. May, 100 tons, 85¢; 200, 85¢; 400, 85¢ per cwt.

Dried Fruit.

Offerings are generally light, while the demand is not brisk. Supplies of Prunes are somewhat free, with prices weak. Apples, 4 to 4½¢ for quartered, 4 to 5¢ per lb for sliced, and 8 to 8½¢ for evaporated; Pears, 6 to 7¢ per lb for bleached halves and 4 to 6¢ for quarters; bleached Peaches, 6 to 7½¢; sun-dried Peaches, 5 to 6¢; Apricots, Moorpark, 11 to 12¢; do Royals, 10 to 11¢ for bleached and 4 to 7¢ for sun-dried; Prunes, 4 to 5¢ per lb for the four sizes; Plums, 5 to 6¢ for pitted and 2 to 3¢ for unpitted; Figs, 4 to 5¢ for pressed and 2 to 3¢ for unpressed; White Nectarines, 6½ to 7¢; Red Nectarines, 5 to 6¢ per lb.

RAISINS—Receipts are liberal. Prices favor buyers. We quote as follows: London Layers, \$1.20 to \$1.25; loose Muscavels, in boxes, 95¢ to \$1; clusters, \$1.50 to \$2; loose Muscavels, in sacks, 3 to 4¢ per lb for three-crown, 2 to 3¢ for two-crown; dried Grapes, 1½ to 2¢ per lb.

OATS—Receipts of late have been of rather liberal volume, but prices have held up well, while the market as a whole shows healthy tone. We quote as follows: Milling, \$1.15@1.22½; Surprise, \$1.22½@1.32½; fancy feed, \$1.20@1.22½; good to choice, \$1.12½@1.17½; common to fair, \$1@1.10; Black, 80¢@1.20; Red, \$1@1.07½; Gray, \$1.02½@1.12½ per cwt.

CORN—Values continue to droop, there being no active demand. Quotable at 81½¢@82½¢ per cwt. for large Yellow, 85¢@87½¢ for small Yellow, and 85¢@90¢ for White.

CRACKED CORN—Quotable at \$20.50@21.50 per ton.

CORNMEAL—Millers quote feed at \$20 to \$21 per ton; fine kinds for the table, in large and small packages, 2½@3½¢ per pound.

OILCAKE MEAL—Quotable at \$35 per ton from the mill.

CHOPPED FEED—Quotable at \$17.50@18.50 per ton.

SEEDS—We quote: Mustard, brown, \$1.75 to

2; Yellow, \$2@2.35; Canary, imported, \$4.50@5; do, California, —; Hemp, 4@4½¢ per lb; Rape, \$2.25@2.50; Timothy, 6½¢ per lb; Alfalfa, 9¢ per lb for California and 9¢ for Utah; Flax, \$2@2.25 per cwt. MIDDINGS—Quotable at \$18@21 per ton. MILLSTUFFS—We quote: Rye Flour, 3½¢; Rye Meal, 3¢; Graham Flour, 3¢; Oatmeal, 4½¢; Oat Groats, 5¢; Cracked Wheat, 3½¢; Buckwheat Flour, 5@5½¢; Pearl Barley, 4@4½¢ per lb; Normal Nutrient, \$3 per case of 1 dozen cans; Breakfast Delight, \$3.25 per case of 2 dozen packages.

BRAN—Quotable at \$16.50@17 per ton.

HAY—Some disposition on the part of holders to realize has given easier tone to prices. Receipts are of moderate proportions. Wire-bound hay sells at \$10@12 per ton less than rope-bound hay. Following are wholesale city prices for rope-bound Hay: Wheat, \$10 to \$14.50; Wheat and Oat, \$10.00@13.50; Wild Oat, \$9@12; Alfalfa, \$10@10.50; Clover, \$8.50@10; Barley, \$9@10.50; Compressed, \$10@12.50; Stock, \$8@10 per ton. STRAW—Quotable at 50@55¢ per bale.

HOPS—Moderate business in progress. Quotable at 16@19¢ per lb, the latter a full figure for a select article.

RYE—Quotable at 87½¢@92½¢ per cwt.

BUCKWHEAT—Quotable at \$1.35@1.45 per cwt.

GROUND BARLEY—Quotable at \$16@17 per ton.

POTATOES—Arrivals continue large. We quote: Garnet Chiles, 35¢@50¢; Early Rose, 25¢@40¢; River Burbanks, 30¢@40¢; River Red, 35¢@45¢; Salinas Burbanks, 55¢@85¢ per cwt; Sweet, 40¢@75¢ per cwt. ONIONS—Oregon is sending down small shipments. Quotable at \$1.20@1.30 per cwt for good to choice.

DRIED PEAS—We quote: Green, \$1.60@1.75; Blackeye, \$1.50@1.70; Niles, \$1.50@1.60 per cwt. BEANS—Trade is moderately active. Supplies free. We quote: Bayos, \$1.75@1.80; Butter, \$2.25@2.40 for small and \$2.50@2.75 for large; Pink, \$1.50@1.70; Red, \$1.75@2.25; Lima, \$2.15@2.20; Pea, \$2.10@2.20; Small White, \$1.85@1.95; Large White, \$1.85@1.95 per cwt.

VEGETABLES—Tomatoes are a drug. Trade quiet. We quote: Eggplant, 25¢@40¢ per box; Green Peas, 2@3¢ per lb; String Beans, 2@3¢ per lb; Lima Beans, 2½@3¢; Marrowfat Squash, \$6@8 per ton; Cucumbers, 25¢@50¢ per box; Green Peppers, 30¢@60¢ per box; Tomatoes, 20¢@35¢ for large boxes; Turnips, 75¢ per cwt; Beets, 75¢@1¢ per sack; Parsnips, \$1.25 per cwt; Carrots, 40¢@50¢; Cabbage, 50¢@55¢; Garlic, ¾¢@1¢ per lb; Cauliflower, 60¢@70¢ per dozen; Dry Peppers, 5¢ per lb; Dry Okra, 15¢ per lb.

FRESH FRUIT—Berries are still selling at good prices. We quote: Apples, 65¢@1¢ per box for good to choice, and 35¢@60¢ for common to fair; Pears, 25¢@50¢ per box for common and 75¢@1¢ for choice; Quinces, 30¢@60¢ per box; Strawberries, \$4@6; Persimmons, 50¢@75¢ per box; Pomegranates, 50¢@75¢ per box; Raspberries, \$4@6 per chest; Cranberries, \$5@6 per bbl.

GRAPES—Offerings of table varieties are large. Low prices tempt peddlers to buy freely. Dealers are hopeful that surplus will be cleaned up and prices do better this week. We quote: Muscat, 15¢@35¢; Black, 15¢@30¢; Tokay, 15¢@35¢ per box; Zinfandel Wine Grapes, \$8@13 per ton; White Grapes, \$8@10 per ton.

CITRUS FRUIT—The first Oranges of the season arrived this week, coming from Oroville, and selling at \$7.50 per box for ripe stock and \$6 for green. Liberal shipping from that direction is expected from this time forward. We quote: Mexican Limes, \$2.50@3.50 per box; Lemons, Sicily, —@—; California Lemons, \$1@2 for common and \$2.50@3 for good to choice; Bananas, \$1.50@2.50 per bunch; Hawaiian Pineapples, \$2@4; Mexican Pineapples, \$3@4 per dozen.

NUTS—We quote as follows: Chestnuts, 12½¢@13¢ per lb; Walnuts, 6½¢@7½¢ for hard shell, 8@8½¢ for soft shell and 9@10¢ for paper shell; Chile Walnuts, 8@9¢; California Almonds, 10½¢@11½¢ for soft shell, 5½¢ for hard shell and 12@13¢ for paper shell; Peanuts, 3@4¢; Hickory Nuts, 5@6¢; Filberts, 10@11¢; Pecan, 8@9¢ for rough and 11¢ for polished; Brazil Nuts, 9@10¢; Cocoanuts, \$4@5 per 100.

HONEY—Very light trading. Stocks are large. We quote: Comb, 8½¢@9½¢; light amber, extracted, 4½¢@5¢; dark, 4½¢@4½¢; water white, extracted, 5½¢@6¢ per lb.

BEESWAX—Quotable at 22@23¢ per lb.

BUTTER—The market continues to improve and the better qualities have further advanced in price. We quote: Creamery, 27@28½¢; fancy dairy, 25@26¢; good to choice, 22½@24¢; common grades, 18@22¢; pickled roll, 19@21¢; firkin, 18@20¢; Eastern lard packed, 17@18¢ per lb. CHEESE—Desirable qualities are not in plentiful supply, while prices are rather firm in consequence. We quote: Choice to fancy new, 11½¢@13¢; fair to good, 9@10½¢; Eastern, ordinary to fine, 11@14¢ per lb.

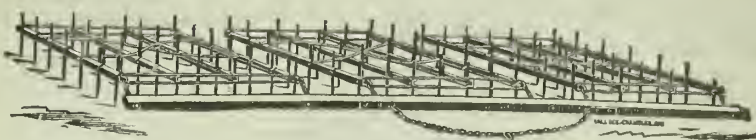
EGGS—Fair demand at current rates. There is still quite a wide range in quotations, though the margin is not as large as it was a week ago. We quote as follows: California ranch, 37½@46¢; store lots, 25¢@35¢; Eastern, 21@25 for ordinary and 25@29¢ per dozen for choice.

POULTRY—The market is not heavily supplied as it was a week or so ago, and the situation consequently looks better for the selling interest. We quote as follows: Live Turkeys—Gobblers, 17@20¢ per lb; Hens, 16@18¢; dressed Turkeys, 18@20¢; Roosters, \$4.50@5 for old and \$4@5 for young; Friers, \$3.50@4; Broilers, \$2.50@3.50; Hens, \$5@6; Ducks, \$3.50@5; Geese, \$1.50@2 per pair; Pigeons, \$1@1.50 per doz.

GAME—The inquiry is active and arrivals clear up well. We quote: Quail, \$1@1.25 per doz; Canvasbacks, \$2.75@3; Mallard, \$4@4.50; Wildgeon, \$1.25@1.50; Teal, \$1.25@1.50; Sprig, \$2@2.50; Small Ducks, \$1@1.25; Gray Geese, \$2@2.50; White Geese, \$1@1.25; Brant, \$1@1.25; English Snipe, \$1.25@1.50; Common Snipe, 50¢@75¢; Hare, \$1@1.25; Rabbits, \$1.25@1.50.

PROVISIONS—We quote as follows: Eastern hams, 13½¢@14¢ per lb; California hams, 12½¢@13¢; Bacon, Eastern, extra light, 15½¢@19½¢; medium, 12½¢@13¢; do, light, 13@13½¢; do, light, clear, 14½¢@15¢; light, medium, boneless, 13½¢; Pork, extra prime, \$14@14.50; do, prime mess, \$15@16; do, mess, \$23@24; do, clear, \$25@26; do, extra clear, \$26@27 per bbl; Pigs' Feet, \$12.50 per bbl; Beef, mess, \$7.50@8; do, extra mess, bbls, \$8.50@9; do, family, \$10@10.50; extra do, \$11@11.50 per bbl; do, smoked, 10@10½¢; Eastern lard, tierces, 8½¢@9½¢;

BENICIA PATENT ANGLE STEEL HARROWS.



Price includes Drag Bar Complete when more than one Section is ordered.

THE BENICIA PATENT

possesses many advantages over other Steel Harrows now in the market. The frames are made of angle shape steel of good quality, combining both strength and lightness. The teeth are driven through the frames, and then securely fastened by a bolt. The operator is thus enabled to lower them as they wear off.

THIS HARROW meets the wants of our farmers in an implement that weather cannot effect, that sun and rain cannot injure, that does its work of pulverization of every inch of the soil in the best possible manner, and at the same time is of light draft for the team.

THE BENICIA PATENT ANGLE STEEL HARROW is now pronounced by practical farmers to be the most successful Harrow in the field. It is an indispensable implement. It surpasses all other Steel Harrows in every particular, costs less for repairs, while the teeth can be replaced in a moment.

DON'T MAKE A MISTAKE in ordering, but remember that the Benicia Patent Steel Harrow with Steel Teeth is the Best, Cheapest and Lightest Draft.

GANG PLOWS—Our line is the largest and best in the State. It includes the Eureka, Peerless, Granger and Reversible Mold Gangs, in all sizes.

SINGLE PLOWS—We furnish the Benicia, Star, Gale, Princess and a score of others. We guarantee their quality.

HARROWS—We have all the various styles, from a common Drag to a Steel Frame Spring Tooth Lever Harrow. Also the Climax and Tiger Disc Harrows.

SEEDERS—Our stock is not equaled; before purchasing some other kind examine our Gem, with Armstrong's patent force feed, Gorham, Triumph, Monarch, Olimax and others.

WRITE FOR OUR NO. 27 LATEST SPECIAL 140-PAGE CATALOGUE of Plows, Harrows, Seeders, Cultivators, etc.

BAKER & HAMILTON,

SAN FRANCISCO AND SACRAMENTO.

do, prime steam, 12¢; Eastern pure, 10-lb pails, 12½¢; 5-lb pails 12½¢; 3-lb, 12½¢; California, 10-lb tins, 10½¢; do, 5-lb, 11½¢; do, kegs, 11½¢@12¢; do, 20-lb buckets, 12½¢; compound, 8½¢ for tierces and 9½¢ for h bbls.

WOOL—The situation still continues favorable for buyers. A local circular says: "There has been considerable inquiry the current week, and a little more business has been transacted than for some time previous. The attention has been mainly directed to the best Wools, which promise to move tolerably freely from this time forward until cleaned up, and while the market for this class of stock is ruling moderately firm, values show no quotable advance. Heavy and defective fleeces are still dragging at former low prices." We quote spring:

California, year's fleece, 7@9¢; do 6 to 8 months, 7@8¢; do Foothill, 10@11¢; do Northern, 12@13¢; do extra Humboldt and Mendocino, 11@13¢; Nevada, choice and light, 12@14¢; do heavy, 8@10¢; Oregon, Eastern, choice, 10@12¢; do Eastern, poor, 7@9¢; do Valley, 12@15¢. We quote fall: Free Mountain, 6@7¢; Northern defective, 5@7¢; Southern and San Joaquin, 3@5¢.

HIDES AND SKINS—Quotable as follows:

	Sound.	Culls.
Heavy Steers, 57 lbs up, ½ lb. 4½¢	4 @—¢	4 @—¢
Medium Steers, 48 to 56 lbs. 4	3 1/2 @—¢	3 1/2 @—¢
Light, 42 to 47 lbs. 3	3 @—¢	2 1/2 @—¢
Cows, over 50 lbs. 3	3 3/4 @—¢	2 1/2 @—¢
Light Cows, 30 to 50 lbs. 3	3 @—¢	2 1/2 @—¢
Stags, 10 to 12 lbs. 2 1/2	2 @—¢	2 @—¢
Kips, 17 to 30 lbs. 4	3 @—¢	3 @—¢
Veal Skins, 10 to 17 lbs. 5	4 @—¢	4 @—¢
Calf Skins, 5 to 10 lbs. 6	5 @—¢	5 @—¢
Dry Hides, usual selection, 6¢; Dry Kips, 6¢; Calf Skins, 10¢; Cull Hides, Kip and Calf, 4¢; Pelts, Shearling, 10¢@20¢ each; do, short, 25¢@40¢ each; do, medium, 40¢@60¢ each; do, long wool, 75¢ each; Deer Skins, summer, 25¢; do, good medium, 15¢; do, winter, 5¢ per lb; Goat Skins, 25¢@40¢ apiece for prime to perfect, 10¢@20¢ for damaged, and 5¢@10¢ each for Kids.		

San Francisco Meat Market.

The demand is showing some little increase, but supplies are large enough to meet all wants. Prices unchanged. Following are the rates for whole carcasses from slaughterers to dealers:

BEEF—First quality, 5@5½¢; second quality, 4½¢@5¢; third quality, 3½¢@4¢ per lb.

CALVES—Quotable at 4@5¢ for large, and 6@7¢ per lb for small.

MUTTON—Quotable at 4@5½¢ per lb.

LAMB—Quotable at 6@7¢ per lb.

PORK—Live hogs, on foot, grain fed, heavy and medium, 5½¢@5½¢; stock hogs, 5½¢@5½¢; dressed hogs, 8@8½¢ per lb.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 m, \$1 10 m, \$2; 15 m, \$3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING OCT. 24, 1893.

507,405.—HYDRAULIC ENGINE—F. Bernhardt, Mokelumne Hill, Cal.
507,409.—LUBRICATOR—G. W. Boyd, S. F.
507,450.—VEHICLE BRAKE—C. K. Brandenburg, Bly, Or.
50,425.—HAY PRESS—F. P. Fowler, Phoenix, A. T.
507,427.—HEADER—J. Garrett, Visalia, Cal.
507,436.—GAS FNOINE—Hirsch & Schilling, S. F.
507,366.—SLIT BRAKE—W. M. Hood, S. F.
507,370.—SIDE HILL VEHICLE—C. Koenig, Sacramento, Cal.
507,231.—GATE LATCH—L. D. Latimer, Windsor, Cal.
507,166.—CONVEYER BELT—R. Niedergsaess, Seattle, Wash.
507,282.—PLOW—J. L. Pearson, Lodi, Cal.
507,327.—MOTOR—B. L. Picard, Centralia, Wash.
507,521.—CONCRETE PIPES—E. L. Ransome, Oakland, Cal.
507,288.—WINDOW SHADE GUIN—F. C. Schroeder, Alameda, Cal.
507,339.—AXLE CUTTER—J. Sovereign, Woodland, Cal.
507,406.—WATERPROOF SUIT—O. Van Oostrum, Portland, Ore.
507,463.—STEAM ENGINE—C. White, Oakland, Cal.
507,193.—TRANSPORTING FLUID—J. S. Wintermute, Tacoma, Wash.
507,397.—LUBRICATOR—S. F. Woodworth, Clipper Gap, Cal.

FOR THE WEEK ENDING OCT. 31, 1893.

507,876.—COIN HOLDER—E. Berrill, Portland, Or.
507,881.—HOR CARRIAGE—Cabell & Dickinson, Salem, Or.
507,885.—PREFRIGING ASPHALT—A. S. Cooper, Santa Barbara, Cal.
507,973.—TONOS—J. W. Cox, Gold Hill, Or.
507,709.—SHIRT METAL PIPE—C. S. Hamlin, Los Angeles, Cal.
507,542.—BAO HOLDER—G. Hunt, Walla Walla, Wash.
507,817.—CLOCK HAND REMOVER—C. G. Ingalls, Colville, Wash.
507,834.—BRAKE—D. C. McGregor, East Oakland, Cal.
507,630.—FLY TRAP—J. S. Morton, Los Angeles, Cal.
507,921.—CHAIR—W. S. O'Brien, S. F.
507,638.—CAR COUPLING—T. C. O'Donnell, Winnemucca, Nev.
507,926.—MINING APPARATUS—E. F. Peck, Napa, Cal.
507,845.—DRYER—S. A. Richards, Fresno, Cal.
22,892.—DESIGN FOR WATCH CHAIN—J. Jenkins, Buckley, Wash.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 11, 503 Montgomery St., San Francisco (Pacific Mutual Life Insurance Building).

Hay Pressing.

If you are interested in pressing hay write Truman Hooker & Co., San Francisco. They will save you money

CALIFORNIA FRUITS

AND HOW TO GROW THEM. By Prof. Edward J. Wilkeson.

A practical, explicit and comprehensive book embodying the experience and methods of hundreds of successful growers, and constituting a trustworthy guide by which the inexperienced may successfully produce the fruits for which California is famous. 600 pages. Fully illustrated. Price \$3. Postpaid. Send for circular. DEWEY PUBLISHING CO. Publishers, 320 Market Street, San Francisco, Cal.

Patrons of Husbandry.

(Continued from page 350.)

From Live Oak.

TO THE EDITOR:—North Butte Grange has been very quiet during the past few months. Owing to busy times but few of the farmers have been able to attend our meetings. However, we have not been idle altogether, for, at our next regular meeting, November 11th, we will confer the first and second degrees upon two candidates, and we expect several applications, so, when all have taken the final degrees, we will celebrate with the usual grand feast. We would like to admit more young people into our grange. It gives them company and society, and it teaches a great many to have confidence in themselves, enabling them to speak in public, for in the grange one feels at home. We were glad to note that our grange was represented at the annual session of the State Grange, which convened at Petaluma beginning October 3rd. Only one member of our grange was present, but we all had the pleasure of listening to a glowing account of her trip, and she felt duly repaid for her visit. We all hope to see more present at the next session in Stockton.

E. M. B.

Live Oak, Nov. 6, 1893.

From Pescadero.

M. A. M., the regular correspondent of Pescadero Grange, writes that after long discussion they have tabled the silver question, adding with a good deal of point: "Surely we cannot be blamed when it is remembered that we have a notable precedent in the late session of the State Grange." The letter continues: "On the 24th inst. we are to have a Pomona celebration. There will be a free literary and musical entertainment, to be followed by a supper, the proceeds from which will go for the Temple to Agriculture at Washington, D. C."

"It would seem strange for a fraternal order like the grange not to have headquarters at such a fair as the Midwinter is likely to be. There will be many visiting patrons from all over the Union, and for them to meet and converse cannot help but be for the good of the order. It is certainly a desirable thing. Whether it is the best plan, on a thorough consideration of the subject, can be determined better by those who have it in hand."

At Rest.

"Is it well with the husband? Is it well with the wife? It is well!"

Stockton Grange was called upon on November 9th to part with a charter member, Bro. J. B. Boody, 43 years a resident of this county and an upright man and successful farmer. He was one of the directors of the "Granger's Union" (a large agricultural store) and a constant attendant and supporter of the Central Methodist Church, from which he was borne by pall-bearers and the directors from his chosen church, and laid in the vault, awaiting, as it proved, the coming of his life companion, whose spirit joined his just as the ceremony was closing. On the 11th the same bearers carried her from the sweet hymns and words and prayers of the church to the resting place of the husband and wife, just one week after their return from Maine. Sister Lizzie Boody was a charter member, an active worker in the W. C. T. U., which turned out in a body, and had been three times chaplain of Stockton Grange. She was 75 years of age, strong in her convictions, plain in her speech, and one of the best-read women in this country.

The handsome coffins being placed by the graves, an impressive Methodist service was rendered; then W. M. Noyes of Stockton, with most of the members of Stockton and Waterloo Granges (wearing badges of the order and mourning) performed our beautiful burial service, each member dropping a farewell blossom on the peaceful sleepers.

A. A.

The Longest Ocean Cable.

The longest ocean cable in the world is that of the Eastern Telegraph Company, whose system extends from England to India and measures 21,000 miles, says *Kate Field's Washington*. Africa is now completely encircled by submarine cables, which make up altogether a length of 17,000 miles. There are 11 cables across the North Atlantic, though not all of them are at present in use. Five companies control the lines of telegraphic communication between this country and Europe.

An Illinois Miracle.

A CASE OF DEEP INTEREST TO WOMEN EVERYWHERE.

Saved Through a Casual Glance at a Newspaper—Weak, Pale and in a Deplorable Condition When Relief Came—A Remarkable Narrative Carefully Investigated by a Dubuque, Iowa, Times Reporter.

(Dubuque, Iowa, Times.)

Among the peculiar conditions with which the people of the present age are endowed is the remarkable capacity for doubting. The *Times* determined upon a thorough investigation into a medical case out in Savanna, Ill., as a matter of news, with the result that the case was even more remarkable than the public had been given to understand.

Mrs. Kenyon was a good talker and told the story in a terse way, as follows:

"I was born in Warren county, New York, 33 years ago. I was married when I was 19, and came to Savanna seven years ago. With the exception of being at times subject to violent sick headaches, I considered myself a healthy woman up to five years ago. At that time I was very much run down and an easy prey to the ever-present malaria in and about the Mississippi bottom lands. I was taken violently ill. The local physicians said I was affected by malarial and intermittent fever. I continually grew weaker and finally went to see Dr. McVey of Clinton, Iowa, who is reputed to be one of the ablest physicians in the Mississippi valley. He treated me for a time without beneficial effects, and finally told me he thought he could help me if I would absolutely abstain from work. That was not to be thought of. If able to go about I had to look after my household duties. I then consulted a prominent doctor of Savanna. My stomach would not retain the medicine he gave me and he came to the conclusion that my stomach was badly diseased. Occasionally I would choke down and nearly suffocate. I then went to Dr. Maloney and he pronounced it a case of heart trouble. He helped me temporarily, but like the rest said I must stop all work or nothing could be done for me. All this time I had grown weaker and paler until I was in a deplorable condition. I had a continual feeling of tiredness, my muscular power was nearly gone, and I could not go up half a dozen steps without resting, and often that much exercise would cause me to have a terrible pain in my side. Seemingly the blood had left my veins. I was as pale as death; my lips were blue and cold, and I had given up all hope of ever being better. About the first of April last a young man boarding with us received a Fulton, Ill., paper. It was his home paper sent him by his mother. I picked it up one day and in casually glancing over its columns came across an account of a marvelous cure through the use of Dr. Williams' Pink Pills for Pale People. Candidly, I did not believe the story, and when my husband suggested that it would do no harm for me to try the pills I laughed at the idea. He insisted and I submitted, but I had no faith whatever in the pills. My husband sent for two boxes and I took them. When these had been used I was somewhat improved in health. I continued their use and felt I was growing stronger, my sleep refreshed me and it seemed as if I could feel new blood coursing through my veins. I kept on taking Pink Pills until a short time ago and I now consider myself a healthy rugged woman. My house is full of boarders and I superintend all the work myself. In other words, I work all the time and am happy all the time. I am positive that Dr. Williams' Pink Pills for Pale People saved my life and I believe there are thousands of women who could find great relief if they used them. The sick headaches I was subject to from girlhood have disappeared and I have not had a single attack since I commenced taking Dr. Williams' Pink Pills."

"Were there any disagreeable effects from the medicine?" asked the reporter.

"None whatever," replied Mrs. Kenyon. "They are pleasant to take and the conditions imposed by the directions are easily complied with."

One of her neighbors said, "I have been intimately acquainted with Mrs. Kenyon, and know of her illness. I look upon her case as something marvelous. It is surely the unexpected that happened in her case. Of my own knowledge she was reduced to a mere shadow; was the palest and most ghost-like person I had ever seen. Hers was a remarkable case. But you can see the result for yourself, and if miracles are not performed in these days I would be pleased to know how to describe a case of this kind."

Dr. Williams' Pink Pills are a perfect blood builder and nerve restorer, curing such diseases as rheumatism, neuralgia, partial paralysis, locomotor ataxia, St. Vitus' dance, nervous headache, nervous prostration and the tired feeling resulting therefrom, the after effects of la grippe, influenza and severe colds, diseases depending upon humors in the blood, such as scrofula, chronic erysipelas, etc. Pink Pills give a healthy glow to pale and sallow complexions, and are a specific for all the troubles peculiar to the female system; in men they effect a radical cure in all cases arising from mental worry, overwork, or excesses of any nature.

These Pills are manufactured by the Dr. Williams' Medicine Company, Schenectady, N. Y., and Brockville, Ont., and are sold only in boxes bearing the firm's trade mark and wrapper, at 50 cts. a box or six boxes for \$2.50. Bear in mind that Dr. Williams' Pink Pills are never sold in bulk, or by the dozen or hundred, and any dealer who offers substitutes in this form is trying to defraud you and should be avoided.

DEWEY & CO
PATENT
SOLICITORS
220 MARKET ST. S. F.
ELEVATOR 12 FRONT ST. S. F.

A. J. VAN DRAKE
203 FREMONT ST. - SAN FRANCISCO
PACIFIC COAST AGENT

SHARPLES (IMPROVED) **CREAM SEPARATOR**
DEALER IN **VATS** **CHURNS** **SOILERS** **ENGINES** **BUTTER WORKERS** **MILK TESTS** **OILS** **GENERAL CREAMERY SUPPLIES**

RUSSIAN AND BELT **REPAIRS SEPARATOR BOWLS** **A SPECIALTY** **RE-BALANCING AND TUNING** **COMPLETE STOCK SEPARATOR PARTS**

Only Award of Gold Medal and Diploma at the World's Fair, Chicago.

CANCER CURED

WITH SOOTHING BALMY OILS.
WE SUCCESSFULLY TREAT
Cancer, Tumor, Catarrh, Piles, Fistula,
Eczema and all Skin and Womb Diseases.

CANCER of the nose, eye, lip, ear, neck, breast, stomach or womb; in fact, all diseased internal and external organs or tissues, successfully treated, without the knife or burning caustic plasters, but with soothing, balmy magnetic oils. Beware of imitations as there are those who hope to profit by advertising an oil cure for these diseases. We are the originators of this system, all others are frauds.

Correspondence solicited. Consultation free. Testimonials furnished. Address

DR. EUGENE BUELL,
Cancer Institute,
ROOM 57, SUPREME COURT BUILDING,
Cor. McAllister and Larkin Sts., San Francisco, Cal.

FARM-POULTRY.
The Best Poultry Paper
IN THE WORLD.

Write for SAMPLE COPY; Sent Free.

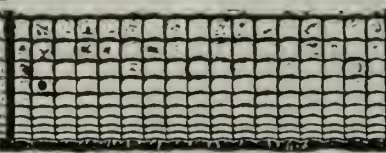
"It opened up a new field
and cultivated it thoroughly."—So says the *Fanciers' Journal*.

"FARM-POULTRY is covering itself with glory."

—Thus the *Philadelphia Farm Journal* writes us.

It is worth \$1.00. It Teaches How to
Sent on Trial. Make Money with
Six Months for A Few Cents.
ONLY 25 CENTS.
IF YOU MENTION THIS PAPER.

One department "Answers to Correspondents," is worth ten times the subscription price to anyone; explains many things not to trouble even old breeders. Send for Index to first 3 Vols. free; judge yourself, if as much instructive matter can be bought anywhere, for many times the price. Remit cash or stamps. This special offer good for only three months. I. S. JOHNSON & CO., 22 Custom House St., Boston, Mass.



Time WILL Tell.
SIX YEARS AGO

A prominent farmer in Indiana put up lots of Page Fence. Did it suit? So well that his son lately formed a partnership with the Agent. Result: Orders enough for a carload of 2500 rods, right now in dull times. Competition was nowhere, against positive proof of efficiency and durability.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

TREE WASH.
OLIVE DIP.

"Greenbank" Powdered Caustic Soda and Pure Potash.

T. W. JACKSON & CO.,
Sole Agents,
No. 5 Market Street, San Francisco, Cal.

THE American Bee Journal,

(Established 1861.)
Is Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample
\$1.00 BEE-BOOK FINE
W. W. YORK & CO., 44 Fifth Ave., Chicago, Ill.

Commission Merchants.

ALLISON, GRAY & CO.,

501, 503, 505 507 & 509 Front St.,
And 300 Washington Street, SAN FRANCISCO.

—GENERAL—

Commission - Merchants,
GREEN and DRIED FRUITS,
Poultry, Eggs, Game, Grain, Produce and Wool.

P. STEINHAGEN & CO



404 & 406 DAVIS ST. S. F.

MOORE, FERGUSON & CO.
WOOL, GRAIN, FLOUR

—AND—

General Commission Merchants,
310 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

LINDSAY & CRAIG,

Crocker Building... San Francisco

Mortgages Bought, Loans Negotiated.

If you desire to sell your farm send us particulars.

STOCK SCALES

4 TON \$45.

U. S. STANDARD. FULLY WARRANTED.

Delivered at your R. R. Station and ample time for building and testing allowed before acceptance.

OSGOOD & THOMPSON, Binghamton, N. Y.

PORTABLE PLATFORM SCALES,
TRUCKS, ETC.

Twenty-five per cent cheaper than any other on the market. Send for Catalogue.

C. H. LINDEMANN, Agent,

126 KEARNY STREET, SAN FRANCISCO.

C. H. EVANS & CO.,

(Successors to THOMSON & EVANS.)

110 and 112 Beale Street, S. F.

MACHINE WORKS,

Steam Pumps Steam Engines

And All Kinds of MACHINERY.



MEYER'S SLIP SHARES!

FOR SALE BY

DAVID N. HAWLEY,

No. 318 MARKET STREET.

HEALD'S

BUSINESS COLLEGE.

24 POST STREET... SAN FRANCISCO.

FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Book keeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR. E. P. HEALD, Pres. O. S. HALEY, Sec.

Guano Fertilizer!

PLAIN AND NITROGENOUS
SUPERPHOSPHATES.

GUANO FLOUR.

Complete and Special Fertilizers

FOR ALL KINDS OF

Fruit, Grain, Sugar Beets, Vegetables, Etc.

MANUFACTURED BY THE

MEXICAN PHOSPHATE & SULPHUR CO.

For circulars and other information address

H. M. NEWHALL & CO., Agents,
309 & 311 SANSOME STREET,
San Francisco.

Seeds, Plants, Etc.

GOLD DUST.

"Gold Dust Clog," says H. E. Van Deman, U. S. Pomologist, "is a yellow cling of medium size, round and regular in shape, and very firm in flesh. The color is very attractive, being dark yellow with a very red cheek. It bears heavily and carries to market with very little damage. Coming as it does before the main peach crop is gathered, it is about the first yellow cling of any special value and therefore finds a ready sale. Each year it gains in favor, but as it is a variety but recently originated the public know little of it. It is a very profitable variety." Price \$1 each, 35 per half dozen. For sale by SACRAMENTO RIVER NURSERY COMPANY, Growers of HIGH-GRADE Fruit Trees, Walnut Grove, Sacramento County, California. Our Specialties—Genuine Tragedy Prunes, Olyman and Japan Plums on true Myrobalan whole root seedlings—we use no piece roots nor cuttings; price 15 cents each; Sacramento River Bartlett's and Peaches—price 10 cents each. Large quantities at lower rates. WE GUARANTEE OUR TREES TRUE TO NAME.

OAK LAWN NURSERY.

90,000 First-Class Fruit Trees
AT LOWEST PRICES.

MUST BE SOLD.
PLEASE WRITE AT ONCE.

HARRY E. HULBERT,
211 THIRD STREET,
SANTA ROSA, - SONOMA CO., CAL.

Pepper's Nurseries.

ESTABLISHED IN 1858.

For Sale at Low Rates, a General Assortment of Hardy Deciduous Fruit Trees.

I do not buy trees to sell; what is offered is grown in my own grounds and free from scale bugs. No scale bugs of any kind to be found in the Nursery. No agents employed. Order direct from the nursery and procure your trees true to label. Order early, as early planting is the most successful with deciduous trees. Prices furnished on application.

Address W. H. PEPPER Petaluma, Cal.

MYROBALAN PLUM AND MAZZARD CHERRY SEED,

Fresh Crop Now Ready for Shipment.

FULL PRICE LIST OF

FRUIT STOCKS AND SEEDS
ON APPLICATION.

THOMAS MEEHAN & SONS, GERMANTOWN, PA.

B. F. GODFREY & CO.,
NURSERYMEN,
Davisville, Cal.

Write for Catalogue and Prices.

Seeds, Plants, Etc.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrobalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond
Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

Santa Rosa

Nurseries.

AN IMMENSE AND WELL
ASSORTED STOCK.

TREES TRUE TO NAME—Warranted clean and raised without irrigation.

PEARS AND PRUNES at about HALF USUAL PRICES till my surplus is sold.

Price List mailed free.

Address R. W. Bell, Santa Rosa, Cal.

Trees, Vines and Plants,

—FOR 1893 and 1894.—

Terms on Application.

Address, - - L. D. BUTT,

Pearyn, Placer Co., California.

OLIVE TREES.

ALL KINDS OF
Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,
Pomona, Cal.

OLIVE TREES

In Variety for Nurserymen,
Dealers and Planters.

Will also contract now to propagate Rooted Olive Cuttings for persons who wish to plant them in nursery spring of 1894.

OLIVE CULTURE IN CALIFORNIA,

Sixteen pages, mailed free.

Address:

JOHN S. CALKINS,
POMONA, LOS ANGELES COUNTY, CAL.

OLIVE TREES.

Apply for Catalogue.

C. F. LOOP & SON, - - Pomona Cal.

SPARK'S MAMMOTH.
A SUPERIOR QUALITY OF APRICOT.
Fine for Canning Drying and Shipping.

They run 3 and 4 to the pound. The Largest and Finest fruit of the Apricot variety.

ADDRESS

N. B. SMITH, Ventura, Ventura Co., Cal.

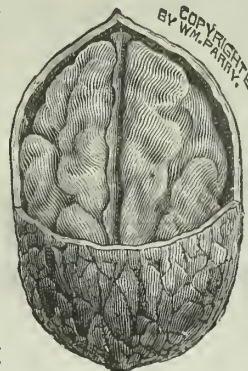
WE GIVE ESPECIAL ATTENTION TO

Fruit Trees! Deciduous Fruit Trees!

ALEXANDER & HAMMON'S

Rio Bonito Nurseries, Biggs, Butte Co., Cal.

KAGHAZI



PERSIAN

:- SOFT SHELL :-

:- WALNUT! :-

Our Stock of TREES and VINES is Most Complete
in EVERY CLASS of Fruits.

A LARGE STOCK OF THOMPSON'S SEEDLESS GRAPES.

SHIPPING, CANNING and DRYING Fruits of all kinds.

Best Assortment of RAISIN and TABLE GRAPES in California.

Early Shipping Plums a Specialty.

SPECIAL PRICES FOR TREES IN LARGE QUANTITIES.

DURING the last three years, trees grown on the FEATHER RIVER BOTTOM LANDS, at RIO BONITO, BUTTE COUNTY, have been much sought after, and the demand for them is increasing all over the State where they have been planted. Owing to the peculiar adaptability of the soil and climate of this section for growing nursery stock, the trees making a very large and well-furnished system of root growth, and maintaining a correspondingly strong and vigorous top, maturing the wood thoroughly, we are enabled to supply our patrons with the best of trees, healthy in every respect, entirely free from insect pests, and in perfect condition for transplanting.

If You Are Going To Plant Trees, It Will Pay You To Correspond With Us Before Purchasing.

ALEXANDER & HAMMON,
BIGGS, BUTTE COUNTY, CALIFORNIA.

STOCKTON NURSERIES,

ESTABLISHED 1853.

FRUIT TREES. FRUIT TREES.

GRAPE VINES.

Also Fine Stock of Shade and Ornamental Trees, Shrubs, Palms, Roses and Carnations.

Correspondence Solicited. PLANTS IN GREAT VARIETY.

E. C. CLOWES, STOCKTON, CAL.

PRUNE TREES

FOR SALE—50,000 Trees on Myrobalan Stock.

Imported from one of the first French nurseries. Scions from an orchard near Saratoga. Fruit raised in this celebrated district has taken for us six first-class awards, INCLUDING HIGHEST AWARD, COLUMBIAN EXHIBITION. Apply to

BALFOUR, GUTHRIE & CO., 316 California St., San Francisco, Cal.
Agents for Saratoga Packing Company.

NAPA VALLEY NURSERIES.

NEW CATALOGUES NOW READY.

Fruit, Nut and Shade Trees, Grape Vines, Etc., Citrus Fruits, Ornamental Shrubs, Flowering Plants, Roses, Palms, Bulbs, Seeds, Etc.

Fruit and Nut Trees propagated from bearing orchards at Sausal Fruit Farm; Unirrigated, Clean and Healthy. Do not fail to correspond before making purchases. Satisfaction guaranteed.

LEONARD COATES, - - - NAPA, CAL.

McKEVITT'S EARLY.

The New Yellow Freestone Peach!
—FIRST AND BEST OF EARLY YELLOW PEACHES.—

RIPENS IMMEDIATELY AFTER THE ALEXANDER (White Clog), which is the earliest peach in market. Fruit is round, of medium size, VERY HIGHLY COLORED, flesh firm and sweet.

THIS PEACH HAS BEEN SUCCESSFULLY SHIPPED EAST FOR FIVE YEARS and is no new, untried variety.

Tree healthy, strong grower, and heavy bearer, never having missed a crop. A limited number of yearling trees for sale this season. Apply early before stock is exhausted.

FRANK B. McKEVITT, : : : : VACAVILLE, CAL.

LOW PRICES ON

ALMOND TREES!

California Paper-Shell, Nonpareil, Ne Plus Ultra and I. X. L.

A pamphlet on Almonds mailed free of charge on application. A large supply of the GOLDEN PEACH and FRENCH PRUNE. All kinds of leading fruit trees for sale. No charges made for haling trees.

PRICES: 4 to 6 ft. Trees, 80; 3 to 4 ft. Trees, 50c.

Address, **PERCY W. TREAT,**

Davisville Nurseries, Concord, California.

“LOOK ON THIS PICTURE”

(THE OLD)



From Milwaukee Harvester Company's Catalogue.

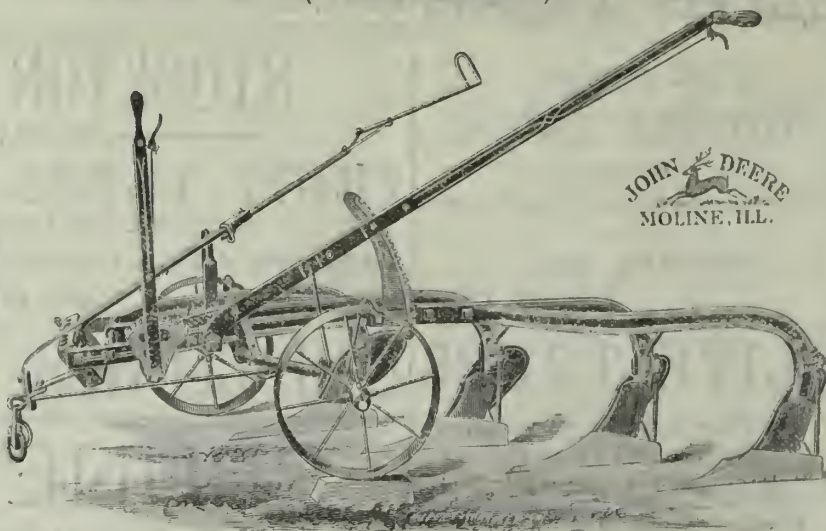
“PLOWING,” FROM ROSA BONHEUR'S PAINTING, EXHIBITED AT THE PARIS SALON.

Photographed and Engraved by King, Fowle & Co., Milwaukee

“THEN ON THIS”

(THE NEW.)

THE BEST
MADE.



BETTER
THAN EVER.

WE CAN SUPPLY EITHER TWO, THREE, FOUR OR FIVE GANG

“NEW DEALS”

WITH STEEL OR CHILLED BOTTOMS.

WITH OR WITHOUT RIDING ATTACHMENT.

“NEW DEAL” FOUR AND FIVE GANGS HAVE OUR PATENT “POWER LIFT.” A BOY CAN HANDLE THEM.

We bought of you a year ago a dozen of your “New Deal” Gang Plows (4 furrow), and have since used them as occasion required. We like them very much and have no hesitancy in commending them highly. We find them especially valuable in re-plowing summer-fallow, though they are, of course, good for any plowing.
Chico, Cal., Oct. 20th, 1893. (Signed) F. C. LUSK, Agent Glenn Estate.

Write for Circulars and Prices to

DEERE IMPLEMENT COMPANY,

305 & 307 MARKET STREET, SAN FRANCISCO, CAL.

LIBRARY OF THE STATE OF CALIFORNIA

PACIFIC RURAL PRESS

Vol. XLVI. No. 22.

SAN FRANCISCO, SATURDAY, NOVEMBER 25, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market Street.



No. 1. Administration Building.
No. 2. Mechanical Arts Building.
No. 3. Agricultural and Horticultural.

No. 4. Fine Arts.
No. 5. Manufactures and Liberal Arts.

No. 6. Electric Tower.
No. 7. Vienna Palace.

No. 8. Hawaiian Exhibit.
No. 9. Chinese Exhibit.

No. 10. Oriental Concessions.
No. 11. Aviary.

No. 12. Buffalo Park.
No. 13. Water Tower.

No. 14. Strawberry Hill.
No. 15. Golden Gate.
No. 16. Ferris Wheel.

BIRD'S-EYE VIEW OF EXPOSITION AND GROUNDS.

At the Midwinter Fair.

Visitors to the site of the Midwinter Fair return with favorable impressions of the extent and style of the improvements which are being hurried forward in preparation for the opening on the first of January next. The engraving on this page, which we reproduce from the *Illustrated Pacific States* of this city, gives an excellent idea of the extent and variety of the structures designed for the different features of this great undertaking for public instruction and entertainment. Of the large buildings around the central court all are now sufficiently advanced to show their style and finish—in fact, several of them are almost completed. Of the scores of smaller buildings, many are well under way and advancing rapidly. The weather has been unexceptional for the prosecution of the work. We believe work has not been interrupted for a single day by unfavorable weather. This in itself is a testimonial to the climate of which the fair is designed to be an exponent.

When the dedication ceremonies take place on New Year's Day, there will be 75 separate buildings on the fair grounds. In placing the number at 75 the 50 or more kiosks are not counted. Neither are the tents and huts in many of the villages. Only those structures which may be justly designated main structures are taken into account. Of the largest of these the dimensions may be given as follows: Manufactures building, 462 feet long by 237 feet wide, with an annex. It is surmounted by a dome over 100 feet high. From side wall to side wall the arch will be 158 feet wide. It is the largest single spanning arch ever made for a building on the coast. The Mechanical Arts building is 340 feet long and 160 feet wide. The Horticultural building is 400 feet long by 200 wide. The Fine Arts building 140 feet long by 132 wide. The Administration building is 70 feet square with a tower 100 feet high. All these structures will be arranged around the central court, shown in the engraving, which will be a beautiful stretch of lawn and handsome plants, amidst which fountains will play, and over all at night the electric lights will flash from the tall tower shown in the pic-

ture. It is evident that the fair will be large, unique and characteristic of all that Californians enjoy and are proud of, and richly endowed with striking contributions from the uttermost parts of the earth.

A SOUTHERN EXCHANGE claims that an alfalfa-grower in San Bernardino county gains much by irrigating his alfalfa a couple of days before cutting. In so doing he said he saved from eight to ten days for the alfalfa. To explain, he said that by irrigating before cutting, the alfalfa did not receive a check but grew right on, and by the time the hay was cured and hauled off, the next crop would be five or six inches high; whereas if he cut his hay first and then irrigated, it would take from eight to ten days to get the water on and the crop started to growing again. Thus the man who waited until he hauled off his hay before irrigating would lose ten days on the growth of his next crop, which lost time he saved by his plan. Whether the thing is at all feasible depends, of course, upon the character of the soil. Some soils would mire down the machine and others would not.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$5 in advance will receive 15 months (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half Inch (1 square).....	1.00	2.50	6.50	22.00
One Inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Registered at S. F. Post Office as second-class mail matter.

Our latest forms go to press Wednesday evening.

Any subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLOKAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, November 25, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—Bird's-eye View of Exposition and Grounds, 357.
EDITORIALS.—At the Midwinter Fair, 357. The Dairy Dragon; Miscellaneous, 359. From an Independent Standpoint, 359.
CORRESPONDENCE.—Thompson's Seedless Grape, 360.
MISCELLANEOUS.—The Fruit-Growers' Convention, 359. Scientific Notes; Some Uses of Hot Water, 371; Magnitude of Railway Business; Queer Rain Theory; How to Keep Cider Sweet, 370. An Australian's Comments Upon Our Methods and Institutions; Profitability of Alfalfa, 360. Horses Should Wear Light Shoes; Chemical History of the Atmosphere; Work a Horse Will Do; Wing Area of Flying Animals, 368.
HORTICULTURE.—More about the State Fruit Exchange; Advice to Fruit-Planters in Placer County, 361.
THE FIELD.—Sugar-Beet Growing in California, 361-362.
THE VINEYARD.—A Grape Fungus Which May Be Valuable; What Influences Raisin Values, 362.
POULTRY YARD.—Troubles in the Oviduct, 362-363.
SWINE YARD.—Hams, Bacon and Salt Pork, 363.
SHEEP AND WOOL.—Those Flat-Tailed Persian Sheep; The French Merinos, 363.
THE APRIARY.—The Beeswax Business, 363.
THE HOME CIRCLE.—Miscellaneous, 364-365.
DOMESTIC ECONOMY.—Miscellaneous, 365.
YOUNG FOLKS' COLUMN.—Miscellaneous, 365.
PATRONS OF HUSBANDRY.—Editorial Observations; The National Grange; Overseer Davis Talks; From New Hope Grange; The Secretary's Column; National Grange Officers, 366.
AGRICULTURAL NOTES, 366-367.
MARKET REPORTS.—The Local Produce Market, 353.

BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Agricultural Implements—Baker & Hamilton.....	PAGE.
"Irealize on Horse Diseases"—Dr. B. J. Kendall, Enosburgh Falls, Vermont.....	372
Olive Trees—W. Alston-Hayne, Montecito.....	371
Loss for Sale—DeForest Land Co., Chicago.....	370
Hayward's Sheep Dip—Christy & Wise.....	370
Seal Skin Soap—A. J. McKnight.....	365, 369, 370
Hall's Catarrh Cure.....	370
Situation Wanted—"Kin," 786½ Harrison St., S. F.....	371

See Advertising Columns.

The Week.

In the upper region of California bright and quiet days have peacefully followed each other through the week. It has been a grand year for late fruits. Even the second crop of grapes has been gathered in without injury. There has been enough uncertainty about the weather, through occasional and local winds and clouds, to make life worth living, but the general standing of the month can be seen in the fact that less than one-quarter of the average November rainfall has been dropped on us. At the East the winter seems to be gathering itself together, and, as we write, a storm of snow, hail and rain covers the whole country from the great lakes to the gulf and from the Rockies to the Alleghanies. Our southern counties have had a slight dash of winter, too, and snow has fallen in unwonted places, but fortunately not to tarry long.

Unexpectedly comes the announcement of the death of Hon. Jere Rusk, Secretary of Agriculture under the last administration. He reached a good age and won a good name throughout the country for his earnest and progressive work for the advancement of the agricultural interest. He had in this State many warm friends who will mourn his departure.

THERE is some feeling at the south against holding the citrus fair for their end at the Midwinter Exposition. The people of Los Angeles, it is reported, have decided to hold a floral and citrus fair. The sum of \$1500 has been pledged as a sure starter, and, besides this, it is proposed to raise a guarantee fund of \$15,000. It is proposed to have a floral parade in connection with the fair and give prizes for the best decorated carriages. There is an issue still to be made before the State Board of Agriculture, which is the almoner of the State Citrus Fair fund. The matter must be decided by about December 1st.

THE floral features of the Midwinter Fair promise to be characteristic and creditable. It is announced that there may be several floral fetes of a week each which will give abundant chance for the display of our winter bloom. All patriotic florists and amateurs should undertake to prepare something which will do them and the State honor when the times and seasons and awards are duly announced.

The Dairy Dragon.

Nearly all our agricultural specialties seem to be forced to cope with monsters in their forward courses. It really seems to one whose memory covers many years of American agricultural history that the avenues of industrial progress, especially in agricultural lines, were never before so closely beset with menacing monsters. Run through the whole list of productive efforts and few will be found in which there are not some forms of baseness or greed which restrain legitimate advancement. At this time we would allude to the evil work of the dairy dragon, which is, of course, oleomargarine—a single word for a host of base imitations which bear the semblance of a genuine product.

It has been hoped that this affliction of the dairyman would ere this have been removed or its ills reduced. It seems, however, that a full outfit of restrictive or prohibitory State laws, capped by a national enactment for taxing and branding the base product, has not yet sensibly affected the situation or brought adequate relief to the dairyman. On the other hand, the bogus product seems to be constantly encroaching upon the genuine.

This matter was forcibly brought to our attention by a few minutes' talk with one of the largest cow-owners of California on his return from the World's Fair. He was evidently depressed by what he had seen. He had visited a butterine factory and gone up and down in it. He was startled by the enormous scale upon which the operations were conducted, and the vast weights of fats, oils, colors and the like which were being cast together to result in a fair semblance of butter. He almost despaired of his ability to maintain his dairies while this and other similar concerns rolled out packages of butter-like food, without limit and without the keeping of a single cow. He was almost inclined to count the dairy done for.

This view was of course an extreme one. It resulted naturally from the surprise that such arts and facilities and capital were all employed in bogus production. The California dairyman probably had no idea that the butterine men were so wise in their generation and could so play upon his senses that he retired inclined to admire an enterprise he will condemn. After a time and further thought he will regain confidence in the purity-loving people and conclude that the policy of the legitimate producer is not to give over the field to the debaser, but to fight the harder each time the evil one takes on a brighter and more dazzling hue.

This is what is just now being done in the East. The imitation is unquestionably pressing close upon the genuine, but it is still doing so in a false guise. In spite of all enactments thus far contrived, the consumer, for the most part, believes he is purchasing genuine butter. So marked is the evil that the metropolitan dealers in genuine butter are taking up the fight in dead earnest. Several meetings, says the *Rural New Yorker*, have been held by the Mercantile Exchange for the purpose of discussing this subject. The resolutions finally adopted, after reciting the facts that certain manufacturers are making desperate attempts of questionable character to foist their products upon different markets as natural butter in violation of law, and that large numbers of retailers and restaurant keepers are furnishing it to their customers as natural butter, go on to condemn such action, and pledge the assistance of the exchange in ferreting out the violators of the law and in assisting the Commissioner of Agriculture in any way he may desire. The resolutions also contemplate an appeal to the legislature at its next session for an appropriation of at least \$100,000 for the protection of the dairy interests, and the consumers in the Metropolitan district.

So much the butter-dealers of New York propose to do, and they have an advantage on their side. It seems that New York has found all her laws against fraud in misrepresenting oleomargarine as butter ineffectual, and now she has in operation a new law making the traffic criminal. This new law only went into effect a few weeks ago and its efficacy is not yet demonstrated, but New York is in earnest in the matter and has a full equipment of inspectors and other officers to detect the criminal acts. This should be encouraging to dairymen everywhere, for if this new weapon against the debaser holds its edge through the courts, it can be everywhere invoked.

Oleomargarine has done one thing for the dairy interest, though it can make no claim to merit for it. It has impelled the dairyman forward into all the improved methods of producing butter economically and of the highest possible quality and uniformity. Surely no one who handles milk by the old haphazard methods can get the best returns for his investment and labor, and those who do not market the best product and secure the greatest returns from the milk are hurt worst in the struggle which is now in progress.

It behooves the California dairymen to be up and doing

in their own defense against oleomargarine. The more it is hedged about in other States the larger will be its stream westward. This is a subject which our local dairy organizations should award a leading place in their efforts, and to this end strengthen these organizations in all possible ways.

Raisin Figures.

The Fresno *Republican* furnishes some interesting figures which show that the proprietors of a vineyard of 132 acres have cleared nearly \$10,000, even in this year of depression. Says our contemporary:

Messrs. Gordon & Granx have just finished handling the grapes from their vineyard of 132 acres, about two miles east of Fresno. The vines are five years old. The first crop was picked and dried for raisins, yielding 250 tons of first-class raisins.

On the 132 acres are 159,000 vines, and the yield was over eight pounds of raisins per vine. The second crop was picked by contract at \$1.25 per ton, and yielded 321 tons of green grapes, or altogether over nine tons of grapes per acre.

The second-crop grapes were sold for \$5.50 per ton on the cars, or \$4 net, bringing \$1,284. About half the raisins have been sold at 3½ cents a pound, and if the balance can be sold to make an average of 3 cents a pound they will bring \$15,000. This, with the \$1,284 for green grapes, gives \$16,284 for the crop.

The cost for maintaining the vineyard and handling the crop has been \$6,600. The difference shows a net income of \$9,684 from 132 acres of vineyard at prices little more than half of what have been sometimes obtained.

THE possibilities of the crystallized-fruit industry have always had much interest for Californians, and it is gratifying that some progress is being made. The Los Angeles *Express* tells of an establishment in that city which consists of a fine brick factory giving employment to 125 people. Between 200 and 300 tons of choice ripe fruit and several carloads of Chino sugar were used the past season. The process of crystallizing involves much and careful handling, as it takes some three months or more from the time the ripe, perfect fruit is first taken till it is packed and boxed ready for shipment. And to see the various fruits undergoing their "pickling" in the numerous fiberware tubs that extend in long rows in the chambers of the factory, to the final imbedding in crystals, is indeed an interesting sight, well worth a trip to witness; the place is so fresh, so clean, so roomy, so thoroughly adapted to the purposes intended, so modern throughout—it is all new—a model factory. It is also stated that the largest Chicago confectioners are seeking their fruit supplies in Los Angeles instead of importing them, and if tariff doctoring does not kill the business it will have a grand future.

THE Midwinter Fair managers have engaged Prof. Emory E. Smith of Stanford University as chief of the department of horticulture. Prof. Smith has had wide experience in matters of this kind and has large knowledge both to the materials pertaining to his department and the people interested therein. He proposes to take hold of the matter with full vigor and develop it as creditably as possible. He has not yet had time to perfect plans and methods, but these will come in due time. In the floricultural line he at present favors special displays of each leading bloom, beginning perhaps with pansies and advancing toward a great rose show in the spring. The same plan might be followed with the small fruits which will ripen during the spring and early summer. Naturally, the chief features of the winter pomological display will be dried fruits of all kinds and citrus fruits. Prof. Smith is also inclined to favor the holding of special horticultural assemblages during the fair, each of which will appeal to some class of specialists. The Midwinter people have committed themselves to displays of fruits and flowers as well as sunshine, and they ought to minister to Prof. Smith's department liberally and effectively.

SINCE the comment was made on another page that the sugar bounty had a fair show of retention, it is telegraphed from Washington that the present bounty on sugar will be repealed, but it is possible that the committee may decide to impose a slight import duty in order to satisfy the sugar-cane men of the South and the beet-raisers of the West. The highest duty thus far discussed is one cent per pound, and the opinion of a majority of the committee seems divided between one-half a cent a pound and admitting it entirely free. These statements may not, of course, truly represent the outcome of the matter. There are several sugar States, and their representatives may be able to use their influence in some way. We shall see how it will come out later on.

R. W. PARRY, of Eureka, Nevada, recently went to New Orleans with a carload of horses. He reports that he did not sell all the horses, but those disposed of brought good prices. He found New Orleans to be a good horse market, and expects to establish a permanent trade for Nevada horses in that city.

THE fine, warm autumn weather this year has hurried the orange crop. Mr. Gillett, of Palermo, Butte Co., counts the crop about six weeks earlier than usual.

From an Independent Standpoint.

It is reported from Washington that there is a movement on foot for the Populists and free silver men to join their forces for the next Presidential campaign. To this end it is proposed that the Populists shall hold their organization in abeyance, together with their doctrines as to the Government ownership of railroads, its land loan policy and the issuing of paper money, which the silver men, as a body, have never embraced; and, under some such name as National party, make a united pull for the Presidency and free silver in 1896. Senator Peffer, of Kansas, being interviewed, said that the report was true, but that nothing definite would be done until after the Congressional elections of next year.

There are, in our judgment, two reasons why this plan will not work. First, it would involve, on the part of the Populists, the putting aside of the chief motives of their organization. Of all the Populist cries one of the most reasonable is that which shames the old parties for subordinating principle to policy. From every Populist stump there has gone forth words of strong and bitter contempt for the sort of politics which is afraid to stand upon its convictions and declare itself to the world. This courageous attitude has commanded the respect and the support of many by whom the leading tenets of the party have not been accepted. There are Populists by thousands who do not believe in the land-loan project or the sub-treasury plan—not to mention a dozen other propositions of reform—but who, nevertheless, stand with the party because it has the manhood to deal with the real issues, and too much self-respect to adopt the policy of dodging for the sake of temporary success. Any effort to change this plan, to support what will be temporarily politic, and to put aside what may offend somebody—in other words, any attempt to substitute political cunning for political conviction—will fail, for the people who make up the Populist rank and file will not stand it.

Another reason why, in our judgment, union between the free silver men and the Populists is not practicable is because their motives with respect to silver are totally at variance. The free silver men—that is the men from Nevada, Colorado and Idaho—represent the *industrial* interest in silver, while the Populists represent the *finance* interest in silver. And while, viewed superficially, these interests seem to be the same, they are in fact totally and radically different. The Populist is for free silver coinage because he believes that to be the way to make a national currency sufficient in volume and just as a measure of value. His interest in silver is an industrial interest growing out of a wish for a better system of currency. On the other hand the interest of the Colorado and Nevada men is in silver as a commodity. They produce silver and want to sell it for a price. They care not at all for the equities of our currency system and only for the bullion market. However they may attempt to disguise it, it is always plain that their fight is *in the interest of the mining industry and of nothing else*. That they are ready to subordinate every other consideration to their own selfish purposes has been demonstrated over and over again. A co-partnership between political elements so widely apart in purpose is out of the question. The silver men are too selfish to honestly support the propositions of the Populists; the Populists are too wise to be duped into the service of the silver mining industry.

At our last writing it will be remembered there was intense anxiety to hear from Hawaii. The latest information precedent to that time was that the new American Minister (Willis) had arrived at Honolulu, but that he had not presented his credentials. The presumption was that Mr. Willis had been instructed to carry into effect the policy of the Administration as expressed in Gresham's letter to the President—in short, that in obedience to specific orders his first business would be to throw out the Provisional Government and reseat the deposed Queen. As we intimated last week, this presumption had no basis excepting the Administrative declaration (expressed in Mr. Gresham's letter) of its views in the matter; but nevertheless, it found the widest credence with the public. The general expectation was that the next steamer from the islands would bring news that Minister Willis had, with the aid of military forces from the U. S. war ships in Honolulu harbor, overthrown the Provisional Government and re-enthroned Queen Liliuokalani, in pursuance of the theory that it is the duty of the American Government to re-establish the status which prevailed before the revolution of last winter. Upon this basis of presumption and uncertainty, the newspapers, with the aid of some excitable Congressmen, worked up a prodigious sensation. So definite were the conceptions of fevered imaginations that many persons expected that the steamer would bring a story of bloody atrocities at the hands of American marines, led by the American Minister. Indeed, so posi-

tively were these sanguinary tidings expected, that plans were already projected at Washington to subject Mr. Cleveland to impeachment.

On Saturday the steamer Australia arrived at San Francisco, bringing news that Minister Willis had presented his credentials to President Dole of the Provisional Government; that he had been graciously received; that nothing had been said on either side about making Mr. Gresham's suggestion a reality. The status remains just as it was. If the U. S. Administration has any plans looking to the restoration of the queen, they are in reserve; and we regard it as extremely unlikely that any attempt will be made to that end without reference to Congress. Certainly, if Mr. Cleveland has his senses about him he will not undertake to proceed to the enforcement of his own and Mr. Gresham's private views in a situation where the authority rests, not with the executive, but with the legislative branch of the Government if, indeed, it exists at all.

Nothing can be clearer than the fact that Mr. Cleveland has no authority to review and unsettle the relations existing between our Government and the Provisional Government of Hawaii. The last-named Government had been officially recognized before Mr. Cleveland became President; and he has no more right to review the circumstances of that recognition and to disregard and deny it than he has to take the same course with Great Britain or any other foreign nation whose ministers he found accredited to the United States and recognized by this Government when he became President.

Having assumed the judgment that it is the duty of the United States to restore the status which prevailed previous to the revolution, the Administration will no doubt urge this policy upon Congress, but there is not the smallest prospect that such a policy will find favor, since every suggestion of common sense and of national self-respect is in opposition to it. The spectacle of the United States of America exercising its power, moral or military, for the overthrow of a struggling attempt at popular government in the interest of monarchy, would be absurd beyond words. Furthermore, there is no constitutional warrant for it, since there is no jurisdiction in the Republic now in any one administering the laws of the Republic, to set up a monarchy or to restore a dismantled one in any part of the world. It was not for such work that our Government was formed and the sentiment of the country would not allow the thing to be done. We believe profoundly that if the President should in fact proceed arbitrarily and by force of arms to re-enthroned the Queen of Hawaii, that the wrath of the American people would not be appeased until he should be impeached and driven from office, and he would deserve no better fate.

The recent assault of the Secretary of Agriculture upon the Grange—the agency which lifted the old Agricultural Bureau into a Department of the Government and evolved the Commissioner into a Cabinet Minister—leads us to some reflections as to the relative practical values of the old plan and the new one. Formerly, the Commissioner of Agriculture was a plain man of scientific and practical attainment who carried on the work of his office in the scientific spirit. The work of the Bureau was useful and satisfactory, so much so that the farmers of the country became possessed of the idea that it should be advanced to the dignity of a Department and that its head should have a place close to the Presidential ear. Chiefly through the agency of the Grange, the thing was done. And now, let us ask the farmers of the country if they are as well served as formerly? The Secretary of Agriculture is not now a man of special knowledge, but a politician; his department is not so much a place of studious investigation as of political intrigue and machinations. The political rather than the scientific idea runs through the whole Department and corrupts its every relation to the world of agriculture. It sounds better to talk of our Secretary than of our Commissioner; there is more "dignity" in the place than there used to be; there is a subtle flattery to the rural imagination in the fact that Agriculture is represented by a Department in the Government. But is the agricultural interest really profited by the change? We think not.

PAJARO VALLEY APPLES are coming into wide request for Eastern shipment. The *Pajaronian* states that not less than 100 cars of apples have been shipped from Watsonville to Eastern points since the season opened, and as yet none of the winter apples have been forwarded. These apples have gone into Montana, Minnesota, Colorado, Kansas, Illinois and other Western States. The main demand has been for Bellflowers, which have been a fine crop this year. The St. Paul *Pioneer Press* recently alluded to a carload of this fruit as the finest apples ever brought to St. Paul. Don't forget the apple, ye who have good soil and climate for it.

The Fruit-Growers' Convention.

Opening Proceedings at Los Angeles.

The telegraph brings outlines of the opening events at the Los Angeles convention of fruit-growers. Our own representative at Los Angeles will present next week his review of the sessions, to which the following by wire may be in some sense introductory:

The seventeenth session of the State Fruit-Growers' Association commenced at the Grand Opera-house this morning at 10:30 o'clock. President Elwood Cooper of Santa Barbara was in the chair. Fifty delegates were present when the convention opened, but others were constantly arriving.

The session was opened with prayer by Rev. A. T. Perkins of Alameda. Mayor Rowan expected to make the address of welcome, but was unavoidably absent, and Abbott Kinney took his place, giving a warm greeting to the delegates. The importance of the horticulturists, he said, to the State was set forth. Their work has already invaded European countries, and their aim is to command the highest markets of the world. California has the conditions favorable to every fruit of the temperate and semi-tropical regions, and even to some tropical ones.

President Cooper delivered his annual address, reviewing in lengthy and interesting detail the work of the fruit-growers, their needs, future development, and especially the good work of the scale-destroying parasites. The necessity of a bureau of fruit statistics was urged.

"It is time to cease making fruit shipments with the risk of not getting proceeds enough to pay freight, drayage and commissions," he said.

Most of the address was devoted to the work of the importation of parasites. He spoke of the loss of millions to fruit-growers, and said that there is little hope of timely Congressional legislation. The fruit-growers must rely upon themselves and establish a permanent bureau to send out such expeditions. The State Boards of Agriculture and Horticulture could arrange for this without greatly increased expense.

He said that there is no doubt of the efficiency of black-scale parasites, which will effectually destroy the black as the vedalia did the white scale. He predicted that as far as the black scale, the red and yellow and the San Jose scales were concerned the days of their ravages were numbered.

Mr. Cooper concluded his address by calling attention to the importance of having stricter quarantine laws. No plant or tree, he said, not free from insect pests or fungoid disease should be permitted to enter the State farther than is necessary to make an examination.

Abbott Kinney and G. J. Griffith were elected first and second vice-presidents. Rev. A. T. Perkins will act as secretary. Committees were elected as follows:

Resolutions—G. J. Griffith of Los Angeles, A. Scott Chapman of San Gabriel, William Chappelow of Duarte, H. A. Brainard of San Jose, J. J. Pratt of Yuba City.

Committee on Address of the President—Abbott Kinney of Kinneloa, General Bouten of Los Angeles, Alfred Holman of San Francisco.

Committee on Legislation—E. W. Maslin of San Francisco, F. A. Kimball of National City, R. Cello of Yuba City, A. T. Perkins of Alameda, J. T. McIntyre of Fillmore.

Committee on Transportation and Freight Rates—H. P. Stabler of Yuba City, C. W. Reed of Sacramento, A. B. Chapman of San Gabriel, N. W. Blanchard of Santa Paula, J. H. Thomas of Visalia.

Secretary Lelong called the convention to order at 1:45, and announced that Abbott Kinney and G. J. Griffith, the vice-presidents, would preside. The first paper read, on citrus fruits by J. E. Cutter of Riverside, was a very elaborate treatise on the varieties of oranges and lemons. The paper gave a valuable analysis of the varieties of citrus fruits. A discussion of the paper followed, a number of questions being asked and answered.

At the afternoon session the attendance increased to about 75, including about a dozen ladies.

Edward Berwick of Monterey read a paper on transportation, in which he made some humorous comparisons and took the position that the Government should own the railroads. This met with some opposition.

E. F. Adams of Santa Clara followed with a paper on "The Market for Dried Fruits." He condemned the commission system. His remedy was the establishment of a general fruit exchange on the lines of the exchange at Santa Clara. A convention will be held in San Francisco in December to appoint the men who are to serve on the Exchange Board for the ensuing year.

H. A. Chamblin of Riverside, the father of the Orange-Growers' Union of southern California, spoke on that subject, and showed that the orchardists would be independent of the commission men and would in a measure be able to control the demands of the railways.

Mr. Adams offered a resolution calling for a committee of five to consider the subject of co-operation in the marketing of fruit, which was unanimously adopted.

Mr. Chamblin continued his explanation of the Orange-Growers' Union, going into details and rousing the audience to the point of enthusiasm for co-operation.

The Committee upon Co-operation, which is to report Thursday, met and discussed various plans looking toward the desired co-operation. They decided to report favoring the proposal of the Board of Exchange established in southern California by the orange-growers, and also endorsing the plan under which the Santa Clara Fruit Exchange is operated. The report will urge upon fruit-growers the necessity of establishing a general office for the various exchanges throughout the State.

THE main office of the California Fruit Union, formerly at Sacramento, is now at 507 Montgomery street, San Francisco. Ex-Senator L. W. Buck, who is manager and secretary of the union, will be in charge of the office here.

An Australian's Comments Upon Our Methods and Institutions.

We present below from an advance copy the comments upon our horticultural affairs which Mr. Fred C. Smith has made for his Australian constituents:

The fruit-drying industry of the State has in past years suffered badly for want of wise and continued co-operation among the producers. This want of unity was all in favor of the buyers and brokers, and prices of dried fruits were governed not so much by the consumption and demand as by the fear on the part of many of the smaller producers of "being left," and by the need of immediate money by so many others, especially by those whose orchards were just coming into bearing, or who were in difficulties. The market was consequently frequently demoralized, and an element of uncertainty continued to attach to the business which was felt to be inimical to the progress of the industry. Notwithstanding all this, the great profits made by those earlier in the field, and consequently well established and well able to bear the brunt of a bad season or exceptionally low prices, tempted and still tempt capital, large and small, to invest in the work. As in all businesses well conducted, the larger the concern the less proportionate cost of producing. This has been all along recognized, and, although invention has rapidly proceeded in the direction of labor-saving machinery to aid the small grower, the big concerns have benefited proportionately. The greater the concern the larger influence it could wield in the way of special rates from the railways, etc.

After repeated efforts to discover a means of uniting the smaller growers and giving them a chance to compete on even terms with the few immense firms and companies in the open market, the San Jose folks have organized what promises to be a very successful scheme. They call it the "Santa Clara County Fruit Exchange." Several hundred growers have acquiesced in the scheme of the nine gentlemen who constituted the committee to formulate it. Its object is not only to prevent ruinous competition, but to be a sort of "Bureau of information" on fruit crops and markets. In addition it seeks to alter the present inconvenient selling by sample, and frequent rejection of parcels of fruit and demands for considerable rebate, often on pretense of the bulk not being up to the sample. As the exchange will probably handle such quantities as 2000 carloads or 20,000 tons of dried fruit in a season, one sees that when this stupendous quantity is graded, all under one management and one system and most carefully, the fear of getting other than just the particular size or grade ordered by the buyer is done away with; thus hundreds of growers will be relieved of that worry, and the buyers will have more confidence in dealing with a great concern like that than with small producers.

Instead of having one immense central drying-ground and grading and dipping plant, they will have smaller ones in different important producing districts, though at one of these, namely, the West Side Drier, there were 40 acres set apart for drying this season's crop upon. Ten or fifteen acres were covered when I saw it.

These smaller driers are called "neighborhood drying associations," and take the fruit nearest to them, so saving the cost of very long carriage. The growers bring their fruit into this drier, and the fruit is graded in an immense Hamilton grader, which is so worked that one man can take account of 50 or 100 tons of fruit in a day. As a man brings in his fruit, it is graded, and each size—there are four—falls into separate boxes. As the boxes fill, they are, by an ingenious contrivance, turned over, and the attendant credits the quantity of each size of fruit to the grower, and he is given a receipt for so much weight of first, so much of second, third and fourth. In this way the difficulty of the fair apportionment of the value of mixed fruits is gotten over. The fruit falls into an arrangement by which it is carried along upon an automatic dipping machine, which takes so many seconds for its long line of small wire pockets or divisions full of fruit to go through a hot lye bath and from there into a clean, fresh water bath to wash off the lye, and the pockets rapidly empty upon wooden trays 8 or 10 feet long by 2 or 2 feet 6 inches wide. These trays are placed upon an automatic shaking contrivance which settles the fruit down level upon the trays. It takes two men working as hard as they can to take away and replace the rapidly filled trays of prunes.

The pile of filled trays on a car is then rolled out upon the hundreds of yards of cheap tramways into the fields and there placed out to dry. The tramways are protected from wearing by broad strips of thin hoop iron nailed close to the inner edge.

Of course, after the grading of the fresh fruit and the crediting to each grower of his proper quantity of different grades, no further trouble is needed to keep his fruit separate from the rest. When the fruit is dried and brought into the sheds, it is carted away to the central warehouse to be graded and boxed or bagged, and the mark of the Exchange then placed upon it is sufficient guarantee of its good quality.

Annual dues are levied upon the members of the Exchange, as in the case of any of the produce exchanges, to pay the comparatively moderate expenses of the union. The proportionate cost of this handling by the union is paid by the grower most readily, he being saved the expense of having the machinery and plant and of employing labor and all the worry of it. The Exchange being a great and responsible body, it is able to make terms where necessary with the banks for money, and at a very great advantage to the members. This can be readily understood where such high rates as 10, 12 and even 15 per cent for money on good security is levied by the banks.

If wanted, the corporation will make money advances to the owners upon the goods it holds, though rather less than a commission house and about the same as the banks. A special feature of the union is its splendid intelligence department. It aims to make known, week after week, the

conditions of markets all over the world and also the condition and prospect of crops everywhere, and to do this it prints a most carefully gotten-up list of questions relating to all the fruits grown in commercial quantities for either canning or drying, and sends a batch of them to all of its correspondents—some hundreds in number—and week after week these returns and reports are summarized and printed in a small bulletin issued from headquarters and sent to all who apply for it. In this way all the growers have the benefit of the combined intelligence of hundreds of other growers all over the country and also reliable information of the markets everywhere. The Exchange disclaims any intention to corner the market, and strongly deprecates that idea under present conditions of the trade. But it is able, owing to the information gathered by its own officers, to advise the producers from time to time as to the fair market price of the different dried fruits, and so prevent them from sacrificing their fruit unnecessarily or ignorantly.

The plan of operations as set forth by Mr. Edward F. Adams, the energetic manager of the exchange, with whom I had the pleasure of a long chat at San Jose, is as follows:

1. Co-operative neighborhood associations for drying fruit.
2. A central warehouse for grading, boxing and otherwise preparing for market, and, if desired, selling the fruit of small growers not served by neighborhood associations.
3. A central exchange for inspecting and selling.
4. Wherever possible, a State exchange or association of exchanges, the directors of which shall be selected from the local directories, and whose functions shall be the gathering and distribution of information, the opening of new markets, the care of our exhibits at important industrial expositions, the detection and exposure of fraudulent practices in the California fruit trade, and mutual conference in regard to prices.

Our Australian producers are at present looking around for some successful scheme such as this, that they can adapt to the requirements of their local markets and conditions, and this is the only systematic attempt on a large scale that has yet shown a possibility of being successfully carried out and firmly established.

So much depends upon the officers of such organizations, and unless they are able and willing to bring as much intelligence and ability to bear upon its work as if it was their own individual business, the very best schemes soon discover leaks and signs of carelessness and ultimately fail. In this case, however, the association or exchange has without doubt, from all I can hear, fallen into the hands of downright practical men, successful growers themselves and men with their heart in the work, recognizing fully that what they do is quite as much for their own future benefit as for that of the hundreds of others not so closely connected with its working as its outcome.

WITH REGARD TO THE ORCHARD WORK.

In the picking of the fruit for drying I have always contended that unless a fruit is ripe when dried it will never make a first-class dried product, and I found this practically recognized everywhere in California, though even there some of the growers anxious to get their work over would make one or at most two pickings of fruit for drying. The men who get the best returns, however, and who are known as the most successful, are those who are most careful in this and other respects. Prunes are not picked from the trees, as a rule, but shaken off by a slight jar only; the slipshod grower will allow his men to take hold of the branches and shake as hard as they can, because when that is done the ripe ones will fall off from the stems, and the green and unripe will fall too, being jerked or broken off by the rough shaking.

Ripe fruit has more sugar and dries heavier and, in the case of peaches and apricots, with a better color altogether than the unripe fruit. It may be easy enough just now to get rid of dried fruit of only fair quality, but the irrigation colonies on the River Murray are already showing the practical effects of the information brought over from California by their founders and the skilled men employed, in the splendid character in all respects of their goods. I pay this tribute to the Messrs. Chaffey's work now after seeing what the best dried fruit of the whole world is like in the splendid series of fruit exhibits at the World's Fair, and I do not hesitate to say that I believe had the Reumark and Mildura people shown their best dried fruit there, that for general appearance and handiness of packages they would have come out near the head of the list. This is not "Colonial blow" either. I reserved my judgment upon the value of our Colonial dried fruit products until after I had seen the Fair and carefully examined their fruits during several days. So I am not talking without the book.

Many of my remarks have had reference to the dried-prune industry, but I have already referred to the varieties of apricots and peaches best adapted for drying, in previous letters. Trays for drying are used in different sizes, from 2 ft. 6 in. by 3 ft. 6 in. to 3 ft. or 3 ft. 6 in. by 6 ft. or 8 ft. Mr. Kells of Yuba averages about £32 per acre per annum from prune growing and this is small compared to some of the yields, £70 and £80 being realized in many instances.

Novices are too often led away by the big figures quoted. Big figures in almost anything will not last, for the reason that everyone rushes for the thing that is paying best and in the end many are disappointed.

The fruit-grower must not reckon upon getting a much higher return upon his investment than in any other form of business, and it has just as many risks as any other form of earning a living. If he does, he'll be like the man in the American saying: "Nothing in this world yields a larger return upon the amount invested than poking a wasp with your finger to see how it feels;" he'll be stung.

In regard to the system of dipping prunes before drying—this has been in vogue for years, to prevent the fruit "bellying," as it is called, and it also dries ever so much sooner, from four days to a fortnight, according to the weather; but the complaint has been that it destroys the bloom, and an ingenious inventor at Santa Cruz has brought out something to supercede the dipper. It is a sloping board covered with fine nail points which prick the fruit as it roll over the board, and gives as good results in rapid drying and better results in the preservation of the

bloom. It is claimed that it has been used successfully in California this season by some large growers.

One of the handiest inventions I saw was at Vacaville, on Mr. Thurber's ranch. It is called the Yolo fruit-picker, and is simply an immense inverted umbrella mounted without a handle upon a handy truck, and instead of folding up like an umbrella it slides around—all the ribs being movable. When it is in use it is run down the rows and the center is close up to the tree, and the two wings move round till they meet and the tree is left in the middle, occupying what would be the place of the umbrella handle. Two apertures and canvas arms reach on each side of the tree into boxes close to the tree trunk. The apex of the umbrella is about 12 or 18 inches above the ground, and as the tree is shaken the fruit rolls into the boxes and is prevented from falling on the ground. In connection with this, Mr. Thurber used long poles fitted at the end with hooks, one turned up and one down. These were used for shaking the branches while standing away several feet from the tree trunks, out at the edge of the umbrella.

FRED C. SMITH.

Profitability of Alfalfa.

R. B. Blowers, the veteran horticulturist of Yolo county, and one of the principal agitators of the Clear Lake irrigation scheme, said: "We have, in this county and upper Solano, lying under the influence of Cache creek and Clear lake, upward of 350,000 acres. Much of this land has been seriously injured in its producing capacity by the continued cropping of cereals. This, planted to alfalfa and properly irrigated, will produce an average of ten tons of hay per acre annually, or its equivalent in part pastureage. In a very few years it will restore the worn-out wheat land to more than its original fertility. As the irrigation laws now are, this land could be furnished with water, which, eventually, would cost the owner nothing. Alfalfa in this part of the State has but one enemy, the gopher, and this pest can be easily gotten rid of if water for irrigating is obtainable at any and all times."

S. Porteus, who devotes his entire time to growing clover for hay, spoke as follows: "I rented my present clover patch of 20 acres during the latter part of last year. During the present year I have gathered four crops, and will be able to gather another if the weather remains warm and clear for a few weeks more. My crops this year have yielded as follows: The first crop, badly mixed with oats, three and a quarter tons per acre; second crop, one and one quarter tons per acre; third crop, one and a half tons per acre, and the fourth crop two tons per acre. If I have a fifth crop, it will amount to at least a ton per acre. The tract has produced, so far, eight tons to the acre. I have found a ready market for my alfalfa at \$9 a ton. This makes one acre pay me \$72 a year and the entire piece \$140. My expenses have been very light. I paid \$50 for irrigation and \$25 for extra labor. All the work I have put on my four crops would not amount to two months steady labor."

Frank Bullard, the first-prize Merino sheep-breeder of the Pacific coast, said, when questioned: "I keep thousands of Merino sheep upon 150 acres of alfalfa. I flood late in the fall, and when spring comes I have the finest green feed you ever saw. By irrigating the productiveness of alfalfa is increased three-fold. I usually give my fields two good floodings a year and cut from them four big crops. There is plenty of money in alfalfa if you know how to use it—to turn it into stock and hogs without depending on the hay market."

Supervisor John Schuerly said: "I have eight acres of clover, but am so situated that I cannot irrigate it. I find that it will produce four good crops a year, each crop yielding a trifle more than a ton to the acre."—W. C. Maxwell in Examiner.

Thompson's Seedless Grapes.

TO THE EDITOR:—I notice you solicit correspondence in reference to the Thompson Seedless and Sultana grapes. As I have been growing the Thompson Seedless for the last ten years, having purchased from Mr. Thompson his first sale of 100 roots, I am fully prepared to indorse what Prof. Husmann said in the RURAL of October 28th in regard to this most excellent grape.

I also notice in the RURAL of October 21st a very good receipt, given by Miss Sanders, of one way to use the Seedless raisins. I will mention a few other ways: We commence using them long before they are ripe, as they make an excellent pie. I will not attempt to give the component parts of sugar and other seasoning, as almost any cook will know how to do that. They are also splendid in fruit cake, as well as in mince pie. And if you want a nice jelly, use Thompson's Seedless grapes a little before they are ripe enough for raisins. For canning I think they have no superior. Some people prefer them to any other, to eat out of hand.

I would like to know who is willing to sit two or three hours at seeding Muscatel raisins for a batch of mince pies or a fruit cake when, in a few minutes, the Seedless raisins can be prepared for the same purpose.

The Seedless raisins have other important advantages over the Muscatel. My Seedless vines produce every year more than double as much as the Muscatel of the same age. Besides I had no trouble to sell my Seedless raisins for five cents per pound, while I am offered only three cents for Muscatels. Then, again, it costs more to gather and cure Muscatel grapes than it does the Seedless, for the simple reason that a man can cut and lay on trays at least one third more, if not twice as many of the Seedless as he can of the Muscatel. The clusters are larger, often weighing two, three, and even as high as four pounds. The Seedless will cure in one-half the time that it takes for the Muscatel. They are also earlier, which is a great advantage, especially if the season is not favorable.

Yuba City.

ROBERT DAVIS.

HORTICULTURE.

More About the State Fruit Exchange.

In our last issue we gave the work of the committee appointed by the State Horticultural Society to organize a State Fruit Exchange so far as it had progressed to the closing of the forms of the last *RURAL*. At a subsequent meeting an address to the fruit-growers of the State was agreed upon, as follows:

To the Fruit-Growers of California:—It is now evident that the products of our orchards are increasing more rapidly than the market for them. Certainly no one who is selling fruit in 1893 will dispute it. The only years in which the owners of orchards and vineyards seem to make money are the "off" years, when crops are light and prices fair.

In years of full crops, like the present, our entire crop can find a market, yield expenses and interest only upon the best lands, farmed with sufficient capital and thorough management. In such years the scramble to sell from growers who must realize utterly demoralized prices and prevented those who might make a profit from selling at all until weak holders had closed out.

The continuance of present conditions, in the face of our increasing acreage, means a blind struggle for existence, resulting in bankruptcy and foreclosure to thousands of orchardists whom visions of unreasonable profits have tempted to engage in the business with insufficient knowledge and inadequate capital. It means also depreciation of values and reduced or no profits to those who, except for the competition of those distressed for money and ignorant of values, might do very well.

The plain and only remedy is counsel and co-operation among growers, to the end that every orchardist shall, early in each season, know about what fruit will that year be placed on the markets of the world and about what price that means for his fruit, and that he shall be then enabled to get that price.

In plain English this means a central bureau of information and selling agency open to all fruit-growers, so that the fruit product of the State shall be put upon the market as nearly as possible in the manner in which it would be sold if entirely owned by one great capitalist, using every existing outlet and such new ones as can be created.

Evidence is abundant that growers desire this and are prepared to unite upon it. The marked success of the co-operative societies of Santa Clara county and elsewhere in the State have well shown forth the possibilities of co-operation and realized many of them. It is proposed that districts yet unorganized and individuals not conveniently situated for local organization shall unite with the existing societies in the maintenance of one central agency, which shall do for all whatever experience shall determine to be the most economically done through one agency.

To this end the State Horticultural Society, very properly taking the initiative, at a late meeting appointed a committee instructed to appoint from their own number a board of directors for a State exchange, who should at once incorporate and prepare for the business of 1894. That committee having held several meetings freely recognized the necessity of prompt action and the propriety of the leadership of the State Horticultural Society; at the same time, as individuals, there were averse to permanently assuming such a responsibility except as representatives of a larger constituency acting with more deliberation. They therefore decided:

First—To appoint, as instructed, the board of directors which should proceed to do the things necessary to be done at once.

Second—That the terms of office of directors and manager should expire within the shortest time possible to convene a representative body of fruit-growers specially called to consider this question.

Third—That such convention when called should select its own directors to carry on the work during the first fiscal year.

This plan the directors are now carrying out. A manager has been appointed who, by experience gained in organizing the Santa Clara County Exchange, has been deemed qualified to begin the active work and who will devote his entire time to the organization of the State Exchange. A convention to be called by the State Horticultural Society in the latter part of December will choose a board of directors to take charge of the exchange thereafter.

Every fruit-grower in the State who can possibly do so should attend this meeting and aid by his presence and his counsel in giving form and force to this most important movement for the benefit of all. In the meantime the present management presents this as their view of our proper objects: That the exchange be

First—A bureau for the collection and distribution of every item of information bearing on the current prices of all classes of fruit in each season.

Second—The selling agent, without charge except actual expense, for all fruit-growers of the State who desire it.

Third—The active agency for opening new markets and extending old ones for all fruits and fruit products of California.

The detailed operations by which these objects are to be gained must necessarily be left to the board of directors of exchange to work out. To this end it is believed that the board should be large enough to allow representatives of all interests and all sections. The convention will be asked to increase the number of directors from seven to eleven.

In the meantime, without waiting, the present board will press the work with vigor, realizing that we have the whole State to organize, and but a few months in which to do it.

The enterprise, like every other business, must have money. Without money we could do nothing of value. The capital stock has been placed at \$100,000, of which only so much will be sold as there shall be definite use for

in such a way as to earn interest upon itself. Upon the stock sold interest at six per cent is guaranteed. Societies formed on this plan all pay their interest promptly, and there is no doubt that this convention will do the same.

The shares are placed at \$5 each, 50 per cent payable upon subscription and the remainder upon call of the directors. Full payment will be necessary by June 1 next. No stock will be issued except to fruit-growers, and the limit to be issued to any one grower is 100 shares at \$5 each.

The first thing required is to raise the necessary capital. The management will endeavor to make it a safe dividend-paying investment. We desire to raise the first half of it by subscription of 100 fruit-growers taking 20 shares each. We desire this to be done during the term of office of the present directors. We therefore ask growers willing to be one of 100 to take 20 shares each to send in their names without further solicitation, with check for half the amount, for which receipts will be given and the stock issued upon full payment.

It is estimated that the work of the Santa Clara County Exchange has saved the growers of the county during the present season half a million dollars by its influence on the market, preventing panic among the growers and unnecessary sacrifice of fruit, and if the entire capital contributed by its stockholders had been sunk in it, would have been a good investment for each one of them. As a matter of fact, however, their capital is intact, all invested in property worth more than it cost and will pay its interest regularly.

Any owner of 25 acres of bearing orchard can contribute \$100 each year to a similar organization, extending its operations over the entire State, and make money easy if he never sees interest or principal again, but the directors of the California Exchange promise a prudent administration. The money is absolutely needed for use, but it shall be so used as to earn interest, and not be wasted.

We hope to receive subscriptions promptly, in order that effort needed for other important work of organization need not be diverted to securing the small amount of cash capital needed, but which, however, must be had.

A mass meeting of the fruit-growers of the State has been called to convene in this city December 29th for the purpose of carrying out the work. If the temper shown at recent meetings be a guide it may be set down as a fact that the orchardists are a unit in sentiment on the question of State organization, and great results are looked for from the December meeting.

Advice to Fruit-Planters in Placer County.

The latest accession to the list of fruit-growers' organizations is the "Placer County Horticultural Society." The permanent officers are: President, J. Parker Whitney; vice-presidents, H. E. Parker, P. W. Butler, Geo. W. Turner; secretary and treasurer, Wm. B. Gester. In addition to this there is a board of directors consisting of 20 members. The objects are declared to be the promotion of the science of fruit-growing and the interests of the growers. Every subject of concern to the fruit men is embraced under one or the other of these broad and commendable aims. The hope and desire is to include in the organization not only all the fruit-growers of the county, but all others who are interested in their success. The initiation fee is placed at the modest sum of 50 cents, and the dues at 50 cents a year.

At the last meeting of the society an interesting paper was read by P. W. Butler, from which we make the following extracts giving the experienced writer's advice to beginners in his county:

Experimenting in orchard work is no longer a necessity. There are certain fruits that can be planted and cultivated in a manner to bring sure success to the grower. The methods by which this can be done are the ones we need to know and practice.

The peach is the leading fruit of this section, and its profits are sure. Plant the Alexander peach where it matures very early in the season, and in no other location. There is but little land in the State or county, that is near enough to shipping points, that is adapted to the profitable growing of this peach, although we have more in this section than elsewhere. The planting of this peach is desirable to those who are sensitive to summer heat, as it can be harvested before the end of June, when they can go to a cooler climate to spend July and August. Where families wish to devote all their time to the industry, follow with Hale's Early, Foster, Susquehanna, Late Crawford and Salway, in the order named. This will complete the list for the season. Cling peaches are no longer in demand for shipment, if we may perhaps except the Levy Cling, although the George's Late Cling has with many been profitable, it being a prolific bearer. Of late, however, it has been neglected, the Salway, ripening at the same time, being preferred, and it is thought no more profitable peach can be grown than the Salway, except on very early land.

Every home in the thermal belt should be surrounded by an orange grove, with perhaps a few lemons for domestic use. They can be grown successfully, and, ripening earlier than in the southern counties, can always be sold at profitable prices. They will add greatly to the value of property, because of the fascinating beauty of their dark green foliage studded with the golden fruit, that is all the more to be appreciated when the deciduous trees have lost their foliage, throughout the winter months.

For apricots, the earlier varieties, the Newcastle and Royal, are most desirable, and can be profitably grown on early lands.

Of cherries, Black Tartarian and Black Oregon are preferred, and they are valuable for their early ripening, fine flavor, and superior shipping qualities.

The Tragedy prune is much in favor at the present time, as it is early, fairly prolific, and has so far proven profitably. The Clyman and Burbank plums are also recommended,

as are several of the Japanese plums, as being desirable for this section, and are in variety sufficient to ripen continuously throughout the season.

Pears can be raised in the thermal belt on low land that is too moist for peaches. They can also be grown with profit in the cooler parts of the county.

Apples of the best quality are grown only where there is frost and some snow in the winter. Early varieties are grown in the thermal belt.

Of shipping grapes there are four varieties generally preferred; viz., Tokay, Emperor, Ferrara and Cornichon.

Strawberries, raspberries and blackberries are all profitable crops. Strawberries can be planted with the orchard, between the rows of trees, but not too near them, and three crops harvested before the trees are so large as to need the use of all the land, but the vines should be well fertilized each year. Strawberries thus planted have in many instances yielded a profit sufficient to pay the expenses of planting and growing the orchard until it was brought into bearing.

There is no secret in the process of planting and rearing trees at the present time, and the best methods are soon easily learned by a close observer. Orange trees that have had two seasons' growth in the nursery after being budded on two-year-old stock are of a desirable age for planting. Deciduous fruit trees are preferred that have had one year's growth in the nursery after being budded on one-year-old stock. Plant only the best trees, and those raised in the State and as near the place of planting as they can be had. When shipped long distances their roots are likely to become dry or otherwise injured, so as to make them worthless. They should be taken from the nursery in cloudy weather, and their roots never exposed to the air until they become dry when in transportation to the orchard. They should then be heeled in on land that is well drained, that their roots may not stand in water even during heavy rains, but where they can be irrigated should there be prolonged dry weather before they can be planted.

All trees should have good roots, the broken ends to be trimmed off with a sharp knife, and while this is being done they should be kept constantly moist and not exposed to sun or wind. When taken to the orchard for planting they should be put in tubs partly filled with water to cover their roots until ready to be put in the ground, or kept moist in wet sacks. The holes in which they are to be planted may be made two feet in diameter and eighteen inches deep. The soil from the bottom of the hole is thrown aside and the richer top soil put under and around the tree roots, which should be kept in their natural position, and the soil carefully sifted among them, but not pressed by tamping. If planted in early winter the rains will thoroughly settle the soil among the roots, but if planted later than the first of March it is often necessary to put water on the roots of each tree as planted, to be followed by frequent irrigating unless late rains are abundant. No trees should fail to grow if planted by these methods.

There are 11 fruit-shipping houses already established in Newcastle, Penryn and Loomis, all within a distance of five miles. The largest firms in the county have houses at each of these stations, thus showing their opinion of the importance of the section. In recent interviews with their managers it was learned that some of them who have houses in other parts of the State are abandoning some of them with the view of concentrating their business here as soon as the orchards that are now to be rapidly planted come into bearing. When asked their reasons for so doing, they stated: "We can begin the season with the early fruit and small fruit. Your fruit is of the finest quality. It is well colored, it ships well, reaches its destination in better condition, and is preferred by our customers to fruit sent by us from any other shipping point. It is the only place in the State where we can fill all our orders for fresh fruit of desirable quality, and we advise you to plant every kind that we ship fresh, consulting us and each other as to the relative quantity of each variety to be planted."

THE FIELD.

Sugar-Beet Growing in California.

We gave last week the amount of beets handled this season at Chino and the weight of sugar secured. Mr. Gird's remark was also mentioned, to the effect that if the bounty was not disturbed California would be filled with sugar factories. We are informed by inside parties that the bounty is not likely to be removed, though of course there is some uncertainty about it. The subject of beet-growing is, however, one of constant interest to our readers, and we are pleased to present below some notes prepared by Richard Gird for a recent bulletin of the Nevada Experiment Station:

Plow in the fall; depth depends on previous cultivation. It is not judicious to turn up too much cold ground, not more, I should say, than two inches after a depth of six inches has been reached in one season. On new land, I should plow 8 inches, the second year 9 to 10 inches, and so increasing each year until a foot or 14 inches has been reached, according to the depth and character of the underlying soils.

Subsoiling is a benefit on most soils but only to stir the land and render it permeable for the tap-root of the sugar beet, which, the deeper it can penetrate the soil, the better. In many instances where the soil will admit the tap-root of the beets, they have been known to penetrate 10 to 12 feet, thus drawing the moisture and nutriment from the underlying soils, which could not have been reached otherwise, and which, of course, is an important point, as it thus brings to the surface for future use the plant food of the underlying strata of soil that could be reached in no other way. Shallow soils with hardpan near the surface, or with heavy underlying strata of soil or clay, should in some way be broken up or deeply stirred, so as to permit

the tap-root of the sugar beet to go down as deep as possible.

Previous to my commencing sugar-beet culture on a large scale, I planted for three years, experimenting with the different kinds of soils and seeds, under different conditions of planting, at different times during the season, analyzing continuously, and finally determined on three varieties of seed—the variety of Desprez seed, which we call the No. 5, and which produces a very long cylindrical beet, made so by cultivating the soils to one meter in depth and selection for many generations, until that type of beet was established which goes deep into the soil; this makes a long beet with heavy tonnage, and, at the same time, it is good in sugar. I plant this beet on the higher lands where the soil is loose and very permeable and of great depth, and where the tonnage would be lighter for the smaller variety of beets. This never fails to make a good sugar percentage, say 14 to 15 per cent. The next best variety, in my estimation, is the Kleinwanzlebener, of which there are many kinds. The one that I have had the most experience with is the Vilmorin Improved Kleinwanzlebener, which, although a much shorter beet, not penetrating so deep into the soil, is a thrifty, hard variety, and has produced as high as 30 tons to the acre, with 15 per cent sugar, on my plantation, and is much liked by the farmers, and also by the factory. I have also on my lower, extremely damp and heavy soils, where, according to rule, I should expect low purity and sugar, been very successful with Vilmorin Ameloree, which is a beet with a smaller tonnage, but good in purity and sugar, and has never failed to make good workable beets, although in many instances the tonnage has been rather light. Last year, from the damp lands, I brought in many wagon-loads of this beet that analyzed as high as 22 per cent in sugar, with the tonnage quite satisfactory. Another variety, fully tested last year and much liked, is the kind marked L. R. from LeMaire Frere et Soeur, which, in addition to high tonnage, seems to be exceptionally high in purity as well as fair in sugar, going the same in sugar as the Kleinwanzlebener, with purity much higher, under the same conditions. The character of this beet is cylindrical and much finer in shape than the Kleinwanzlebener.

I should advise those who are going into the sugar-beet business extensively to test their soils thoroughly with the different varieties of seed, at different times of planting and mode of cultivation. I find there is no agricultural product that needs so careful attention and consideration by the agriculturist, perhaps, I may say in a scientific way, as the sugar beet. Neither theory nor practice brought from Europe have been found reliable as to the new conditions of climate and soil, especially on the Pacific coast; for instance, much careful experimenting has been done with reference to the necessary and adequate rainfall or the perfect development of the sugar beet in Europe, and without which a failure of the crop is expected, whereas, here, beets are raised that never see a drop of rain from the time they are planted until they are harvested, and that with the most perfect success.

In planting I have used, so far, a drill-seeder made by myself, and upon the forced-drill principle, that will not clog and plants the seed in given distances apart in drills from 17 to 25 inches. I have found this seeder very satisfactory, and with it can plant from 10 to 18 pounds of seed to the acre. My best success has been with 14 pounds, which I find ample for proper planting. The depth at which it should be planted depends upon the condition of the soil, the time of year, etc., from one inch, perhaps, to two inches; light, warm soils deeper; heavy, cold, damp soils, one inch is sufficient. This is a matter of great importance. They should also be planted at a uniform depth, so that they will come up at the same time, which makes the thinning much more satisfactory, as the beets will be the same size to thin and will ripen at the same time in the fall.

The time of growth to maturity of the sugar beet—from the time of seeding to the time of ripening—depends to a great extent on the variety of seed and conditions of the soil, and is very variable. I should say, on an average, it is about 4 to 4½ months. Some varieties ripen much earlier than others, under the same conditions, but the above will be about the average for the varieties of seed that I have tried on my soils.

To determine whether a beet is ripe or not and ready to be harvested and to go into the factory, the only sure test is the chemical analysis. The appearance of the top of the beet is somewhat of a guide, of course, but it may be a fallacious one, as I have found by actual test that even a few foggy days will run down the percentage of sugar sometimes as much as two per cent. I therefore depend entirely upon chemical analysis to determine when beets are fit to go into the factory. Early rains in the fall, if they are at all warm, will reduce the percentage of sugar very rapidly, and, in some cases, by promoting the second growth, may render a good beet unfit for the factory. Very cold rains don't make so much difference.

The question of mechanical harvesting of sugar beets has not, so far, been thoroughly determined; none of the foreign or domestic harvesters that have been tried have fully answered the purpose. The most complete one is the puller invented by H. B. Martin, of Chicago, which will pull in a most complete manner, as a team is driven along, all the large and small beets and deliver them on the top of the ground as they come from the machine. He is now trying to improve upon this machine by mechanically handing the beets to some receiver to save the picking up from the ground, etc. No toppler has yet been invented in California or elsewhere, I think, that will work beets, although I expect it will be accomplished before long, as many inventors are working upon it, and some of them will undoubtedly perfect a machine in the future, when the cost of harvesting beets will be reduced by one-half from the old plan of plowing out and topping with a knife. I adopted, last year, in connection with the puller above mentioned, a plan of topping with a hoe bent to a curve like an adz, so as to cut the top of the beets square, by which plan I find one man will top about as much as six

with a knife. Following the toppers, I have a horse-rake to remove the leaves that have been topped; then comes the puller. By this plan I have already reduced the expense almost one-half, and consider it a very satisfactory method.

I have not, so far, experimented very much with fertilizers, as my soils are all virgin and rich. For most soils of a sandy nature, common barnyard manure will be the very best. I think it should be pretty well rotted, and I think that, with the sunshine and warm soils we have here in southern California, we need not fear putting on any kind of raw manures. In Europe they require to figure so closely on the percentage and purity that they have not made a success of any but the nitrogenous, well-rotted prepared fertilizers.

The distance between the beets in the row varies very much, according to the character of the soil and the beet. The No. 5 and the Kleinwanzlebener should have a larger space left than the Vilmorin Ameloree. I should say, ordinarily, 10 to 12 inches for the No. 5 and Kleinwanzlebener, and 8 to 10 inches for the Vilmorin Ameloree and some of the smaller varieties.

THE VINEYARD.

A Grape Fungus Which May Be Valuable.

TO THE EDITOR:—Rotten grapes are a constant source of trouble to wine-makers, so much so that they go to the expense and trouble of carefully eliminating them from the wine vat. In some cases many tons of grapes are lost, in addition to the loss of time and labor of separating the sound from the unsound grapes. In almost all cases this practice is eminently proper, for rotten grapes, if not the root of all the wine-makers' troubles, are the cause of many of them. It is, then, with pleasure that he will learn that there is at least one kind of fungus that is not an absolute enemy.

While visiting the various viticultural regions of the State during this vintage (1893), I had occasion to observe the great damage done by these various fungi. In one section of the State I found one special fungus (*Aspergillus niger*) causing the wine-makers to lose 90 per cent of the crop of certain varieties. In another part of the State I found many tons left on the ground after the crop was harvested. Microscopic examination of these grapes showed the presence of many distinct kinds of fungi. I am sorry to say that most of them were, *sui generis*, bad. One among the number, however, proved to be harmless, if not a real blessing. I refer to the *Edlefaule* of the Germans or the *Pourriture noble* of the French; or, more correctly speaking, the *Botrytis cinerea*. When at Chateau Yquem, where the very best Sauterne is made, I noticed that the grape-pickers were gathering only seemingly rotten grapes—grapes that would fall from the bunch at the least shake. This successive harvesting went on whenever the grapes became well covered with the mould till the whole crop had been harvested and made into wine. The same was observed at Schloss Johannisberg on the Rhine. The strange part of it all was the extreme satisfaction of the owner of the grapes the more perfectly the grapes were covered with mould—seemingly rot. The wine made from these seemingly rotten grapes was sold as high as \$1000 per ton when but a few weeks old.

It was this self-same fungus of the French Sauternes and German Rhine wines that I found in the vineyards of the Napa valley, in Sonoma and at various points around the bay of San Francisco.

Now, though the *Botrytis cinerea* is an unmixed blessing at Chateau Yquem and on the Rhine, it is not so everywhere. When it attacks red or black grapes, it is a positive curse, for it takes away the color of the grape to such an extent that, instead of making a red wine, you succeed only in making a pale pink one. Then, too, it destroys the tannin which is absolutely necessary in order to make clarets. More, it concentrates the sugar to such an extent that it becomes, in some cases, impossible to make a dry wine. Therefore, when it is found on colored grapes, it must be regarded as an enemy. When it is found on white grapes it is not usually harmful; in most cases it is beneficial. Before it can be regarded as a friend or an enemy, it must be carefully studied and experimented with, for the changed conditions it finds in California may change its usefulness into an evil.

At this moment it is the subject of special study and experiment at the viticultural laboratory and experimental wine cellar of the State University in Berkeley, and when the proper time arrives the results will be made known. In order to understand how difficult it is to pass judgment at once, it must be borne in mind that this mould belongs to a kind of fungus that can so readily adapt itself to circumstances as to assume any one of three distinct forms—*Sclerotinia fuchliana*, *Botrytis* or *Polyactis cinerea* and *Botrytis acinorum*.

In very wet and cold years it may develop before the grape is ripe and thus cause rotting before sufficient maturity is reached. Then again it may develop to such an extent on the stem as to cause the loss of the entire bunch. When it develops late on white varieties it is a great blessing, for it merely decomposes the skin of the grape, allowing the oxygen of the air to act slowly on the juice without bringing about any decomposition. By this slow action of the air on the juice of the grape certain complex acids are formed. It is due to the presence of these rare acids that the resulting wine has those peculiar, inimitable qualities found only in the very best vintages of the famous white-wine regions of Europe. Besides this, it concentrates the sugar in the grape and thus full maturity is reached more promptly. This power of concentrating the sugar is especially valuable when an early rain has fallen before the grapes have been harvested. In case of rain, the wine tends to become watery and flat. It is at this moment that the *Botrytis* develops most rapidly. Then comes concen-

tration of the juice of the grape, which more than counterbalances the water absorbed from the rain.

The external appearance of this fungus is as follows: On the outside of the grape there is a mouse-colored mould, generally first noticed where two berries touch. This gradually spreads over the entire grape and well up the stem. When very young, it is of a light ashy color, gradually deepening to a distinct mouse color. It can be easily distinguished from the common mould (*Penicillium*), the latter being of a bright blue color, seldom growing as long and furry as the *Botrytis*. Under the microscope it shows the ordinary mycelium, but has beautiful clusters of grape-shaped spores of a very characteristic form.

Though it remains for actual experiment to show just how much the changed climatic conditions of California have affected the useful character of this fungus, I feel perfectly safe in saying that, in the light of the experiments already made at the University, the *Botrytis cinerea* will, in a great many cases, prove of the greatest value, and aid certain favored localities to raise the quality of California wine.

ARTHUR P. HAYNE.

Berkeley, November 13th.

What Influences Raisin Values.

A. G. Freeman of this city writes to Fresno parties as follows: I consider the most important factor in the raisin market this year has been the importation of Zante currants, which, up to November 1st, amounted to nearly 20,000,000 pounds. The importation from Spain from this year's crop of Valencia raisins is, up to the same date, nearly 11,000,000 pounds. The importation of both currants and raisins amounts to over 30,000,000 pounds. The shipment of raisins from California up to November 1st amounted to something over 26,000,000 pounds; so we have an importation that goes into direct competition with our raisin product of fully one-fifth more than we have shipped up to date.

The 20,000,000 pounds of currants so far have sold, delivered in New York, all expenses paid, at from 1½ to 2 cents per pound; most of them were under 2 cents. These currants are a seedless fruit, and a favorite with bakers and housewives on that account. The 10,000,000 to 11,000,000 pounds of Valencia raisins imported have sold in New York City, duty and all expenses paid, at from 5½ to 6½ cents, according to the quality.

It is reported on good authority that the currant crop of Greece this year will amount to 300,000,000 pounds, or about five times as many as the largest estimate yet made of the entire raisin crop of California this year. The raisin crop of Spain is also very heavy, but up to date we have not had any heavier importation of them than in former years. These are the facts which demand the earnest and honest consideration of all parties in California interested in raisin production.

POULTRY YARD.

Troubles in the Oviduct.

Trouble in the oviduct or egg organs is of frequent occurrence and baffles the beginner. The following account by Joseph Wallace in the *Poultry Monthly* will be generally useful:

Some hens lay a large number of soft-shelled eggs, even though plenty of shell matter is always before them. This is caused by a weakened condition of the oviduct to retain the eggs until perfectly coated with shells. Inflammation of that organ will also check the flow of carbonate and phosphate of lime, animal gluten and the salts of lime, which give to the shell its hardness; or the system may be deficient in some of these constituents, consequently the laying of eggs without shells or with soft shells.

Egg binding is the cause of much mortality among our feathered pets, particularly canaries. An egg drops from the cluster to receive its natural coating of shell. There being a deficiency of shell matter, the egg remains longer in the oviduct in obedience to nature; another follows that one and soon another one, all awaiting their turn to be coated. The presence of so many eggs without shells crowding one another for several days is very apt to cause fever or inflammation of the oviduct, which, of course, obstructs the passage. If the hen cannot expel those eggs, and no immediate relief is given, the heat of the oviduct literally bakes the contents of the eggs, and a tumor forms and encloses the eggs in a tough sac, which shows itself in the "hagging down," so common among old hens.

A fatty condition of internal parts also obstructs the passage of eggs. This is known by the presence of blood on the eggs of adult hens. In cold, ungenial weather, and more particularly in the advent of the first nest of eggs, hens are liable to suffer from egg binding. If a hen is dull and listless, and her feathers are raised and rough, and she frequents the nest often, or rests on the nest-box, it is a sure sign of the disorder.

The following remedies for egg binding are generally effective and the best known to us: First chop a little groundsel and give it to the hen in a tablespoonful of hot common molasses. If this does not procure the delivery of the egg, inject a little salad oil into the vent, and feed sparingly if the bird is too fat. In cases which do not yield to the foregoing treatment, slightly warm some salad oil in a tablespoon, and with a very fine camel's-hair brush insert a little of the oil into the vent; passing the tiny brush into the vent, turn it around very gently, thus lubricating the part thoroughly. Vary the size of the brush according to the size of the bird. If you should have occasion to resort to steam, put some boiling water in a jug the size of a gravy strainer; line the strainer with a piece of thick flannel, lay the hen in, and tie a piece of muslin over the top; then place the strainer on the jug. It may be necessary to renew the jug with boiling water. The bird must

not remain too long over the steam. Remove the strainer and replace it in a minute or so several times during say 20 minutes. The strainer may be dispensed with and the abdomen of the hen placed over the mouth of the jug for the same length of time, but in obstinate cases the former method is best.

Bagging down behind is usually caused by the retention of eggs in the oviduct, followed by inflammation and tumor; also, when hens get too fat, often eggs get broken in the passage and cause the same disorder. These tumors grow to enormous size sometimes and weigh down the hen. A careful examination will show whether the fowl has tumor or inflamed "egg sac" near the vent. If the "bagging" is from mere internal fat, the fowl should be physicked and fed on just enough to sustain life till reduced to normal condition. Tumors from broken eggs or arising from inflammation cannot be cured without a skillful operation.

Inflammation of the Egg Organs.—It is only in post-mortem examinations that this disease is made known. Stimulating food to increase egg production and excessive laying are the chief causes of this disease. The symptoms become apparent when the hen drops eggs with blood in the yolk, or when there is an absence of due proportion of albumen or yolk. There is also much heat along the region of the backbone, and the hen gives way to the slightest pressure on the back, and usually walks lame. The disease is aggravated by having a heavy and awkward male running with the hen. Feed moderately on plain food, avoiding all stimulating and heating kinds, giving occasional doses of Epsom salts, so as to induce cessation of laying, and consequent rest.

SWINE YARD.

Hams, Bacon and Salt Pork.

We have given from time to time recipes for the above essentials to the home larder but as the time for slaughtering is now at hand, newer recommendations will be of interest. A writer in the *Breeders' Gazette* gives the following advice:

The making of good old-fashioned Kentucky country-cured hams and bacon and salt pork bids fair to become one of the lost arts. Our farmers have got in the way of selling all their hogs and then buying the packing-house-cured hams and bacon to such an extent that the younger generation of farmers do not know how much better the meats cured by the old-country process were than those which are railroaded through the packing-houses. It is a fact that the salt-peter and other chemicals used by the packers in their hurried processes of curing, harden the hams and to a very considerable extent destroy the flavor. Hams to be at their best *should be cured in salt only*. Not a particle of salt-peter, or sugar, or anything else besides the salt is needed, and their use does harm rather than good when the necessary time can be taken to cure by the old process. Pack the hams down in a box or barrel with plenty of salt and let them remain until the salt has had time to thoroughly permeate the joint, then hang them up in a dry, clean smoke-house and smoke slowly and thoroughly with smoke made from burning corn cobs or chips from any good, sound hardwood—hickory is usually thought to be the best—but really if there is no bad odor about the burning wood it makes but little difference what kind is used. Do not be in a hurry about it; take plenty of time to it so that the outside of the ham will be thoroughly dried and smoked; let them hang until there is danger from flies, then take them down, put canvas covers on them and whitewash them same as the hams that you buy are fixed, and then hang them up again and let them hang until they are wanted for use. By this process you will have rich, tender, juicy, delicious hams, without the coloring, the drying, and the hardening which the salt-peter causes. Try it, ye who have never tasted hams cured by other than the packing-house processes and you will be surprised at the results. The amount of salt required and the length of time they should remain in the salt will depend upon the weather and the size of the ham. They will absorb the salt much more rapidly in moderately mild weather than when it is freezing cold, and big hams will require a much longer time than smaller ones. Let the animal heat pass off before salting, but on no account should the salting process be deferred until they are frozen. A little experience will enable anyone to tell how long a time is necessary—say from four to six weeks.

And now about salt pork and bacon. Have your pork barrel perfectly tight—if it leaks the brine your pork will be ruined. Begin by putting a good layer of salt on the bottom, then cut your "side meat" into pieces of a convenient size and make a tight, closely-fitting layer of meat; on this put another layer of salt, packing all the crevices full; then another layer of meat, and so on, alternating with salt and meat until all is packed or your barrel is about full. Do not put on a particle of water, or sugar, or syrup, or anything except salt. The juices of the meat will dissolve the salt and make a pure, sweet brine that should completely cover the meat. Put a board with a stone on the top to hold the mass firmly down and your work is practically done. Remember, on no account should a particle of joint or a bony piece go into this barrel—the joint fluid will within even a day or two ruin the brine. If all this has been properly done—your meat perfectly clean and free from all bloody pieces, as it should have been—nothing more remains to be done. But usually it is safest after about six weeks to pour the brine off, heat it until it comes to the boil, then carefully skim off all impurities, let it cool and then pour it back again, and if at any time there should not be enough of brine to completely cover the meat some must be prepared and added. It should be borne in mind that the great essentials to success are strong, pure brine, and plenty of it, keeping the meat covered with it, and the exclusion of all joints, bones and bloody pieces of meat.

Pork prepared and kept in this way will keep sweet and good for years.

For making bacon the curing process is the same as that above described, the pieces to be taken out as soon as sufficiently salted, and then smoked the same as the hams.

SHEEP AND WOOL.

Those Flat-Tailed Persian Sheep.

Our readers know that there are specimens of this breed in the Golden Gate Park, at the University Experiment Station at Paso Robles and on the breeding farm of C. P. Bailey of San Jose, who took premiums with them at the World's Fair. As the animals have gained introduction here the following account of the breed by E. P. Smith, in the *American Cultivator*, will be read with interest:

The Agricultural Department has imported to this country, as an experiment, some of the broad-tailed sheep of Asia, and there will be considerable interest in the ultimate result of this work. It is said that over 100 years ago a ram of this breed was presented to George Washington, and it was from this ram as the basis that the celebrated Arlington long-wooled flock of sheep was propagated. Since then very few of these sheep have found their way to America, but there is certainly advantage in experimenting with a breed that is almost as old as Adam.

This is really the only sheep bred that exists in the Orient, and it is the one of which we read so much about in the Bible. The sheep of the breed were killed by the Hebrews as sacrifice, and we have representative figures of the same animals sculptured on the bas-reliefs of Babylon, Persia and other eastern countries. Like everything else in the Orient, the sheep have fallen into certain lines which have not varied, neither improvement nor degeneration following. The same breed has been intact for many generations, and no effort has been made to cross them with other breeds. The different countries and climates in which they have lived have changed their characteristics some, but otherwise they are the same throughout the whole of that vast region. In the western and southern parts of the Orient the sheep are smaller, and in the northern and mountainous district the so-called "Astrakan sheep" are found, but these are really the broad-tailed sheep changed somewhat in appearance by the climate.

This interesting breed gets its name from the peculiarity of its tail, which is very broad, thick and fat. The whole tail is greatly enlarged and first attracts the attention of the observer. The tail fat makes most delicious food, and the Orientals highly prize it. The fat is considered even superior to butter for cooking, and when it is cooked with the mutton of the sheep it gives delicious flavors to it that no one can help from liking. In fact, most of the fat that accumulates on the bodies of other breeds goes to the tails of this breed, and hence it leaves the mutton sweet and juicy, without such thick layers of fat that it is spoiled for many. It is said that by good breeding the tail of the animal can be made to represent one-fourth and sometimes one-third of the whole weight of the carcass, and as the tail always commands the highest price in the market, this characteristic is very desirable.

The best broad-tailed sheep average about 90 pounds to the carcass, not including the tails. From six to seven pounds of coarse, long-stapled wool makes the average production, and this is either dark gray or light brown. The tails sometimes grow so large and heavy that artificial appendages have to be fixed to support them. Otherwise they would drop off, and very often the wolves of the woods and mountains eat the tail of the sheep without injuring the rest of the animal. Consequently very many are seen without much tail on, as they have lost this appendage through accident.

The French Merinos.

The French Merinos seem to be coming to the front quite strongly. We have previously alluded to this fact, and now we read in the *American Sheep Breeder* the following interesting statement:

To-day we are confronted with somewhat changed conditions, and the problem before breeders is to steer the sheep industry so as to meet them. Not that we need less foreign clothing material, but rather an increased mutton demand, which confronts us on account of a less liberal supply of beef and pork and a very rapidly developing taste for mutton with every class of our people.

There are certain traits and characteristics found in the Merino breed which have made them especially adapted to our climate and the practices of our sheepmen, and made them the standard by which they gauge all other breeds; these consist in that vigor and hardiness which enable them to meet conditions of weather and scanty sustenance in cases of emergency, if need be, and longevity or years of usefulness unapproached by other breeds, while their sociability and quietude give them unequaled herding qualities, together with freedom from disease or vermin, all of which have combined to make them deservedly popular. The fact must have been apparent to all sheepmen, that during the last five years there has been an earnest desire and looking for a mutton Merino type that would yield first-class fine wool for our manufactories while at the same time meeting all the requirements of a mutton sheep, both as to quality and cheapness of production. In looking the ground over it was found that it would take time and skillful manipulation to develop the new type. Happily, at this juncture, it was found that the Rambouillet Merino, which has been trained and bred for more than a century in the hands of some of the most skillful breeders of Europe, would most thoroughly meet the requirements above noted, while at the same time constituting an attractive, finished and well-covered sheep that would command the pride and admiration of breeders.

The flock of these sheep with which our people are best acquainted is that of Baron F. Von Homeyer, Ranzin, Prussia, that very probably has no successful rival in Europe as a combined wool and mutton flock, or one whose sheep command a higher price abroad. Ram No. 560-2, sold in 1882 at auction in Buenos Ayres, brought \$4900, and No. 563-2, sold in 1883, brought \$6000. Two rams recently sold to parties in England brought \$750 each; these will probably go to the River Platte country, and the yearly demands for these sheep from every quarter far exceeds the number for sale.

That these sheep can be bred and maintained in this country in all their integrity, and these crosses with our American Merino constitute a well-balanced all-round wool and mutton sheep that will produce as much value of wool as our Merino, and approach the Rambouillet Merino as a flesh-yielding animal, has been fully demonstrated.

THE APIARY.

The Beeswax Business.

Probably few of the beeswax producers have any idea of the treatment which their yellow product requires to transform it into the handsome white plates of the drugstores. The following from the *Scientific American* will interest all who keep bees and sell wax:

The greatest honey and wax-producing States are New York, California, Ohio, Indiana, Illinois, Wisconsin, Michigan, Kentucky, North Carolina and Dakota. These States produce about 800,000 pounds of beeswax yearly. About 20 pounds of honey are required to produce one pound of wax. Large quantities of wax are imported to this country, in cakes of 25 and 50 pounds each, from Cuba and Africa. It comes in two colors, light yellow and dark brown.

Bees that gather most of their honey from grape and tobacco flowers produce the dark-colored wax, which is hard to bleach. That produced from clover, buckwheat, etc., is light-colored and bleaches easily. The bleached wax is used mostly by sperm-candle makers, wax-flower makers, druggists, and in the manufacture of carbon paper. The large cakes are first broken up into small pieces and put into a large circular tub or vat made of cedar. This tub is about five feet in height and about three feet in diameter. Across the bottom of the tub are two square, hollow wooden pipes, one crossing the other at the center, the tops of which are perforated with a number of holes. Placed into the end of one of these pipes is a perpendicular wooden pipe, which is connected at the top to a brass steam pipe.

About 1500 pounds of the wax is placed in the tub, and enough water poured on to it to swim it well. From 45 to 60 pounds of steam is then turned on, which rushes down to the perforated pipes and is forced up through the holes and distributed through the wax, which, in about three hours, becomes thoroughly melted, the dirt and grit, if any, sinking to the bottom. It is then drawn from the tub and run through a sieve, where it falls down on to a revolving wooden wheel or roller, about 4½ feet in length and 18 inches in diameter. The bottom of this roller rests in a bed of water about 18 inches in depth and about 6 feet in length, the temperature of which is about 70°. As the melted wax leaves the sieve it strikes or falls on the top of the wooden wheel in small pieces of ribbons, sticking fast and becoming instantly chilled.

This roller makes about 64 revolutions per minute, the wax dropping off the instant it comes in contact with the water. The material is then taken out of the water bed by means of wooden forks, and placed in boxes and carried out to the bleaching frames. These frames are made of wood, about 100 feet in length, 14 feet in width and about 8 inches in depth, and raised 3 feet from the ground. About 1000 pounds of wax is placed on each frame, and left out day and night for the sun to bleach for four weeks. It is sprinkled with water four or five times daily to keep the hot summer sun from melting it, as the temperature reaches as high as 120°. Once a day a 64-pronged wooden rake is drawn back and forth through the material, which turns it over, allowing the sun to act on every particle. The wax, when first taken out to bleach, is yellow. After four weeks' exposure in the sun it becomes a creamy white. It is then gathered up and taken back to the tubs and melted over again, going over the same operation and out again to the bleaching frames, to remain out two weeks longer, with the same sprinkling and raking operation. This second bleaching turns the wax almost to a snow white, and it is ready to be formed into cakes for the market.

About 600 pounds is then melted up at a time in a tub and drawn off, to be made into cakes as needed. These cakes are made by running melted wax from a horizontal movable copper cylinder into circular molds. These molds are of heavy tin, four inches in diameter and about one-quarter inch in depth, and are placed one after another on a long table, the sides of which are fitted up with tracks over which the movable cylinder can be drawn back and forth. This cylinder is 10 inches in diameter, 5 feet in length and double. The outer cylinder contains hot water, which surrounds the inner one, containing about 15 pounds of melted wax. The hot water and wax are poured into the cylinders by means of capped tubes at each end. Projecting from the outside of cylinder and connecting with the inner cylinder are a number of small hollow tubes, through which, when the attendant turns the cylinder over, the wax runs out into the molds. As soon as the molds are filled the cylinder is drawn back again and pushed forward to the next set of molds, the operation being repeated until the molds are all filled. To keep the wax from cooling, the hot water is poured when cool and fresh added after every 90 pounds of wax has been drawn off. The molded wax becomes cool in about one hour, and it is packed into boxes and ready for market.

THE HOME CIRCLE.

Nobility.

True worth is being, not seeming,
In doing each day that goes by
Some little good, not in the dreaming
Of great things to be done by and by,
For whatever men say in blindness
And spite of the fancies of youth,
There's nothing so kingly as kindness
And nothing so royal as truth.

We get back our mete as we measure—
We cannot do wrong and feel right,
Nor can we give pain and feel pleasure,
For justice avenges each slight.
The air for the wing of the sparrow,
The bush for the robin and wren,
But always the path that is narrow
And straight for the children of men.

'Tis not in the pages of story
The heart of its ills to beguile,
Though he who makes courtship to glory
Gives all that he hath for her smile,
For when from her heights he has won her,
Alas, it is only to prove
That nothing's so sacred as honor
And nothing so loyal as love!

We cannot make bargains for blisses,
Nor catch them, like fishes, in nets,
And sometimes the thing our life misses
Helps more than the thing which it gets,
For good lieth not in pursuing,
Nor gaining of great nor of small,
But just in the doing, and doing
As we would be done by, is all.

Through envy, through malice, through hating—
Against the world, early and late,
No jot of our courage abating—
Our part is to work and to wait.
And slight is the sting of his trouble
Whose winnings are less than his worth,
For he who is honest is noble,
Whatever his fortunes or birth.

—Alice Carey.

As We Grow Old.

As we grow old our yesterdays
Seem very dim and distant;
We grope as those in darkened ways
Through all that is existent;
Yet far-off days shine bright and clear
With suns that long have faded,
And faces dead seem strangely near
To those that life has shaded.

As we grow old our tears are few
For friends most lately taken,
But fall—as falls the summer dew
From roses lightly shaken—
When some chance word or idle strain,
The cords of memory sweeping,
Unlock the flood-gates of our pain
For those who taught us weeping.

As we grow old our smiles are rare
For those who greet us daily;
Or, if some living faces wear
The looks that beamed so gaily
From eyes long closed, and we should smile
In answer to their wooing,
'Tis but the past that shines the while
Our power to smile renewing.

As we grow old our dreams at night
Are never of the morrow;
They come with vanished pleasure bright,
Or dark with olden sorrow;
And when we wake, the names we say
Are not of any mortals,
But of those in some long dead day,
Passed through life's sunset portals.

—Selected.

A Christian Sacrifice.



YOUNG man who was half through his medical course in one of our large universities, and who accepted Christianity and professed to follow its teachings, one day awoke to the fact that, having been absorbed by his studies, he had forgotten that his profession placed him under sacred obligations to lead a generous, unselfish life.

While in this frame of mind the thought of another student in the university came to him—a fellow-townman—who was fast rioting himself to death. The two had been friends, but when the younger man began to drink and to seek questionable associates, the medical student avoided him. Now he felt that he had done wrong to abandon a man when he most needed a friend.

That day he hunted the poor fellow up, and found him partially under the influence of the last night's debauch. His books were lying before him, and he was stupidly trying to prepare for the next recitation.

"This place is not for a man like you. Come to my rooms. We will share them together."

The poor fellow answered: "I can't leave. I'm in debt. I'm no good. I'm past any hope of reform. Let me alone."

"Not a bit of it," answered the other, cheerily. "I've let you alone too long."

The young man paid his townsman's debts and took him to his own neat rooms.

The next morning his guest was sober, and the host proposed a written contract between them, if they were going to live together. This paper stipulated, among other things, that neither of them were to go out

alone; that twenty minutes should be allowed to go to the university or back, and all extra time should be accounted for. One hour each day was to be reserved for pleasure. Under all circumstances by-gones were to be by-gones.

This contract was signed by both students. A month passed without any violation of it. Then the man who had been rescued threw down his book and exclaimed:

"I can endure it no longer! I can't and I won't continue the struggle to keep that contract!"

"All right. Break it, then, and break it here," was the calm reply.

"But how can I? I must drink. There is no brandy here."

"Drink if you must; I'm studying."

"All right. I will."

The half-reformed fellow rose to put on his hat. His host also rose and took his.

"What are you doing?" as the other, querulously.

"Remember our contract. If you must drink, I must go with you."

The guest's eyes fell, and he dropped to his chair. His face grew deathly pale. Should he break away from this man, the only true friend he had? If he did, there was no hope for him. It meant a drunkard's degradation, possibly a drunkard's grave. The horrible craving for liquor stirred every nerve in his body. The struggle, the alternations of feeling, the intensity of desire, convulsed his whole nature.

There was a pause. For some moments in silence the men faced each other, one sitting, the other standing. At length the set lips of the tempted man relaxed, the frenzied eye softened, and he said feebly:

"Thank you, old fellow, I'll stay here and try—and try—to overcome," and then, crying like a child he threw himself upon his bed.

Another month passed. The temptation came again. Again this constant friend stood by him, supporting him by his strong will and his firm sympathy.

When eighteen months had passed the drunkard was a cured man. His old haunts had been abandoned, his old tastes overcome. During this period of convalescence his friend, each day in the quiet of his little side room, had offered openly his morning prayer and had read some time during the day a book which he had not invited him to share. It was the bible.

"You never talk religion to me," said the puzzled man one day.

Talk religion, when his self-sacrificing host was leading the life of a Christ before his eyes. It was the life that had saved. It ought to have spoken louder than words.

"I would have talked religion had it seemed best that I should do so," said his friend. "I have not shunned to show you the motive that has governed my conduct. Your feelings and opinions with regard to Christ, whom I love, have been indifferent, almost antagonistic. More than I can tell you, I should rejoice could I know that you have the hope, and the incentive to a true life that I have found in Him I love."

When the savior of his friend left the university, he took no honors, for his work of mercy had not left him time to do so. He was simply what is called a "commonplace man." The other, who was a man of brilliant parts, ranked among the first in his class—he who but a little while ago had been picked up out of a debauch.

This story is a true one. The like occurs in different ways and under varying conditions, oftener than we suspect. It is a sacred drama, forever new, forever inspiring, when one life is given in some beautiful form for that of another—unknown, unrecognized by men, but honored by God.—Youth's Companion.

Woman's Place.

One of our lady readers sends the following and requests its publication: The great element of danger with woman's progress before the public lies in this fact—that it takes women away from home who ought to be there and nowhere else. The public platform is no place for a mother who has either sons or daughters to educate. If woman's progress is going to tend in that direction, then the sooner that advancement stops the better. The first thought of a wife or a mother should be her home; all things, no matter how important, are secondary to that. No matter how rampant may become certain public evils, let her see to it that she keeps the evils out of her home, and she performs her greatest duty to her God, her family and mankind. When a woman tries to remedy an evil by striding the lecture platform, warning others, when that very evil is invading her home by her absence, she is mistaking her mission in life, and she cannot realize it too soon. The good that a woman can do toward the great world at

large is as nothing compared to her possibilities in her own home if she be wife or mother.

The Lord Mayor of London.

The fountain of municipal honor in England undoubtedly springs from the Guildhall, London, which justly claims to be accounted the most ancient of our municipal halls, seeing that the lord mayors of the last eight centuries are, with justice, assumed to have had prototypes in the Roman prefect and the Saxon foretyre or portgrave.

For a considerable number of years the robes of the lord mayor, the court of aldermen and the common councilors have been settled with a precision that none save the most reckless of innovators would presume to disturb. The lord mayor himself has his "gold" robe for the occasion of the annual Guildhall banquet and for the times when he proceeds in state either to the new law courts or to the houses of parliament. The aldermen have their scarlet gowns, the sheriffs their distinctive and very handsome robes and chains, while the common councilors rejoice in gowns called "mazarines," it being generally understood that mazarine is a term for a particular dark blue color, although, according to some lexicographers, mazarine also means a drinking vessel and an old way of dressing fowls.

Then, again, when the sovereign comes into the city the lord mayor is bound to don a robe of crimson or purple velvet trimmed with ermine. At the time of this investiture he wears a massive gold chain, but when he is honored by re-election at the expiration of his term of office he wears two chains. The mace of silver gilt, surmounted by a royal crown and the imperial arms, is carried before the mayor by the authority of the charter of Edward III. While the city possesses no less than four swords, one called the "Pearl," presented by Queen Bess when she opened the first royal exchange, and so called from its being richly set with pearls. This sword precedes the chief magistrate on all occasions of rejoicing and festivity. The sword of state is carried before the lord mayor as an emblem of his sovereignty within the city proper. The "black" sword is used on fast days in Lent and at the death of any member of the royal family, while the fourth sword is that placed close to the lord mayor's chair at the central criminal court.—London Telegraph.

About the House.

Hot sunshine will remove scorch. Nothing taxes the housekeeper's purse more heavily than the butcher's bill.

A housekeeper suggests that a little paint will do a great deal towards making life worth living.

A pinch of soda added to sour fruit will take away much of the tartness and make much less sugar necessary for sweetening.

Those hygienic housewives who dislike upholstered furniture and have a fondness for rattan and portable cushions are turning their attention to corduroy as a winter covering for cushions. It is fairly inexpensive, has the wearing qualities of sheet iron and comes in all colors.

Anybody who cooks, and knows how utensils must be handled, would see at once that the killets and pans small enough to be held by the left hand when being emptied of food, ought to have the mouths on the opposite side from that where most makers put them.

The careless habit which some housekeepers have of storing away the grocery packages in the brown papers in which they come is certainly to be condemned. They should be emptied into their proper box as soon as they come into the house, not only for the sake of order, but to keep them in good condition.

Disadvantage of Being a Woman.

A woman must be at home to bores, while her brother has the absolute right to avoid dull women. She must wait for a partner in the dance, while her brother may seek one.

She must smile on old Stumbleover and accept his moist hand for the dance, although she knows that bruised ankles will be the penalty. A woman equally clumsy, old and unattractive, has the right to put herself in bold relief against the wall as a part of its human dado. Why should not Stumbleover take his place beside her? Also, as if life were a mere cotillon, must our daughter watch and wait the coming of her lord and master.—Washington Post.

The Value of Time.

One morning, when Benjamin Franklin was busy in the press-room on his newspaper, a lounge stepped into the bookstore and spent an hour or more looking over the books. Finally he seemed to settle upon one, and asked the clerk the price.

"One dollar," the clerk replied.

"One dollar," echoed the lounge. "Can't you take less than that?"

"One dollar is the price," the clerk answered.

The wood-be purchaser looked over the books awhile longer, and inquired:

"Is Mr. Franklin in?"

"Yes, he's busy in the printing office," the clerk replied.

"Well, I want to see him," said the man. The clerk told Mr. Franklin that a gentleman was in the store waiting to see him. Franklin soon appeared, and the stranger said:

"What is the lowest, Mr. Franklin, that you can take for that book?"

"One dollar and a quarter," was the prompt and decisive answer.

"One dollar and a quarter? Why, your clerk only asked me a dollar just now."

"True," replied Mr. Franklin, "and I could have better afforded to take a dollar than leave my work."

The man seemed surprised, and, wishing to end a parley of his own seeking, said:

"Well, come now, tell your lowest price for this book."

"One dollar and a half."

"A dollar and a half? Why, you offered it yourself for a dollar and a quarter."

"Yes," said Mr. Franklin, coolly; "and I had better have taken that price then than to take even a dollar and a half now."

This was a way of trade which took this man quite by surprise. Without a word he laid the money on the counter, took the book, and left the store.—Exchange.

Gems

We feed upon what we read, but digest only what we meditate upon.—Bengel.

What is the true end and aim of science but the discovery of the ultimate power?—W. H. Furness.

He who receives a good turn should never forget it; he who does one should never remember it.—Charren.

Our grand business is not to see what lies dimly at a distance, but to do what lies clearly at hand.—Carlyle.

There are few people more often in the wrong than those who cannot endure to be thought so.—Rochefoucauld.

Honor is like an island, rugged and without a landing place; we can never more enter when we are once outside of it.—Boileau.

Never esteem anything as of advantage to thee that shall make thee break thy word or lose thy self-respect. Remember this: That there is a proper dignity and proportion to be observed in the performance of every act of life.—Marcus Aurelius.

Here is where the mind must dwell and rest. Not on our trials, weaknesses, follies, failures, sins; we can do better. The good things are most real, the best things are most true, the greatest things are most sure. What the light shows—the vision of spiritual reality—to that let us forever make fast.—Rev. Charles G. Ames.

"Papa," said a boy, "I know what makes folks laugh in their sleeves." "Well, my son, what makes them?" "'Cause that's where their funny bone is."—Exchange.

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder
ABSOLUTELY PURE

You'll Use it Always for a Like Mishap.

PATRONS OF HUSBANDRY.

Editorial Observations.

[Mr. Holman is in attendance at the Fruit-Growers' Convention at Los Angeles, and the usual editorial observations are therefore omitted.]

The National Grange.

The twenty-seventh annual session of the National Grange of Patrons of Husbandry was opened at the Alhambra, Syracuse, N. Y., at 11 o'clock Wednesday morning, November 15th.

There was a good-sized crowd present when the hour for opening arrived. Bunting and flags were to be seen everywhere. The stage was decorated with grain, plants and farming implements, and presented a very handsome appearance. On the floor, directly in front of the stage, was built a pyramid, covered with various products of the soil. Steward Alva E. Page of Missouri exhibited on a small table near the stage a very good collection of apples and corn, and Lecturer Mortimer Whitehead of New Jersey displayed some handsome pears. On banners on the side walls were to be seen such mottoes as these: "For God, For Home and Native Land," "Equal Rights to Both Sexes," "The Farmer Feeds us All." The business houses of the city extended a welcome to the Patrons by responding very generally to the invitation to decorate their stores.

The grange opened in the sixth degree at 11:30 o'clock with Hon. J. H. Brigham of Ohio, worthy master, in the chair. The executive committee occupied their usual chairs, with the exception of that of the last Worthy Brother X. X. Charters of Virginia, which was tastefully decorated in mourning. Mr. Charters died last February, and services were to be held at the Alhambra in his memory on Sunday at 3 P. M.; also in memory of Mrs. Charters.

Prayer was offered by Charles McDaniel of New Hampshire, chaplain of the National Grange.

The following officers were present: Master, J. H. Brigham of Delta, O.; overseer, E. W. Davis of Santa Rosa, Cal.; lecturer, Mortimer Whitehead of Middlebush, N. J.; steward, Alva E. Page of Appleton City, Mo.; chaplain, Charles McDaniel of West Springfield, N. H.; treasurer, F. W. McDowell of Penn Yan, N. Y.; secretary, John Trimble of Washington, D. C.; pomona, Mrs. C. E. Bowen of Woodstock, Conn.; flora, Mrs. E. P. Wilson of Okolona, Miss.; lady assistant steward, Mrs. Laura C. Douglas of Sherborn, Mass. Executive committee—Leonard Rhone, chairman, of Center Hall, Pa.; J. J. Woodman, secretary, Paw Paw, Mich.; and Worthy Master Brigham. The only officers absent were: Assistant Steward O. E. Hall of Pawnee City, Neb., and Gatekeeper W. H. Nelson of White Haven, Tenn.

The following delegates answered to the roll call:

California, A. P. Roache, Mrs. E. Z. Roache; Colorado, D. W. Working, Mrs. Ella Grance Working; Connecticut, George A. Bowen, Mrs. C. E. Bowen; Delaware, John C. Higgins, Mrs. Higgins; Georgia, T. H. Kimbrough, Mrs. M. L. Kimbrough; Illinois, J. M. Thompson, Mrs. M. J. Thompson; Indiana, Aaron Jones, Mrs. Maggie W. Jones; Iowa, J. E. Blackford, Mrs. M. M. Blackford; Kansas, A. P. Reardon, Mrs. Mary M. Reardon; Kentucky, J. D. Clardy, Mrs. A. F. Clardy; Maine, M. B. Hunt, Mrs. Patience Hunt; Maryland, H. M. Murray, Mrs. M. H. Murray; Massachusetts, Elmer D. Howe, Mrs. Leonard M. Howe; Michigan, G. B. Horton, Mrs. M. A. Horton; Mississippi, S. L. Wilson, Mrs. E. F. Wilson; Missouri, W. E. Harbaugh, Mrs. Anna M. Harbaugh; Nebraska, O. E. Hall, Mrs. E. M. Hall; New Hampshire, N. J. Bachelder, Mrs. Mary A. Bachelder; New Jersey, John T. Cox, Mrs. R. E. Cox; New York, W. C. Gilford, Mrs. Eliza C. Gilford, Mrs. Eliza C. Gilford; Ohio, T. R. Smith, Mrs. Lucy G. Smith; Oregon, R. P. Boise, Mrs. E. P. Boise; Pennsylvania, L. Rhone, Mrs. M. S. Rhone; Rhode Island, A. M. Belcher, Mrs. M. J. Belcher; South Carolina, W. K. Thompson, Mrs. S. W. Thompson; Tennessee, W. L. Richardson, Mrs. Richardson; Texas, John B. Long, Mrs. Emma K. Long; Vermont, Alpha Messer, Mrs. Lizzie B. Messer; Virginia, R. H. Hutchinson, Mrs. Hutchinson; Washington, D. L. Russell, Mrs. Elizabeth Russell; West Virginia, C. H. Knott, Mrs. S. G. Knott; Wisconsin, Washington Chonchill, Mrs. Mary L. Chonchill.

The only delegates absent were Mr. and Mrs. Hiram Hawkins of Alabama. The

above list comprises the voting delegates of the National Grange. All members who have taken the fourth degree are entitled to sit in all sessions of the National Grange except the conferring degrees.

The grange opened in the fifth degree and R. R. Hutchinson of Virginia and Mrs. Hutchinson received that degree, after which the grange opened in the sixth degree and that degree was conferred upon the same candidates.

When during the roll-call of the Executive Committee the names of the late X. X. Charters and wife were called, Messrs. L. Rhone and J. J. Woodman answered for them in appropriate words.

At 12 o'clock a recess was taken until 2 P. M.

The grange was opened in the afternoon in the fourth degree, and at 2:45 a public session was declared and Grand Master Brigham delivered his annual address. After Mr. Brigham had delivered his address, the grange was again called to order in the fourth degree, when announcement of standing committees was made and reports of the Committee on Credentials and reports of National Grange officers were called for.

The outcome of the proceedings for the ten days session, as given in the *Syracuse Journal*, was as follows: The grange opens on Wednesday at 10 A. M. The first day will be given up to organization. In the afternoon Grand Master Brigham will deliver his annual address. The local committee will ask that the session in the afternoon be open so that persons who are not members of the grange may hear the grand master's address. There will be three sessions each day. The organization will be perfected on Wednesday evening.

On Thursday morning the fifth degree will be conferred by the officers of the New York State Grange; and, if there is any time to spare, reports of officers will be received. On Thursday afternoon the sixth degree will be conferred. There will be an open meeting in the evening and a public session. On Friday morning the reports of the secretary and treasurer will be read, and in the evening the seventh degree will be conferred by the officers of the National Grange. This is the great degree of the order.

The principal business on Saturday will be the receiving of reports of officers. On Sunday at 3 P. M. there will be memorial services at the Alhambra, which will be open to the general public. On Monday reports of officers of the various State Granges will be received. On Tuesday there will be more reports and the biennial election of officers of the National Grange. In the afternoon the visitors will be shown about the city and the Lakeside stock farm. At the State fair grounds, Smith & Powell's stock will be shown in the ring, and there will be several scrub races. The programme for Wednesday, Thursday, Friday and Saturday is not finished, but those days will be fully occupied. Resolutions will be offered at the opening of each session.

Overseer Davis Talks.

Following is from the *Syracuse Journal*: E. W. Davis of Santa Rosa, Cal., is overseer of the National Grange, and one of the hustlers of the order. "The general public should not get the idea that the grange is a political organization," said he to a *Journal* man. "We have more or less to do with politics, but are not partisan. We look out for the interests of the farmer. As retiring master of the California State Grange, I can say that the grange in our State is in splendid condition, socially, financially, and in every other way. There are 90 granges in the State." Mr. Davis said that California might be called a free silver State. Speaking of the crops, he stated that the fruit crop had been exceedingly large and of excellent variety, but sales had been very poor on account of the dull times. The crop of cereals has been good, but the price desperately low. Most of the lumber mills shut down and also a great many of the mines.

From New Hope Grange.

TO THE EDITOR:—New Hope Grange has awakened and shows a little more activity this winter. Nine new members have been initiated in the four degrees of our order this month, and more have been balloted upon. The first volume of our grange paper was read and was enjoyed by all. The editor, Bro. Jourdon, did not forget to mention the names of the members in witty sayings. New Hope Grange has decided to celebrate the 4th of December with a short drama and concert, and finish with a dance. A pleasant time is looked for, as the committee that has it in charge will see that everything necessary is done and the result sure to be a very enjoyable affair.

At our last meeting part of the evening

was taken up in trying to decide which it would be best for our grange to buy, an organ or piano. A committee was appointed to investigate and report at our next meeting.

At our first meeting in December the election of officers takes place.

Bro. Kise, our inside gate keeper, has the sympathy of his many friends in his recent illness. He has been to the city for some time being treated for rheumatism. The weather here has been perfect with the exception of a big wind scare Thursday night. The nights are cold, there being a heavy frost every night. CARRIE CARLETON.

New Hope, Nov. 18, 1893.

The Secretary's Column.

An informal meeting of the Executive Committee of the State Grange, and prominent members of the order, was held at the Russ House, November 15, 1893, to consider the proposition of the State Grange making an exhibit at the Midwinter Fair. Among those present were Cyrus Jones of San Jose, G. P. Loucks of Pacheco, W. Walter Greer of Sacramento, Frank Dunn of San Jose, Geo. Ohleyer Sr. of Yuba City, I. C. Steele of Pescadero, E. Greer of Sacramento, J. D. Huffman of Lodi, and your humble servant. The subject was discussed, pro and con, but no definite conclusion was arrived at.

After lunch most of those present visited the exposition grounds to view the proposed location, space, etc., for the exhibit of the State Grange.

The committee appointed to confer with the Executive Committee of the Midwinter Fair failed to secure an interview with those gentlemen. The secretary was, however, instructed to send a circular letter to all the subordinate granges relating to the securing of means for this exhibit.

The letters have all been mailed, and I trust that as soon as they are received by the different masters they will notify this office at once of the action taken, or what can be done in their vicinities, so that the Executive Committee will be fully informed regarding the desire of its subordinates. It is thought by prominent members of the order that if the State Grange undertakes to make a display it should be one of the best on exhibition, and we concur, if those interested will but immediately come to the front from all over the State, this idea can be easily accomplished.

Sonoma County Pomona Grange, No. 1, several years ago made a display of the products of Sonoma county which was the admiration of the world. If the few granges of Sonoma county, under the jurisdiction of its county grange, can create such feelings of admiration just from the products of one county, what may the State Grange do under its jurisdiction? I leave this for you to think of.

Do you desire to advertise the products of your farms? Do you desire to show to the world that the Patrons of Husbandry of California are live business men and women, who believe that a difference of opinion is no crime; that progress toward truth is made by differences of opinion, while the fault lies in the bitterness of controversy; who hall the general desire for fraternal harmony, equitable compromises and earnest co-operation as an omen of future success?

Let us then to work; our time is short, but money makes the mare go, and it's the dollars that are needed to make a creditable display. Advertisements cost money, and I think this is the chance of a lifetime, and should not be neglected.

Petaluma Grange reports that they are trying to work up something that will make their grange meeting more interesting.

Elk Grove Grange reports that they have gained a few members; financially, they are in a better condition than last year.

Past Master Davis and wife are enjoying good health, and report from Syracuse, N. Y., that they have seen much to instruct and entertain them since they left Santa Rosa. Bro. Davis will probably talk to the good people of Visalia on his return from the National Grange.

This office has received a few calls for the Journal of Proceedings of session 1893. They have not as yet been received from the printer, but we hope to have them distributed by the 1st of December.

I have received masters' reports from Eden and Elk Grove Granges, but I am sorry to state that they are too late to go in Journal of Proceedings.

Eden Grange reports that they have 41 members, and their average attendance about 20. They have had two public meetings during the year. The status of their grange compared with the same period last year is that rather more interest is shown in grange work, although not so large a membership.

I have just received quarterly report of

Magnolia Grange, and they report their last meeting an interesting one. Much interest was taken in Secretary Morton's speech, and one application was received for membership.

Address all communications for California State Grange to Don Mills, Sec'y, Santa Rosa, Cal.

National Grange Officers.

A dispatch from Syracuse, N. Y., November 20th, states that the newly elected officers of the National Grange are:

Master, J. H. Brigham, Ohio; overseer, E. W. Davis, California; lecturer, Alpha Messer, Vermont; steward, A. M. Belcher, Rhode Island; chaplain, S. L. Wilson, Mississippi; treasurer, Mrs. E. L. McDowell, New York; secretary, John Trimble, District of Columbia; gatekeeper, W. E. Harbough, Missouri; ceres, Mrs. M. S. Rhone, Kansas; flora, Mrs. Anna L. Bull, Minnesota; lady assistant steward, Mrs. Amanda Harton, Michigan; executive committee—R. R. Hutchinson, Virginia; J. J. Woodman, Michigan. An equal-suffrage resolution offered by Mrs. W. C. Gifford was adopted.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

Register: W. E. Gillespie pickled recently a hundred gallons of olives. They are delicious. The olives were grown in the City Gardens, and it is somewhat odd that these olives were not used for several years, the parties owning the place evidently not realizing the value of the fruit. He finds a ready sale for them at \$1 a gallon.

Register: N. Goldstein will plant this winter a 200-acre orchard on the west side of Feather river just south of Rio Bonito. The land is known as the Boyles' ranch, and is as rich and fertile a strip of earth as can be found within the State.

Register, Nov. 16: E. B. Ward on Saturday picked 12 or 14 boxes of oranges, mostly Navela, for shipment to San Francisco. Oranges this fall are earlier than usual.

Fresno.

Enterprise: James Say has cured a big crop of prunes from 220 trees five years old, this second season of bearing. The trees were literally covered with the purple fruit, the long, willow-like limbs spreading themselves outward and bending downward until they rested on the ground. There was probably 30 tons of the green fruit on these young trees. Mr. Say sold his prunes for four cents, and realized \$500 spot cash for the crop on less than two acres of ground. He had a fine crop of raisins also—20 tons of superior quality. He is also raising each season an increasing crop of pink beans. He has this season 25 acres promising to show a fine acreage yield in the sack.

Prof. W. A. Sanders, an authority on many matters connected with horticulture and agriculture, writes thus to the *Republican* from his home in Fresno county: "I am beginning the work of trying to produce seedless Muscat grapes. If my children follow, and my grandchildren follow them faithfully, they may possibly begin to have Muscat grapes certain bunches of which will be entirely seedless. I have now a number of Muscat vines on which all of the smaller grapes, over half the grapes in each bunch, are entirely seedless. I propagate from cuttings of these vines, then from such of these new vines as produce the most seedless grapes I propagate again, and so continue using cuttings from such vines only as produce most seedless grapes. The white Corinth grapes never have anything like seeds; it has taken 800 years of such work as above outlined to bring them to perfection. The Sultan is yet in the last years of metamorphosis from seed bearing to seedless. The Thompson is in the same condition. Many vines of these two varieties produce a few grapes containing seeds, or shells of seeds. People should never propagate from such vines.

Humboldt.

Rohnerville Herald: We were shown some samples of apples grown on the place of Wm. Perrott, near Rohnerville a few days ago. There were four varieties, viz., Alexander, Stark, Baldwin and King of Tompkins county, and for size, color and flavor would be hard to beat. Mr. Perrott has 1000 apple trees in his orchard, and if they all bear such fruit as was shown us, he will find a ready market for his crop. There are 3000 prune trees on the place which are just coming into bearing.

Kern.

Californian: A large amount of new ground has this season been broken up for the first time and sown to Egyptian corn. A good deal of it in the Poso country and southward therefrom has already been thrashed out. The product averages about 15 sacks of 130 pounds each to the acre. Out in Delta school district Mr. Bonham has harvested 2500 sacks, Mr. Taylor 2500, Mr. Courtney 2200, Mr. Eggleston 1200 and Mr. Rambaut 5000 sacks. Mr. Rambaut intends to feed his to hogs, and in this way figures that he can make three cents a pound out of his corn. Henry Miller has 5000 acres in Egyptian corn, and some 150 men are now at work harvesting. A large amount of new land under the Lerdo canal was planted this year to this crop. It is understood that most of this will be fed on the ground, first to cattle and

afterward to hogs. The thrashers charge 6¢ cents a hundred and turn out about 800 sacks daily. It is estimated that if all the corn that has been put into new land this season were thrashed the product would aggregate 150,000 sacks, or 9750 tons.

Los Angeles.

The Pomona Progress says that the seedling orange yield in the Pomona valley will be less than one-third of that of last winter, and navel oranges are going to be about one-fourth of an average crop. This is a smaller estimate than others have made. Monrovia's young orchards have an average crop and the fruit appears to be a very fair size. Some of the Duarte orchards, particularly those that bore heavily last year, have light crops, while others are up to the average.

Orange.

Anaheim Gazette: Another beet-sugar factory is on foot in the neighborhood of Anaheim and Garden Grove, and signatures are being obtained from farmers pledging themselves to plant a specified number of acres. Tim Carroll is circulating the papers, and he has already secured signatures for a very large acreage. The proposition differs from the other in that it has no co-operative feature, and the document now being signed is to be laid before capitalists who are thought likely to be ready to engage in such an enterprise and run it for the money there is in it for them.

Placer.

Herald: J. Parker Whitney is now preparing for shipment from his 35 acres of oranges. The trees are only four years old and the yield is estimated at 80,000.

Riverside.

Press, Nov. 18: Up to date there have been shipped from Riverside 16 carloads of raisins this season. This is a very small proportion of the crop. These come from the smaller growers, principally, and represent only a portion of the small raisings, at that, as the packing houses are just in the middle of their work. A great majority of the heaviest producers do their own packing and will ship within a week or ten days. The shipment from this point will be large, notwithstanding many vineyards have recently been converted into orchards.

San Bernardino.

Anaheim Gazette: The amount of sugar made at Chino this season and refined is 15,063,357 pounds. This is double the output of last year, and the largest output of a single campaign ever known in this country. The Government bounty on sugar made at Chino is 1½ cents per pound, so that the premium that will be paid on this season's output will reach the magnificent sum of \$263,608.75. It is expected that this year's output will be far surpassed by that of next year, as the factory will not only manufacture from an increased acreage of sugar beets to be planted by outside districts, but that the cultivation of the land will be greatly extended on the Chino ranch itself. It is expected that the output for the next campaign will reach 25,000,000 pounds, at least.

For the first time Rialto will this year enter the lists as a direct shipper of oranges. It is expected that fifteen carloads will be dispatched. "We also," says the Rialto Grower, "ship this year a large quantity of deciduous fruits and raisins, and hereafter Rialto is to be counted on as one of the producing centers. In a very few years it will be, by reason of the large area planted and the superior quality of its fruits, one of the most important fruit-growing centers of southern California."

San Diego.

Riverside Press: Up to Wednesday about 100 carloads of raisins had been shipped from El Cajon, San Diego county, and the surrounding neighborhood to Eastern cities this season. The shipments have not yet ceased. By the first of next week, at any rate, the last carload will be gone. In the Escondido district shipments will begin this week, and at least 40 carloads will be dispatched.

Santa Barbara.

Santa Maria Times: The amount of grain, beans, butter and other produce shipped from Santa Maria during the month of October foots up to the good round sum of 5,122,978 pounds.

Santa Maria Times: W. H. Langlois has at the Eagle Market some very fine lemons on exhibition, grown on his father's place on Moro creek in San Luis Obispo county. The trees average a hundred dozen lemons per season. He also has some almonds and other fruits grown on the same place.

Santa Cruz.

Pajaronian: The McLean farm is to the front this year with a crop that demonstrates the great value of the reclaimed slough lands. About 600 sacks of beans have been harvested, and it is estimated that the potato crop will run to 4000 sacks. Before the ditches were put through, this tract of land was under water most of the year, and it seldom produced anything. The spuds it is turning out would be stunnors at the Midwinter Fair. Mr. King, who is farming the land, informs us that he has found potatoes weighing from three pounds upward, and got a dozen that weighed 24 pounds.

Pajaronian: Each day from 300 to 400 loads of beets, weighing from 800 to 1000 tons, pass over Third street. In addition there is the heavy traffic of local freight, apples, grain and other produce.

Pajaronian: Our strawberry growers have long felt the effects of the limited district which they had for the sale of the matchless Pajaro strawberry, and they have often tried to extend the market; but inability to get proper railroad connections have prevented an extension of the

field. It is probable that this difficulty may be removed next spring. The representative of large Eastern fruit-houses is giving the matter his attention, and he believes by the use of first-class refrigerator cars that berries can be shipped to mid-continent points and be placed on sale in first-class condition. Neither chests nor slides would be returned, and would have to be made of cheaper material than is used at present.

Shasta.

Redding Democrat: J. S. Eddington, who owns a fine farm and orchard near Millville, has 200 prune trees ten years old. This season these trees yielded a crop of prunes that weighed 14,000 pounds, dried and cured. He sold the prunes—part of them to the McCormick-Saeltzer Co. of this place and the remainder to J. F. Bedford in Anderson—for five cents a pound, bringing him \$700. The labor cost is estimated by Mr. Eddington, counting in his own time at fair wages, at \$200, thus leaving a net profit of \$500 on his 200 prune trees. These trees do not cover quite two acres. Mr. Eddington says he lost three tons of prunes from the crop on these trees by the early wet weather, and, but for that misfortune, he would have ten tons of dried prunes.

Sonoma.

Santa Rosa Democrat: The vintage at the Chanvet Winery is nearly finished. Over 200,000 gallons will be the season's output.

Martin Peter has finished crushing. He has made about 35,000 gallons.

The vintage is over with James Shaw. He made something over 30,000 gallons.

Kohler & Frohling have handled less grapes than usual this season. They have done more distilling than usual.

Stanislaus.

Oakdale Leader: Knight's Ferry has a mushroom industry, the innovation of a man named West, who has recently located there. Mr. West has leased the lower floor of the old brick court house for the mushroom beds.

Modesto News: The sheep-owners in this section are testing the sheep-license ordinance passed by the supervisors of some of the mountain counties. In Tuolumne county a license of five cents per head is charged for all sheep which pass through or graze within the boundaries of the county. Recently Davin & Nicolas, of this city, drove a band of 3500 sheep through that county, but did not use any of the land for grazing. They resisted the payment of the license and a trial took place before a justice at Sonoma, in which they lost. The case has been appealed to the Superior Court, and in case of the lower court's judgment being affirmed, an appeal to the Supreme Court will be taken. A large number of sheep-owners are interested in the case and intend giving the matter a thorough test.

Sutter.

Farmer: Sutter county is liable to blossom out as a tobacco-producer before many years. Recent experiments tried at Nicolans show that the plant thrives well and produces a good leaf. Jacob Vahle set out an acre to tobacco this last season, and raised, gathered and cured the leaves. The yield and quality were excellent, and cigars made from the same are pronounced good smokers. Mr. Vahle intends planting six acres more the coming year.

Tehama.

People's Cause: L. Dailey, the well-known Cole Fork farmer, says he has a pumpkin weighing 100 pounds.

Tulare.

Times: W. S. Camp of Grangeville has 500 six-year-old prune trees. This year these trees yielded an average of 340 pounds of green prunes. The prunes were sold green at \$30 per ton. There are 108 trees to the acre, and the gross receipts were a fraction over \$550 per acre. Mr. Camp gathered the prunes and delivered them, which probably left \$500 per acre net. He says he thinks some of the trees bore as many as 1500 pounds. He also says he would have taken much less for the land than the net receipts for this year alone.

ARIZONA.

Phoenix Herald: As an example of the value of Salt River Valley farming land, attention is called to the business done by the Kay Bros., who are the owners of 320 acres of land in the west end of the valley. This season they have fattened on those 320 acres of land 600 head of hogs which they sold for over \$5200 and have 300 head more nearly in marketable condition. The 300 head will be shipped before the first of the year and are expected to realize, at the lowest valuation, \$2000, making a total income for the season of \$7000. This is a return of nearly \$25 per acre from the ranch. There are about 500 small pigs to be held for the market next season, which will be fat and in good condition to ship by that time.

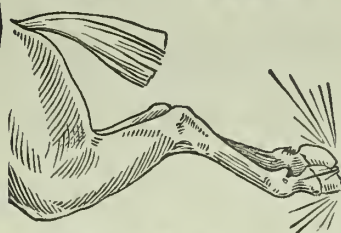
NEVADA.

Winnemucca Silver State: H. F. Dangberg of Carson valley recently refused \$50 a head for 100 head of beef steers. During the Midwinter Fair at San Francisco greater inducements will be offered.

PIANOS A. L. BANCROFT & CO.
303 SUTTER ST., S. F.
KNABE, HAINES, BUSH & GERTS, and others.
Cash or installments. Please call or correspond.
SAN FRANCISCO. **BANCROFT**

GUNS BICYCLES \$15
All kinds cheaper than elsewhere. Before you buy, send stamp for catalogue to POWELL & CLEMENT CO.
100 Main St., Cincinnati, O.

DON'T BLAME



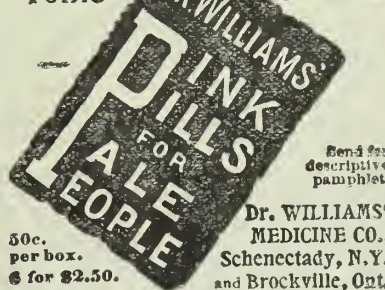
A HORSE FOR KICKING

or for eating more than his share if you don't keep him warm. Two or three dollars invested in a good blanket will save you many dollars in feed, and your horse will look better and do better. This is the mark by which you can distinguish the good from the bad in blankets.

5/A Blankets are made in 250 styles to suit every horse, every purpose, and every purse.

Made only by
WM. AYRES & SONS, Philadelphia.

Nerve Tonic **Blood Builder**



WE GUARANTEE
That one tablespoonful of
GOMBAULT'S CAUSTIC BALSAM
will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made. It is therefore the cheapest (as well as safest and best) external applicant known for man or beast.

THE LAWRENCE WILLIAMS CO., CLEVELAND, OHIO.



CHOPPERS

ATTENTION!
ASK FOR THIS AXE.
USE NO OTHER.
Wood-choppers, try the
Kelly Perfect Axe
It will cut more wood than any other axe.
The scoop in the blade keeps it from sticking in the wood, and makes it cut deeper than any other axe. Ask your dealer for it. Send us his name if he don't keep it. It is the Anti-Trust Axe.
Kelly Axe Mfg. Co.
LOUISVILLE, KY.

J. I. C. DRIVING STILL LEADS THEM ALL.
IT WILL CONTROL THE MOST VICIOUS HORSE.
75,000 sold in 1891.
100,000 sold in 1892.
THEY ARE KING.
Sample mailed X C for \$1.00
Nickel, \$1.50.
Stallion Bits 50 cts. extra.
RACINE, WIS.
RACINE MALLEABLE IRON CO. J. P. Davies, Mgr.

GRANGERS' BANK

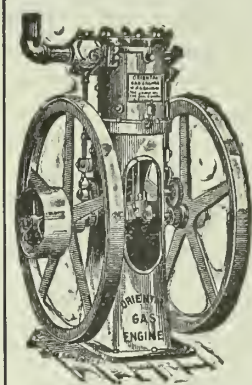
OF CALIFORNIA.
SAN FRANCISCO, CAL.
INCORPORATED.....APRIL, 1874.



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 800,000
Dividends paid to Stockholders.... 720,000
OFFICERS.

A. D. LOGAN.....President
L. O. STEELE.....Vice-President
ALBERT MONTELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary
General Banking. Deposits received, Gold and Silver.
Bills of Exchange bought and sold.
Loans on wheat and country produce a specialty.
January 1, 1893. A. MONTELLIER, Manager.

THE ORIENTAL GAS ENGINE



IS "THE BEST," because it combines simplicity of construction with power and economy in space. It can be run with natural or manufactured gas or gasoline at a cost of 20 to 25 cents per horse power per day.
It can be used for pumping purposes, as well as for all purposes where a perfect engine is required, with the advantage of lessening the risk of explosion. No licensed engineer at a high salary needed to operate it.
Send for circulars and prices if a good safe engine is what you need.

The Oriental Launch is Perfection.
M. A. GRAHAM,
Inventor and Manufacturer,
105 BEALE STREET, SAN FRANCISCO.



Your Grocer Has It. Ask For It.

TREE WASH.
OLIVE DIP.
"Greenbank" Powdered Caustic Soda and Pure Potash.
T. W. JACKSON & CO..
Sole Agents,
No. 5 Market Street, San Francisco, Cal.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,
Surveying, Architecture, Drawing and Assaying,
128 MARKET ST., SAN FRANCISCO, CAL.
Open All Year.
A. VAN DER NAILLEN, President.
Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50.
ESTABLISHED 1864. Send for circular.

The American Bee Journal,
(Established 1861.)
IS Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample.
\$1.00 BEE-BOOK FREE
W. W. YORK & CO., 14 Fifth Ave., Chicago, Ill.

Horses Should Wear Light Shoes.

Horses are commonly made to carry too heavy shoes. The shoe is designed merely to protect the hoof, and the lighter it can be made and still serve its purpose, the better for the horse, says the *American Agriculturist*. Horses that are devoted to farm work, and on land where there are few or no stones, may dispense with shoes, except while the ground is frozen. This would be of great advantage to the horse, to say nothing of the saving in the horseshoer's bill. But most horses require shoeing, and the shoes worn are heavy iron ones. Steel shoes can be made lighter, will wear longer, and the first cost is not so much more that it need prevent their being used. Light horses and driving horses should always use them. For horses of 1100 pounds weight, and with well-shaped upright feet, the fore shoes should weigh about one pound each, and the hind ones 12 ounces. If four ounces are added to each shoe, let us see what a difference it will make. In plowing, cultivating, mowing, reaping and many other farm operations, a horse will walk from 10 to 20 miles a day, and advance about four feet at each step. At each step the horse lifts half a pound extra on its two feet, or 666 pounds in every mile. In a day's work of 15 miles, the horse would lift 9900 pounds extra, or nearly five tons. If the force required to lift this five tons of iron could be expended in the work the horse is doing, much more could be accomplished. In the light of these facts, is it any wonder that when young horses begin to wear shoes they soon become leg weary, have their step shortened and acquire a slower walking gait?

Chemical History of the Atmosphere.

Dr. Phipson gives in *Chemical News* the chemical history of the atmosphere from its origin to the present day, in accordance with the results of his observations and experiments. Premising that the matter composing the earth was originally in a gaseous condition at such temperature that no compounds could exist, he assumes that, when a solid crust later covered an internal molten mass, water was condensed upon the surface and a primitive atmosphere of nitrogen surrounded the globe. Into this atmosphere large quantities of carbonic acid and water were evolved by volcanic action, but there was no free oxygen. Plants then made their appearance, and, in vegetating, evolved oxygen copiously, deriving this element from the carbonic acid supplied by volcanic action. When a certain proportion of oxygen was attained, animal life became possible and duly appeared. At the same time the proportion of carbonic acid became less, the carbon being stored up as coal, peat, lignite, etc. As these processes proceeded animal life of higher order appeared, the development of the nervous system coinciding with the increase of oxygen in the air. As evidence that the composition of the atmosphere is still slowly changing, it is stated that the latest and most careful determinations of carbonic acid in the air have shown a decided decrease (0.05 to 0.03) in the last 50 years.

Work a Horse Will Do.

A horse will travel 400 yards in 4½ minutes at a walk; 400 yards in two minutes at a trot; 400 yards in one minute at a gallop, says an exchange. The usual work of a horse is taken at 22,500 pounds raised one foot per minute for eight hours per day. A horse will carry 250 pounds 25 miles per day of eight hours. An average draught horse will draw 1600 pounds 23 miles per day on a level road, weight of wagon included. The average weight of a horse is 1000 pounds, and his strength is equivalent to that of five men. The greatest amount a horse can pull in a horizontal line is 900 pounds, but he can only do this momentarily; in continued exertion probably half of this is the limit. He attains his growth in five years, will live 25, average 16 years. A horse will live 25 days on water without food, 17 days without eating or drinking, but only five days on solid food without drinking.

Wing Area of Flying Animals.

M. de Lucy, a French naturalist, has shown that the wing area of flying animals varies from about 49 square feet per pound of weight in the gnat and 5 square feet in the swallow to half a square foot per pound of weight in the Australian crane, which weighs 21 pounds and yet flies well. If we were to adopt the last or smallest proportion, a man weighing 12 stone would require a pair of wings each of them 14 feet long by 3 feet broad.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

L. F. EATON, Breeder of A. J. H. R. Jerseys. Choice young stock for sale to make room for others. Florin, Sacramento Co., Cal.

JERSEYS AND HOLSTEINS, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. William Niles & Co., Los Angeles, Cal., Breeders and Exporters. Established in 1876.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sitas, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER SAGE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS—The best A. J. C. C. Registered Prize Herd is owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

WM. NILES & CO., Los Angeles, Cal., Breeders of nearly all varieties of Poultry, Dairy Cattle and Hogs.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

R. H. CRANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

SWINE.

H. J. PHILPOTT, Niles, Cal., Importer and breeder of Tecumseh and other choice strains of Registered Poland-China Hogs.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, new Prices.

BERKSHIRES & POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. William Niles & Co., Los Angeles, Cal. Established 1876.

MONROE MILLER, Eliso, Ventura County, Cal., Breeder of Registered Berkshire Hogs.

P. H. MURPHY, Perkins, Sao. Co., Cal.—Breeder of Short-Horn Cattle, Poland-Chinas and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.

CHAS. A. STOWE, Stockton, Regist'd Berkshires.



In These Dull Times

You Can Largely Increase Your Income by buying an Incubator and engaging in the chicken business. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember, the best is the cheapest. PACIFIC INCUBATOR CO., 1317 Castro St., Oakland, Cal.

FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank.)

Importer, Breeder, Exporter.

S. C. White Leghorns,
S. C. Brown Leghorns,
Barred Plymouth Rocks,
Black Minorcas,

Eggs, \$3 per 15. Send for circular.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards. Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOF'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.



—THE—
HALSTED INCUBATOR
COMPANY,
1312 Myrtle Street, Oakland, Cal.
Send Stamp for Circular

LIGHTNING LARGEST **WELL MACHINERY** Works.
All kinds of tools. Fortune for the driller by using our Adamantine process; can take a core. Perfect Economic Artesian Pumping Rigs to work by Steam, Air, etc. Let us help you. THE AMERICAN WELL WORKS, Aurora, Ill.; Chicago, Ill.; Dallas, Tex.

RED SEAL GRANULATED 98% LYE

HAS NO EQUAL

FOR DESTROYING SCALE BUGS AND OTHER INSECT PESTS ON TREES AND PLANTS.

FOR TREE WASH!

—USE—

One pound to 5 gallons of water.

Thousands of Orchardists testify to its value, using it in preference to all other preparations. Where the Red Seal is applied it kills the insects and at the same time forms a coating through which others cannot penetrate. When used in the above proportions, it is a

GREAT BENEFIT TO THE TREES.

Put up in SIFTING-TOP CANS, so that any quantity may be used and the balance preserved uninjured.

MANSFIELD LOVELL,
124 California St., San Francisco.



FOR HOUSEHOLD PURPOSES

The Red Seal Lye is indispensable.

USED AS DIRECTED it will take the place, and at 75% less cost, of all other alkaline preparations, soaps, etc., now on the market. ONE CAN will make 10 to 12 lbs. of Hard Soap, or 200 lbs. of Soft Soap. See directions in can.

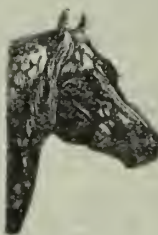
It cleans floors, kills roaches and bugs of all kinds, cleans milk vases, tin or wood; keeps farming implements bright and free from rust; is a perfect disinfectant; softens water, washes dishes and clothes; and can be put to a thousand uses in place of soap or other preparations.

SOLD

—BY—

ALL GROCERS.

P. C. TOMSON & CO.,
Manufacturers, Philadelphia, Pa.



ONLY 25 YEARS OLD AND A GIANT!

THE H. H. H. LINIMENT

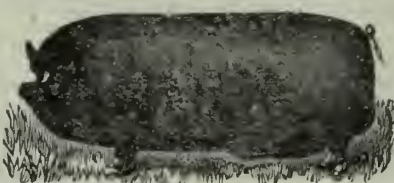
HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.



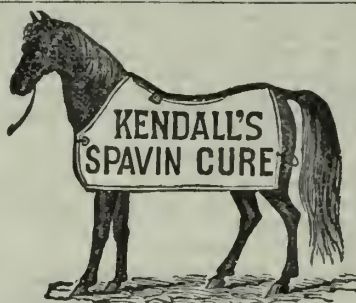
BERKSHIRE SWINE.

Prize Herd of Southern California.

PIGS OF ALL AGES FOR SALE.

SESSIONS & CO., Los Angeles, Cal.

P. O. Box 686.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STAR, LANE CO., OREGON, Feb. 8th, 1892.

DR. B. J. KENDALL CO.,

Dear Sirs:—I have used your KENDALL'S SPAVIN CURE for the last twelve years never being without it but a few weeks in that time and I have made several wonderful cures with it. I cured a Curb of long standing. Then I had a four year old colt badly swelled; tried every thing without any benefit, so I tried your liniment, and in a few weeks he was well and his shoulder filled up all right, and the other, a four year old that had a Thoroughpin and Blood Spavin on the same joint, and to-day no one can tell which leg it was on. These statements can be proven, if necessary; the four year olds are now seven and can be seen any day at Cottage Grove, Or.

—Price \$1.00 per bottle.

DR. B. J. KENDALL CO.,

Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

Short-Horn BULLS

Calves, Yearlings and 2-year-olds FOR SALE.

ROBERT ASHBURNER,
3aden Station, San Mateo County, Cal.
The cars of the S. F. and San Mateo Electric Road pass the place.

The BEST POULTRY JOURNAL.

Teaches How to Make Money with A Few Hens.
Sent on Trial Six Months for ONLY 25 CENTS.
It is well worth \$1.00. Send stamps. Sample free. Address all orders to G. Lissenenden, Stockton, California.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular

E. FOUGERA & CO.,
30 North William Street, New York.

Porteous Improved Scraper

Patented April 8, 1883. Patented April 17, 1883.



Manufactured by G. LISSENDEN.

The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Levelling Land, Road Making, etc.

This implement will take up and carry its load to any desired distance. It will distribute the load evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

This Scraper is all steel—the only one manufactured in the State.

Price, all Steel, four-horse, \$40; Steel two-horse, \$21. Address all orders to G. LISSENDEN, Stockton, California.

California Inventors Should consult DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists and large practice as Patent attorneys enables them to offer Pacific Coast Inventors far better service than they can obtain elsewhere. Send for free circular of information. No 320 Market St., San Francisco Cal.

S. H. MARKET REPORT

Market Review.

WEDNESDAY MORNING, Nov. 22, 1893.

The course of the wheat market, at home and abroad, during the week, has been mainly downward. Locally there has, during the past two days, been an improvement in prices, but business is not in large volume, and the market shows no life. Advices from the interior are that the movement of grain has greatly slackened. A large part of the crop has been moved, and the grain yet remaining in the interior is held by men who are in a financial condition to keep it stored for a while. Reluctance to ship is mainly due to the low prices prevailing.

The general situation in wheat may thus be summed up:

The present volume is 10 per cent larger than that of a year ago, and many people are looking at the fact as if it justified a belief that there has been a huge mistake in the crop estimates. But we hardly think the assumption is correct. Hardly ever in the history of the wheat trade in the Northwest has there been such a favorable season for harvesting and marketing the grain. Several weeks of almost uninterrupted fine weather permitted the marketing of a far greater percentage of the crop than is usual at this date, and all the information about it is to the effect that the opportunity has been improved to the uttermost. As it is well known to be not only advisable but necessary to get rid of as much as possible in the fall, the farmers of the Northwest, as well as of the Pacific Coast, have sold their wheat and got rid of it. There is the best of reason to believe they have done this in much greater volume than indicated by the statistics of the movement at the principal receiving points, this because the interior mills have been extraordinarily active all through the fall. They have taken direct orders for flour shipment to British markets, while the larger concerns have offered the product freely to arrive.

The following table shows the range of the speculative markets during the week:

LIVERPOOL.

(Per cent.)	Nov.	Dec.	Jan.	Feb.	Mar.	May.
Thursday.....	50.22 1/2	50.22 1/2	50.23 1/2	50.23 1/2	50.23 1/2	50.23 1/2
Friday.....	50.22 1/2	50.22 1/2	50.23 1/2	50.23 1/2	50.23 1/2	50.23 1/2
Saturday.....	50.22 1/2	50.22 1/2	50.23 1/2	50.23 1/2	50.23 1/2	50.23 1/2
Sunday.....	50.22 1/2	50.22 1/2	50.23 1/2	50.23 1/2	50.23 1/2	50.23 1/2
Tuesday.....	50.22 1/2	50.22 1/2	50.23 1/2	50.23 1/2	50.23 1/2	50.23 1/2

To-day's cablegram is as follows:
LIVERPOOL, Nov. 22.—Wheat—Hardening. California spot lots, 55 1/2c; off coast, 27 1/2c; 27 1/2c; just shipped, 27 1/2c; nearly due, 27 1/2c; cargoes off coast, quiet but steady; on passage, 27 1/2c; her firmers. Mark Lane wheat, quiet; English country markets, nothing offering; French, inactive.

NEW YORK.

Day.	(Per bushel.)	Nov.	Dec.	Jan.	May.
Thursday.....	66	67	68	73	73
Friday.....	66	67	68	73	73
Saturday.....	66	67	68	73	73
Sunday.....	66	67	68	73	73
Monday.....	66	67	68	73	73
Tuesday.....	66	67	68	73	73

The following is to-day's telegram—per bushel:
NEW YORK, Nov. 22.—November, 66 1/2; May, 73 1/2.

CHICAGO.

Day.	(Per bushel.)	Nov.	Dec.	Jan.	May.
Thursday.....	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2
Friday.....	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2
Saturday.....	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2
Sunday.....	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2
Monday.....	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2
Tuesday.....	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2

The following is to-day's telegram—per bushel:
CHICAGO, Nov. 22.—November, 61 1/2; December, 61 1/2; May, 68 1/2.

SAN FRANCISCO.

Day.	(Per bushel.)	Nov.	Dec.	Jan.	May.
Thursday, high st.....	1.06 1/2	1.06 1/2	1.06 1/2	1.06 1/2	1.06 1/2
low st.....	1.06	1.06	1.06	1.06	1.06
Friday, high st.....	1.06 1/2	1.06 1/2	1.06 1/2	1.06 1/2	1.06 1/2
low st.....	1.06	1.06	1.06	1.06	1.06
Saturday, high st.....	1.06 1/2	1.06 1/2	1.06 1/2	1.06 1/2	1.06 1/2
low st.....	1.06	1.06	1.06	1.06	1.06
Monday, high st.....	1.06 1/2	1.06 1/2	1.06 1/2	1.06 1/2	1.06 1/2
low st.....	1.06	1.06	1.06	1.06	1.06
Tuesday, high st.....	1.06 1/2	1.06 1/2	1.06 1/2	1.06 1/2	1.06 1/2
low st.....	1.06	1.06	1.06	1.06	1.06

The following are to-day's recorded sales on Call:
Morning—Informal Session—May, 100 tons, \$1.20; 200, \$1.22.
December, 100 tons, \$1.06; per ctn.
Regular Session—May, 100 tons, \$1.21; 107, \$1.26; 600, \$1.24; 200, \$1.22.
December, 400 tons, \$1.07; 400, \$1.07; 100, \$1.06; per ctn.
Afternoon Session—May, 1100 tons, \$1.21; 1900, \$1.22; 300, \$1.21.
December—100 tons, \$1.07; 100, \$1.07; 200, \$1.07; per ctn.

Barley.

For best feed there has been a good steady tone, though the market cannot be said to have shown any particular activity lately. There has been very little demand for brewing on local account, and only a moderate inquiry for export. Of late the offerings on 'Change have been comparatively small, both of feed and brewing. The following table shows the prices which have ruled during the week in the San Francisco speculative market:

Day.	(Per bushel.)	Nov.	Dec.	Jan.	May.
Thursday, high st.....	73 1/2	73 1/2	73 1/2	73 1/2	73 1/2
low st.....	73	73	73	73	73
Friday, high st.....	73 1/2	73 1/2	73 1/2	73 1/2	73 1/2
low st.....	73	73	73	73	73
Saturday, high st.....	73 1/2	73 1/2	73 1/2	73 1/2	73 1/2
low st.....	73	73	73	73	73
Monday, high st.....	73 1/2	73 1/2	73 1/2	73 1/2	73 1/2
low st.....	73	73	73	73	73
Tuesday, high st.....	73 1/2	73 1/2	73 1/2	73 1/2	73 1/2
low st.....	73	73	73	73	73

The following are to-day's recorded sales on Call:
Regular Session—May, 200 tons, 86c.
December, 200 tons, 74c; 100, 73c per ctn.
Afternoon Session—May, 100 tons, 85c; 100, 85c per ctn.
December—100 tons, 73c; 100, 73c.
January—100 tons, 75c per ctn.

Dried Fruit.

There is continued activity in dried fruits, though at prices allowing only a close margin of profit. It is stated that there are fewer peaches, apricots, evaporated apples and pitted plums left on the coast to-day than there have been for years at this season. The only fruits in heavy supply are raisins and prunes, and the very low prices at which these goods are being offered will, it is confidently expected, move them all before the new crop is ready for market. Prices on raisins have fallen considerably in the large cities East during the past week, but with a cessation of shipments it is not believed present low prices will continue long. The shipments prior to two weeks ago were exceedingly heavy, but since that time they have been comparatively light, and the amount now going forward is very small. We quote as follows: Apple, 4 1/4c for quartered, 4 1/2c per lb for sliced, and 8 1/2c for evaporated; Peas, 6 1/2c per lb for bleached halves

and 4 to 6c for quarters; bleached Peaches, 6 to 7c; sun-dried Peaches, 4 to 5c; Apricots, Moorpark, 11 to 12c; do Royals, 10 to 11c for bleached and 6 to 7c for sun-dried; Prunes, 4 1/2 to 4 3/4c per lb for the four sizes; Plums, 5 to 6c for pitted and 2 to 2 1/2c for unpitted; Figs, 4 to 5c for pressed and 2 to 3c for unpressed; White Nectarines, 6 to 7c; Red Nectarines, 5 to 6c per lb.

RAISINS—London Layers, \$1.20 to \$1.25; loose Muscates, in boxes, 95c to \$1; clusters, \$1.50 to \$2; loose Muscates, in sacks, 3 to 4c per lb for three-crown, 2 to 3 for two-crown; dried Grapes, 1 1/4 to 2c per lb.

The Boston Wool Market.

In a review of the condition of trade in the Boston wool market the *American Wool and Cotton Reporter* for November 9th says:

The demand has fallen off the past week, due to some extent perhaps to election, which has kept some of the near-by buyers out of town, but to a far greater extent to the fact that there has been no increase in the demand for goods and the idleness of fully 75 per cent of the woolen machinery of the country. There are, however, mills here and there which, rather than shut down completely and allow their employees to scatter, are disposed to run one-half or three-quarters time, even at a loss. Again there is now and then a manufacturer who has sufficient capital at his command and who, recognizing the cheapness of wool, is buying as he discovers a bargain. Thus each week finds a fair amount of wool moving.

Prices show no appreciable change. There are unquestionably soft spots here and there in the market—somebody willing to shade a trifle—yet this only applies to the cheaper wools, such as heavy California, New Mexico, Oregon, Utah, Texas or Western pulled wools of low grade. Fleece wools are held firm, particularly staple wools, while fine warp Territories are steady and in fair request. The supply of fleeces in Boston is undoubtedly comparatively small for this season of the year, principally because these wools have not come forward with the usual freedom, growers hesitating to part with their clips but selling wheat or some other farm product to carry them along until better prices were in sight, while in the case of Territory wools the ranchman without other sources from which to derive a revenue has been forced to send forward his clip.

OATS—Offerings are somewhat liberal, while trade is not of very heavy proportions. Prices, however, show moderate strength. We quote as follows: Milling, \$1.15 to \$1.22 1/2; Super, \$1.22 1/2 to \$1.32 1/2; fancy feed, \$1.20 to \$1.22 1/2; good to choice, \$1.12 1/2 to \$1.17 1/2; common to fair, \$1.10 to \$1.15; Black, 80c to \$1.20; Red, \$1.10 to \$1.17 1/2; Gray, \$1.02 1/2 to \$1.12 1/2 per ctn.

CORN—Receipts still come along with freedom. Trade slow. Quotable at 85 1/2 to 87 1/2c per ctn. for large Yellow, 87 1/2 to 90c for small Yellow, and 85 1/2 to 87c for White.

CRACKED CORN—Quotable at \$20.50 to \$21.50 per ton.

CORNMEAL—Millers quote feed at \$20 to \$21 per ton; fine kinds for the table, in large and small packages, 2 1/4 to 3 1/4c per pound.

OILCAKE MEAL—Quotable at \$35 per ton from the mill.

CHOPPED FEED—Quotable at \$17.50 to \$18.50 per ton.

SEEDS—We quote: Mustard, brown, \$1.75 to \$2; Yellow, \$2 to \$2.35; Canary, imported, \$4.50 to \$5; do, California, 1; Hemp, 4 1/4c per lb; Rape, \$2.25 to \$2.50; Timothy, 6 1/2c per lb; Alfalfa, 9c per lb for California and 9c for Utah; Flax, \$2.25 to \$2.50 per ctn. MIDDINGS—Quotable at \$18 to \$21 per ton.

MILLSTUFFS—We quote: Rye Flour, 3 1/2c; Rye Meal, 3c; Graham Flour, 3c; Oatmeal, 4 1/2c; Oat Groats, 5c; Cracked Wheat, 3 1/2c; Buckwheat Flour, 5 1/2c; Pearl Barley, 4 1/4c per lb; Normal Nutrient, \$3 per case of 1 dozen cans; Breakfast Delight, \$3.25 per case of 2 dozen packages.

BRAN—Quotable at \$15.50 to \$16.50 per ton.

HAY—Is in fair supply. Wire-bound bay sells at \$1.52 per ton less than rope-bound hay. Following are wholesale city prices for rope-bound Hay: Wheat, \$10 to \$14; Wheat and Oat, \$10.00 to \$13; Wild Oat, \$10 to \$12; Alfalfa, \$10 to \$10.50; Clover, \$9 to \$10.50; Barley, \$9 to \$11; Compressed, \$10 to \$12.50; Stock, \$7 to \$8 per ton. STRAW—Quotable at 50 to 55c per bale.

HOPS—Quotable at 16 to 18 1/2c per lb. Shippers are not inclined to pay over 18c, no matter how choice the article.

RYE—Quotable at 87 1/2 to 92 1/2c per ctn.

BUCKWHEAT—Quotable at \$1.45 per ctn.

GROUND BARLEY—Quotable at \$16 to \$17 per ton.

POTATOES—Stocks are large and prices keep low. We quote: Garnet Chiles, 35 to 50c; Early Rose, 25 to 35c; River Burbanks, 25 to 40c; River Red, 30 to 35c; Salinas Burbanks, 55 to 75c per ctn; Sweets, 50 to 75c per ctn.

ONIONS—Steady in price with fair demand. Quotable at \$1.35 per ctn for good to choice.

DRIED PEAS—We quote: Green, \$1.50 to \$1.65; Blackeye, \$1.55 to \$1.75; Niles, \$1.50 to \$1.60 per ctn.

BEANS—The market generally shows easy tone. Bayos, \$1.80 to \$1.85; Butter, \$2 to \$2.25 for small and \$2.25 to \$2.55 for large; Pink, \$1.45 to \$1.60; Red, \$1.75 to \$2.25; Lima, \$2.12 to \$2.20; Pea, \$2.10 to \$2.20; Small White, \$1.85 to \$1.95; Large White, \$1.85 to \$1.95 per ctn.

VEGETABLES—Receipts of Tomatoes are lighter and prices for good stock are firm at full figures. We quote: Eggplant, 35 to 50c per box; Green Peas, 4c per lb; String Beans, 4 to 5c per lb; Lima Beans, 3 1/2 to 4 1/2c; Marrowfat Squash, 56 to 80c per ton; Cucumbers, 4c to 6c per box; Green Peppers, 40 to 50c per box; Tomatoes, 30 to 65c per b. x; Turnips, 75c per ctn; Beets, 75c to \$1 per sack; Parsnips, \$1.25 per ctn; Carrots, 40 to 50c; Cabbage, 50 to 55c; Garlic, 1/4 to 1c per lb; Cauliflower, 60 to 70c per dozen; Dry Peppers, 5 to 7c per lb; Dry Okra, 12 1/2 to 15c per lb.

FRESH FRUIT—Good Berries are in request at full figures. We quote: Apples, 65c to \$1 per box for good to choice, and 35 to 60c for common to fair; Peas, 25 to 50c per box for common and 75c to \$1.25 for choice; Quinces, 30 to 50c per box; Strawberries, \$4 to \$7; Persimmons, 50c to \$1 per box; Raspberries, \$7 to 8 per chest; Cranberries, Eastern, 86 to 9c per bbl; do Coos Bay, \$3.25 to \$3.75 per box.

GRAPES—There is but little animation to the market. We quote as follows: Muscat, 15 to 35c; Black, 15 to 30c; Tokay, 15 to 35c per box; Zin-

fandel Wine Grapes, \$8 to \$12 per ton; White Grapes, \$8 to \$10 per ton.

CITRUS FRUIT—Oranges are beginning to make quite a liberal showing. A carload of seedlings from Florida brought \$4.25 to \$4.50 per box. Riverside Navels are quotable at \$4.50 to \$5; Oroville Oranges, \$4.50 to \$5 for Navels and \$3.25 to \$3.75 for seedlings; Mexican Oranges, \$2.50 to \$3 per box. Mexican Limes, \$2.50 to \$3.50 per box; Lemons, Sicily, —@—; California Lemons, \$1.20 for common and \$2.50 to \$3.25 for good to choice; Bananas, \$1.50 to \$2.50 per bunch; Hawaiian Pineapples, \$2 to \$4; Mexican Pineapples, \$3 to \$4 per dozen.

NUTS—We quote as follows: Chestnuts, 10 to 12 1/2c per lb; Walnuts, 7 to 7 1/2c for hard shell, 8 to 8 1/2c for soft shell and 9 to 10c for paper shell; Chile Walnuts, 8 to 9c; California Almonds, 10 1/2 to 11 1/2c for soft shell, 5 to 5 1/2c for hard shell and 12 to 13c for paper shell; Peanuts, 3 to 4c; Hickory Nuts, 5 to 6c; Filberts, 10 to 11c; Pecan, 8 to 9c for rough and 11c for polished; Brazil Nuts, 9 to 10c; Coconut, \$4 to \$5 per 100.

HONEY—We quote: Comb, 8 1/2 to 9 1/2c; light amber, extracted, 4 1/2 to 5c; dark, 4 1/2 to 4 3/4c; water white, extracted, 5 to 5 1/2c per lb.

BEESWAX—Quotable at 22 to 23c per lb.

BUTTER—Prices steady at an advance. We quote: Creamery, 29 to 30c; fancy dairy, 26 to 27 1/2c; good to choice, 22 1/2 to 25c; common grades, 18 to 22c; pickled roll, 19 to 21c; firkin, 18 to 20c; Eastern ladle-packed, 17 to 18c per lb.

CHEESE—A strictly choice article is not very plentiful, but of ordinary qualities there is ample supply. We quote: Choice to fancy new, 11 1/2 to 13c; fair to good, 9 to 10 1/2c; Eastern, ordinary to fine, 11 to 14c per lb.

EGGS—Ranch parcels are not so firm in price as they were a day or two ago. We quote: California ranch, 37 1/2 to 42 1/2c; store lots, 25 to 35c; Eastern, 21 to 24 for ordinary and 25 to 27 1/2c per dozen for good stock.

POULTRY—Two cars at least of Eastern Poultry are expected this week, one being now due. Dressed Turkeys are a shade lower. No change in other kinds. We quote as follows: Live Turkeys—Gobblers, 14 to 15c per lb; Hens, 13 to 15c; dressed Turkeys, 15 to 17c; Roosters, \$4 to \$4.50 for old and \$4 to \$5.50 for young; Friers, \$4 to \$4.50; Broilers, \$2.50 to \$3.50; Hens, \$5 to \$6; Ducks, \$3.50 to \$5; Geese, \$1.50 to \$2 per pair; Pigeons, \$1 to \$1.50 per doz.

GAME—Prices soft. We quote: Quail, \$1 per doz; Canvasbacks, \$2.50 to \$3; Mallard, \$2 to \$2.50; Widgeon, \$1 to \$1.25; Teal, 75c to \$1; Sprig, \$1 to \$1.50; Small Ducks, 75c; Gray Geese, \$1.75 to \$2; White Geese, \$1 to \$1.25; Brant, \$1 to \$1.25; English Snipe, \$1.25 to \$1.50; Common Snipe, 5c to 75c; Hare, \$1 to \$1.25; Rabbits, \$1.25 to \$1.50.

PROVISIONS—We quote as follows: Eastern hams, 13 to 13 1/2c per lb; California hams, 12 to 12 1/2c; Bacon, Eastern, extra light, 16 1/2 to 17 1/2c; medium, 12c; do, light, 12 to 12 1/2c; do, light, clear, 13 1/2 to 14c; light, medium, boneless, 13c; Pork, extra prime, \$14 to \$15; do, prime mess, \$15 to \$16; do, mess, \$23 to \$24; do, clear, \$22 to \$23; do, extra clear, \$23 to \$24; Pigs' Feet, \$12.50 per bbl; Beef, mess, \$7.50 to \$8; do, extra mess, \$8.50 to \$9; do, family, \$9.50 to \$10; extra do, \$11 to \$11.50 per bbl; do, smoked, 10 to 10 1/2c; Eastern lard, tierces, 8 1/2 to 9 1/2c; do, prime steam, 12c; Eastern pure, 10-lb pail, 12 1/2c; 5-lb pails 12 1/2c; 3-lb, 12 1/2c; California, 10-lb tin, 12 1/2c; do, 5-lb, 11c; do, kgs, 11 1/2 to 12c; do, 20-lb buckets, 12 1/2c; compound, 8 1/2c for tierces and 9c for hf bbls.

WOOL—There is more activity in the market, without any positive change in prices. We quote spring:

California, year's fleece, 7 to 9c; do 6 to 8 months, 7 to 8c; do Foothill, 10 to 11c; do Northern, 12 to 13c; do extra Humboldt and Mendocino, 11 to 13c; Nevada, choice and light, 12 to 14c; do heavy, 8 to 10c; Oregon, Eastern, choice, 10 to 12c; do Eastern, poor, 7 to 9c; do Valley, 12 to 15c. We quote fall: Free Mountain, 6 to 7c; Northern defective, 5 to 7c; Southern and San Joaquin, 3 to 5c.

HIDES AND SKINS—Quotable as follows:

	Sound.	Culls.
Heavy Steers, 57 lbs up, 1/4 lb.	4 1/2 to 5c	4 @—c
Medium Steers, 48 to 56 lb.	4 @—c	3 1/2 @—c
Light, 42 to 47 lbs.	3 @—c	2 1/2 @—c
Cows, over 50 lbs.	3 @—c	2 1/2 @—c
Light Cows, 30 to 50 lbs.	3 @—c	2 1/2 @—c
Stags.	2 1/2 @—c	2 @—c
Kips, 17 to 30 lbs.	4 @—c	3 @—c
Veal Skins, 10 to 17 lbs.	5 @—c	4 @—c
Calf Skins, 5 to 10 lbs.	6 @—c	5 @—c
Dry Hides, usual selection, 6 to 6 1/2c; Dry Kips, 6 to 6 1/2c; Calf Skins, 6 to 6 1/2c; Cull Hides, Kip and Calf, 4c; Pelts, Shearling, 10 to 20c each; do, short, 25 to 35c each; do, medium, 40 to 50c each; do, long wool, 50 to 75c each; Deer Skins, summer, 25c; do, good medium, 15c; do, winter, 5c per lb; Goat Skins, 25 to 40c apiece for prime to perfect, 10 to 20c for damaged, and 5 to 10c each for Kids.		

San Francisco Meat Market.

Supplies of all kinds are liberal. Following are the rates for whole carcasses from slaughterers to dealers:

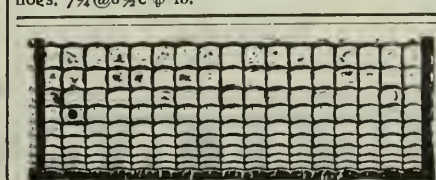
BEEF—First quality, 5 to 5 1/2c; second quality, 4 1/2 to 5c; third quality, 3 1/2 to 4c per lb.

CALVES—Quotable at 4 to 5c for large, and 6 to 7c per lb for small.

MUTTON—Quotable at 4 to 5 1/2c per lb.

LAMB—Quotable at 6 to 7c per lb.

PORK—Live hogs, on foot, grain fed, heavy and medium, 5 1/2 to 6c; stock hogs, 5 1/2 to 5 3/4c; dressed hogs, 7 1/2 to 8 1/2c per lb.



Our Specialties.

Every rod of our fence is made from wire drawn especially for our use, as common soft wire would not hold the coil. There is a spring in every foot of fence, instead of one in forty rods. The ties are only one foot apart instead of several feet, as in others.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Commission Merchants.

ALLISON, GRAY & CO.,

501, 503, 505 507 & 509 Front St.,
And 300 Washington Street, SAN FRANCISCO.

GENERAL

Commission - Merchants,
GREEN and DRIED FRUITS,
Poultry, Eggs, Game, Grain, Produce and
Wool.

P. STEINHAGEN & CO.



404 & 406 DAVIS ST. S.F.

MO

Magnitude of Railway Business.

E. A. Mosely, in an address before the Railroad Trainmen's Convention at Boston, gave some statistics regarding the magnitude of railroad interests in this country. Some of his statements were as follows:

"To transact the business of the railways, there were required last year the services of 33,136 locomotives, of which 8848 were employed in passenger service, 17,559 in freight service, and 6729 in yard service and in service not specified. To perform the passenger traffic of this great country last year 28,876 cars were employed, and the freight service of the country gave employment to 966,988; 36,901 cars were required in the service of the railways themselves.

"Putting these figures in a more concrete and definite form, the locomotives of the railways of the United States, if marshaled, with their tenders, into a single line, would make a train 357 miles long. With the passenger cars reported owned last year, we might make a train that would reach from Boston to within fifteen miles of Philadelphia.

"But the most wonderful figures are brought out by a similar arrangement of cars in freight service. Placing these cars together in a continuous train, it seems almost incredible that this train would be 7028 miles long, but so the figures make it appear, and, allowing the distance from Boston to San Francisco to be 3000 miles, our train of freight cars would reach from Boston to San Francisco, from San Francisco back to Boston, and from Boston again as far west as Chicago. What tonnage they would move at a single load I leave you to conceive if you can."

Queer Rain Theory.

A most extraordinary theory has recently been propounded to show the reason why rain usually falls after a severe battle has been fought, says the Boston *Globe*.

The ancients used to attribute the phenomenon to the generosity of some deity, who was kind enough to make the attempts to wash away the traces of men's degradation as soon as possible; and later on, when cannons came to be used as a means of destroying life, the detonations of these machines were said to cause the wonderful downpour of rain.

But more prosaic, up-to-date people of today put it down to perspiration. And this is how they go to prove it:

One soldier will in the course of 12 hours' fighting give off six gallons of water. He drinks much; thirst for gore, glory and water go together on such occasions, and the total amount of moisture given off by one man is said to be sufficient to cover 12 square feet three-quarters of an inch deep.

Now, of course, all this perspiration evaporates and goes up into the atmosphere. The atmosphere, becoming unduly charged with moisture, offers itself on the slightest provocation to the formation of clouds, and in nine cases out of ten rain falls immediately condensation sets in.

How to Keep Cider Sweet.

Pure, sweet cider that is arrested in the process of fermentation before it becomes acetic acid, or even alcohol, and with carbonic acid gas worked out, is one of the most delightful beverages, says the *Scientific American*. The following scientific method of treating cider will preserve its sweetness: When the saccharine matters by fermentation are being converted into alcohol, if a bent tube be inserted air tight into the bung, with the other end in a pail of water, to allow the carbonic acid gas evolved to pass off without admitting any air into the barrel, a beverage will be obtained that is fit nectar for the gods. A handy way is to fill your cask nearly up to the wooden faucet, when the cask is rolled so the bung is down. Get a common rubber tube and slip it over the end of the plug in the faucet, with the other end in the pail. Then turn the plug so the cider can have communication with the pail. After the water ceases to bubble, bottle or store away.

In one of his remarkable lectures, Tesla states that most scientific men now look upon the various forms of manifestations of the same nature as those of radiant heat and light. The phenomena of light and heat, and others beside, may therefore be called electrical phenomena, and thus it is that electrical science has become the mother science of all and its study all-important. The day when we shall know exactly what electricity is will chronicle an event probably greater and of more moment than any other recorded in the history of the human race.

Cutting and Polishing Gems.

In the cutting and polishing of gems generally, the artificer is provided with a small mill the arrangement of which is such as to enable him to keep a flat plate rotating in a horizontal direction, says *Work*. The upper surface of the mill-plate is that on which the grinding of the gem is conducted, and the plate is, therefore, formed of material adapted to the kind of gem. The diamond requires a mill-plate of steel. Gems of the next degree of hardness, such as the sapphires and ruby, require a mill-plate of copper. Somewhat softer gems, such as the beryl, topaz, amethyst, garnet and hyacinth, require a leaden mill-plate. The softest kinds, such as quartz, opal, and artificial gems, require a mill-plate of wood. These distinctions arise from the circumstance that the mill-plate for grinding each gem must be proportional in hardness to, but not so hard as, the gem to be ground. The gem to be ground is cemented to one end of a small rod, and the artificer, having the means of giving a rapid rotatory motion to the mill-plate, applies the gem to it, and grinds away the substance of the gem according to the kind of effect required to be produced. For grinding diamonds, sapphires and rubies, the mill-plate is touched with a little diamond powder and oil to give the requisite abrading power; for emeralds, beryls, topazes, garnets, hyacinths, and all the softer gems, emery and water are applied to the plate. The grinding wears away the surface of the gem in various parts but the new surface thus produced is dull. To impart lustre the gem is polished on softer mill-plates with tripoli powder and water.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm. West & Traux, Wholesale Druggists, Toledo, O. Walzing, Kinnear & Marvin, Wholesale Druggists, Toledo, Ohio.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75c per bottle. Sold by all Druggists. Testimonials free.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING NOVEMBER 7, 1893.
508,267.—LATCH AND LOCK.—J. E. Armstrong, Santa Cruz, Cal.
508,270.—SEPARATOR.—A. F. L. Bell, S. F.
508,275.—SAFETY GAS COCK.—L. Brodt, Oakland, Cal.
507,991.—FRUIT CRATE.—H. E. Bullock, Oakland, Cal.
508,279.—PRESERVING PILES.—Jas. Cass, Cayucas, Cal.
504,280.—GIRDER SUPPORT.—F. Cavallaro, San Jose, Cal.
507,993.—BUCK RAKE.—C. Coulhard, Emmet, Cal.
508,007.—BOILER.—F. X. Fisher, Oakland, Cal.
508,013.—ORE GRINDER.—G. A. Gilien, S. F.
504,331.—SMELTING FURNACE.—J. L. Giroux, Jerome, A. T.
508,333.—"KOPPELNER"—A. P. Gordon, S. F.
508,309.—HOOP-SAWING MACHINES.—E. O. Hall, Marshfield, Or.
508,359.—SAW FASTENER.—F. C. Immel, S. F.
508,320.—OCEAN POWER.—R. L. Johansen, Los Angeles, Cal.
508,173.—DRYER.—J. Miller, Vancouver, Wash.
508,332.—CAN OPENER.—C. Morgan, Lath, Wash.
508,113.—FRUIT DRIER.—J. H. Motteth, Los Angeles, Cal.
508,349.—WRITING TABLET.—B. W. Scott, San Jose, Cal.
22,869.—DESIGN FOR BOOKHOLDER.—W. G. Willis, Sacramento, Cal.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Complimentary Samples

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 6 mos., \$1.10; 12 mos., \$2.15; 18 mos., \$3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 11, 508 Montgomery St., San Francisco (Pacific Mutual Life Insurance Building).

Hay Pressing.

If you are interested in pressing hay write Truman Hooker & Co., San Francisco. They will save you money.

HEALD'S

BUSINESS COLLEGE.

24 POST STREET.....SAN FRANCISCO.
FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Book keeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR. E. P. HEALD, Pres. C. S. HALKY, Sec.

HAYWARD'S SHEEP DIPS

Hayward's famous Paste and Liquid Dips received the Highest Award at the World's Columbian Exposition, also the Prize Medal at the California State Fair. Dips from all over the world were exhibited at Chicago and practical sheep men pronounced Hayward's the best and most effective medicine for the cure of scab and general benefit to wool.

CHRISTY & WISE,

General and Sole Agents for the Pacific Coast,
Office—Fifth and Townsend Streets,
San Francisco.

A LOT FOR \$1 A WEEK

A dollar a week for sixty weeks, buys a lot 25x125 feet east of Chicago Heights, the great manufacturing suburb of Chicago. Sixteen factories, streets paved, stone sidewalk, beautiful shade trees, schools, churches, etc. No doubt these lots will treble in value within one year. No such bargain was ever offered in Chicago Real Estate. These lots are now on the Belt Line where factories are now in successful operation, employing over 60,000 people. Business transacted for non-residents. Address, 14 Forrest Land Co., Unity Building, Chicago.

CANCER.

THE KOEHLER CANCER CURE CO.,
1428 Market St., San Francisco.

CANCER, Tumors or Malignant Growths removed without knife or caustic. A GUARANTEED CURE a specialty. Call or send for circular. Over 300 cancers preserved in alcohol in our office. Consultation free. PHILIP KOEHLER, Manager.

Sure Way to Make \$100.

Send 25 cents for particulars, including sample cake of SEAL'S SKIN SOAP for Complexion and Toilet.

A. J. MCKNIGHT,

1175 Mission Street, San Francisco, Cal.

Poultry and Stock Book

Niles's new manual and reference book on subjects connected with successful Poultry and Stock Raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated with handsome, life-like illustrations of the different varieties of Poultry and Live-Stock. Price, postpaid 50 cts. Address PACIFIC RURAL PRESS Office, San Francisco, Cal.



DEWEY & CO.
AMERICAN AND FOREIGN
PATENT SOLICITORS
ESTABLISHED 1860
OFFICE OF THE
"Mining and Scientific Press"
Pacific Rural Press
No 220 Market St.
TAKE ELEVATOR No 12 FRONT ST.
SAN FRANCISCO, CAL.

GRANGERS' BUSINESS ASSOCIATION, GENERAL COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.
Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

T. R. BALLINGER, Grain Salesman.

Send for Price Lists
OF GUNS

And all Articles used
by Hunters and
Anglers.

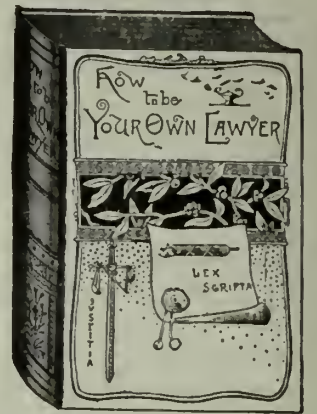


GUNS SENT ON
TRIAL.

OLD GUNS TAKEN
IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.

\$1000 WORTH OF LAW FOR \$1.50.



"How to Be Your Own Lawyer" is the title of a book of over 800 pages, adapted for use in every State and Territory in the Union, and is by far the best and most complete work of the kind ever published. It gives instruction on all the most important law points which a Farmer, Mechanic, Merchant or anybody else would want to know about, and if carefully studied and kept at hand for consultation when needed will save any man, in the course of an ordinary business career, hundreds, if not thousands of dollars. It is a lawyer whose retainer fee (the price of the book, \$1.50) has to be paid but once in a lifetime. Plain and concise directions are given and forms furnished for the transaction of all kinds of business, and the preparation of every description of legal document in common use. A copy of this valuable work, handsomely bound in extra cloth, with ink side-stamp, will be mailed to any address on receipt of \$1.50.

Address THE DEWEY PUBLISHING CO.,
220 Market St., San Francisco, Cal.

CANCER CURED

WITH SOOTHING BALMY OILS.

WE SUCCESSFULLY TREAT

Cancer, Tumor, Catarrh, Piles, Fistula,
Eczema and all Skin and Womb
Diseases.

CANCER of the nose, eye, lip, ear, neck, breast, stomach or womb; in fact, all diseased internal and external organs or tissues, successfully treated, without the knife or burning caustic plasters, but with soothing, balmy magnetio oils. Beware of imitations as there are those who hope to profit by advertising an oil cure for these diseases. We are the originators of this system, all others are frauds. Correspondence solicited. Consultation free. Testimonials furnished. Address

DR. EUGENE BUELL,

Cancer Institute,

ROOM 67, SUPREME COURT BUILDING,
Cor. McAllister and Larkin Sts., San Francisco, Cal.

Scientific Notes.

Mr. Morris Gibbs has shown that the songs of birds remain the same, regardless of the psychological state of the singer. This conclusion is based on observations made on 50 species of song birds.

Mr. Clarence King, the well-known geologist, has computed the earth's age on the basis of experiments made, on the effect of heat and pressure on certain rocks. Mr. King concludes that the earth's age as a planet is 24,000,000 years.

A member of the Royal Meteorological Society has experimented on the size of raindrops, which vary from a speck so small as to be almost invisible up to a diameter of two inches. Drops of the same size do not always contain the same amount of water. Some of the largest drops are hollow.

Nature, quoting a correspondent from Lahore, India, says: "A few days ago, in a village named Daduzai (in the Pashawa district), rain fell, preceded by a wind storm, and with the rain came a shower of hailstones, which lasted for an hour and a few minutes. The most curious part of this occurrence is that the hailstones, when touched, were not at all cold, and when put in the mouth tasted like sugar.

Another Arctic expedition is to start from the United States next year. It is to be under the leadership of Robert Stein of the geographical survey, and its object is the exploration of the territory to the north of Baffin's bay and the west of Smith's sound. Eight men will form the party, and will go by steamer to Jones' sound, where a supply station will be erected. From that point the party will explore as far as possible to the north and west.

Contrary to the opinion of eminent geologists, Prof. Bonney contends that glaciers exert no excavating action, and this conclusion he bases on facts observed by him in the Swiss Alps. He had followed up many of the valleys in Switzerland, and the work of the glaciers in every instance should, he believes, be classed rather as abrasive than erosive. In the absence, however, of the erosive theory, it will be difficult to account for the present character of many of the lochs on the west coast and in the interior of Scotland.

Some Uses of Hot Water.

Hot water is far more of a medical property than many believe or know. Because it is to be had for the making thousands think it valueless, on the theory that what comes easiest is oftentimes least thought of. The uses of hot water are, however, many.

For example, there is nothing that so promptly cuts short congestion of the lungs, sore throat or rheumatism, as hot water when applied promptly and thoroughly.

Headache almost always yields to the simultaneous application of hot water to the feet and back of the neck.

A towel folded several times and dipped in hot water, and quickly wrung out and applied over the toothache or neuralgia, will generally afford prompt relief.

A strip of flannel, or napkin, folded lengthwise and dipped in hot water and wrung out, and then applied around the neck of a child that has the croup, will sometimes bring relief in ten minutes.

Hot water taken freely half an hour before bedtime is helpful in the case of constipation, while it has a most soothing effect upon the stomach and bowels.

A goblet of hot water taken just after rising, before breakfast, has cured thousands of indigestion, and no simple remedy is more widely recommended by physicians to dyspeptics.

SPECIAL ANNOUNCEMENT.

We have made arrangements with Dr. B. J. Kendall Co., publishers of "A Treatise on the Horse and his Diseases," which will enable all our subscribers to obtain a copy of that valuable work free by sending their address (enclosing a two-cent stamp for mailing same) to Dr. B. J. KENDALL CO., ENOSBURGH FALLS, VT. This book is now recognized as standard authority upon all diseases of the horse, as its phenomenal sale attests, over four million copies having been sold in the past ten years, a sale never before reached by any publication in the same period of time. We feel confident that our patrons will appreciate the work, and be glad to avail themselves of this opportunity of obtaining a valuable book.

It is necessary that you mention this paper in sending for the "Treatise." This offer will remain open for only a short time.

SITUATION WANTED.

A strong Japanese boy, who understands the care of horses, wants a situation on a farm or ranch to learn stock-raising. Address KIN, 784 Harrison Street, San Francisco, Cal.

Seeds, Plants, Etc.

GOLD DUST.

"Gold Dust Cling," says H. E. Van Deman, U. S. Pomologist, "is a yellow cling of medium size, round and regular in shape, and very firm in flesh. The color is very attractive, being dark yellow with a very red cheek. It bears heavily and carries to market with very little damage. Coming as it does before the main peach crop is gathered, it is about the first yellow cling of any special value and therefore finds a ready sale. Each year it gains in favor, but as it is a variety but recently originated the public know little of it. It is a very profitable variety." Price \$1 each, \$5 per half dozen. For sale by SACRAMENTO RIVER NURSERY COMPANY, Growers of HIGH-GRADE Fruit Trees, Walnut Grove, Sacramento County, California. Our Specialties—Genuine Tragedy Prunes, Clyman and Japan Plums on true Myrobalan whole root seedlings—we use no piece roots nor cuttings; price 15 cents each; Sacramento River Bartlett and Peaches—price 10 cents each. Large quantities at lower rates. WE GUARANTEE OUR TREES TRUE TO NAME.

Trees, Vines and Plants,

—FOR 1893 and 1894.—

Terms on Application.

Address, L. D. BUTT,
Penryn, Placer Co., California.

MYROBALAN PLUM
AND
MAZZARD CHERRY SEED.

Fresh Crop Now Ready for Shipment.

FULL PRICE LIST OF
FRUIT STOCKS AND SEEDS
ON APPLICATION.

THOMAS MEEHAN & SONS, GERMANTOWN, PA.

SPARK'S MAMMOTH.
A SUPERIOR QUALITY OF APRICOT.

Fine for Canning Drying and Shipping.
They run 3 and 4 to the pound. The Largest and Finest fruit of the Apricot variety.

Address
N. B. SMITH, Ventura, Ventura Co., Cal.

B. F. GODFREY & CO.,
NURSERYMEN,
Davisville, Cal.

Write for Catalogue and Prices.

CALIFORNIA FRUITS

—AND—

HOW TO GROW THEM.

A MANUAL OF METHODS WHICH HAVE YIELDED
GREATEST SUCCESS; WITH LISTS OF VARIETIES
BEST ADAPTED TO THE DIFFERENT
DISTRICTS OF THE STATE.

PRACTICAL, EXPLICIT, COMPREHENSIVE.
Embodying the Experience and Methods of Hundreds
of Successful Growers, and Constituting a Trust-
worthy Guide by which the Inexperienced
may Successfully Produce the Fruits
for which California is Famous

SECOND EDITION, REVISED AND ENLARGED.

BY EDWARD J. WICKSON, A. M.
Assoc. Prof. Agriculture, Horticulture and Entomology,
University of California; Pacific Rural Press, Editor
Pacific Rural Press, San Francisco; Sec'y
California State Horticultural So-
ciety; Pres. California State
Floral Society; Etc.

Large Octavo—599 Pages, Fully Illustrated.
PRICE, \$3, POSTPAID.

FOR SALE BY
THE DEWEY PUBLISHING CO.,
PUBLISHERS PACIFIC RURAL PRESS,
220 Market Street, Elevator, 12 Front Street
SAN FRANCISCO, CAL.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos. A. Carey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St., San Francisco.

TREES! TREES! OLIVE TREES

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrobalan Plum Roots.

—ALSO—
Cherries, Peaches, Apricots, Apple, Almond
Trees, Etc.

Special Rates on Large Order.
Send for Price List for 1893-94.
James T. Bogue, Marysville, Cal.

Santa Rosa
Nurseries.

AN IMMENSE AND WELL
ASSORTED STOCK.

TREES TRUE TO NAME—Warranted clean and
raised without irrigation.

PEARS AND PRUNES at about HALF USUAL
PRICES till my surplus is sold.

Price List mailed free.
Address R. W. Bell, Santa Rosa, Cal.

Pepper's Nurseries.

ESTABLISHED IN 1863.

For Sale at Low Rates, a General Assort-
ment of Hardy Deciduous Fruit Trees.

I do not buy trees to sell; what is offered is grown in my own grounds and free from scale bugs. No scale bugs of any kind to be found in the Nursery. No agents employed. Order direct from the nursery and procure your trees true to label. Order early, as early planting is the most successful with deciduous trees. Prices furnished on application.

Address W. H. PEPPER Petaluma, Cal.

STOCKTON NURSERIES,

—ESTABLISHED 1853.—

FRUIT TREES. FRUIT TREES.

—GRAPE VINES.—

Also Fine Stock of Shade and Ornamental Trees, Shrubs, Palms, Roses and Carnations.

Correspondence Solicited.

PLANTS IN GREAT VARIETY.

E. C. CLOWES, STOCKTON, CAL.

LOW PRICES

ON

ALMOND TREES!

California Paper-Shell, Nonpareil, Ne Plus Ultra and
I. X. L.

A pamphlet on Almonds mailed free of charge on application. A large supply of the GOLDEN PEACH and FRENCH PAUNE. All kinds of leading fruit trees for sale. No charges made for baling trees.

Address, PERCY W. TREAT.

Davisville Nurseries.....Concord, California.

McKEVITT'S EARLY.

The New Yellow Freestone Peach!

—FIRST AND BEST OF EARLY YELLOW PEACHES.—

RIPENS IMMEDIATELY AFTER THE ALEXANDER (White Cling), which is the earliest peach in market.

Fruit is round, of medium size, VERY HIGHLY COLORED, flesh firm and sweet. THIS PEACH HAS BEEN SUCCESSFULLY SHIPPED EAST FOR FIVE YEARS and is no new, untried variety.

Tree healthy, strong grower, and heavy bearer, never having missed a crop. A limited number of yearling trees for sale this season. Apply early before stock is exhausted.

FRANK B. McKEVITT, : : : : VACAVILLE, CAL.

THE
RAISIN INDUSTRY.

A PRACTICAL TREATISE ON THE RAISIN GRAPES,
THEIR HISTORY, CULTURE AND CURING.

—By GUSTAV EISEN.—

This is the Standard Work on the Raisin Industry in California. It has been approved by Prof. Hilgard, Prof. Wickeon, Mr. Chas. A. Wetmore and a multitude of Practical Raisin Growers.

Sold only by the DEWEY PUBLISHING CO., or its Agents at the uniform price of \$3.00, postage prepaid. Orders should be addressed:

THE DEWEY PUBLISHING CO.,
220 Market St., San Francisco.

In Variety for Nurserymen,
Dealers and Planters.

Will also contract now to propagate Rooted
Olive Cuttings for persons who wish to
plant them in nursery spring of 1894.

OLIVE CULTURE IN CALIFORNIA,

Sixteen pages, mailed free.

Address:
JOHN S. CALKINS,
POMONA, LOS ANGELES COUNTY, CAL.

OLIVE TREES.

ALL KINDS OF

Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,
Pomona, Cal.

OLIVE TREES FOR SALE.

Twelve years experience has taught me how to
PROPERLY root the olive. No artificial heat used.

Address
W. ALSTON-HAYNE Jr.,
Montecito P. O., Santa Barbara, Cal.

OLIVE TREES.

Apply for Catalogue.

C. F. LOOP & SON, - - Pomona Cal.

IT TAKES TOO MUCH MONEY TO BUY

Space in this paper, sufficient to show cuts of all the different styles of we manufacture or sell, and as you are not so much interested in seeing pictures **PLOWS** as you are in informing yourself where the very best fall and winter implements can be procured during the prevalence of **THESE HARD TIMES** we have decided, for the present at least to simply call your attention to the fact that we are fully equipped with catalogues and descriptive circulars of our seeding and cultivating implements, and you can have them sent to you, just as well as not, if you will only ask for them. A postal card addressed to us, with a request for such circulars and catalogues as you desire, will receive prompt attention and the printed matter desired will be forwarded to you by first mail.

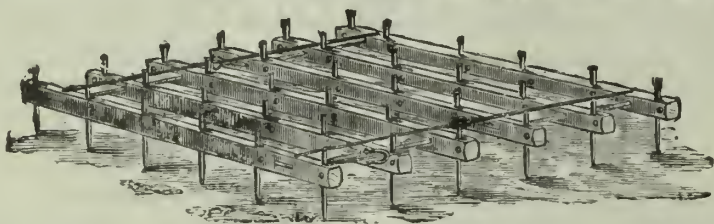
If we can keep our expenses down, we can sell you all the more closely, and we respectfully invite your co-operation. We want your trade, and before buying you want to be fully assured that the articles we carry are what you want. Full descriptive circulars are the best mediums for the dissemination of just such information as you are in search of. Why not try it?

YOURS FOR
ECONOMY,

H. C. SHAW PLOW WORKS, STOCKTON, CAL.

Benicia Wood Bar HARROWS.

MANUFACTURED BY THE BENICIA AGRICULTURAL WORKS.



IMPROVED EUREKA WOOD BAR HARROWS



Out showing Harrow with Section containing 30 Teeth.

THE BENICIA AND EUREKA ARE SUPERIOR HARROWS.

The bars are ash or oak. The teeth are steel. A 5/16 inch carriage bolt is put through the bars close by every tooth, thus preventing any possibility of splitting. All of our harrows are neatly varnished. The bars on the 24 and 30 tooth sections are 2 1/2 x 2 1/2 inches. The bars on the 42 tooth section are 2 x 2 1/2 inches.

The Eureka and Benicia are made to comply with the demand for a light weight Wood Bar Harrow. The prices at which these are offered are made especially to meet Eastern competition and are much below the real worth of the Harrows, which are infinitely superior to the cheaply made but same priced Eastern work with which the market has lately been flooded.

GANG PLOWS—Our line is the largest and best in the State. It includes the Eureka, Peerless, Granger and Reversible Mold Gangs, in all sizes.

SINGLE PLOWS—We furnish the Benicia, Star, Gale, Princess and a score of others. We guarantee their quality.

HARROWS—We have all the various styles, from a common Drag to a Steel Frame Spring Tooth Lever Harrow. Also the Climax and Tiger Disc Harrows.

SEEDERS—Our stock is not equalled; before purchasing some other kind examine our Gsm, with Armstrong's patent force feed, Gorham, Triumph, Monarch, Climax and others.

WRITE FOR OUR NO. 27 LATEST SPECIAL 140-PAGE CATALOGUE OF Plovs, Harrows, Seeders, Cultivators, etc.

BAKER & HAMILTON,

SAN FRANCISCO AND SACRAMENTO.

:- CALIFORNIA PRODUCTS. :-

P & B

ROOFING.
BUILDING PAPER.
ROOF PAINTS.

First Prizes at the World's Columbian Exposition, 1893.

PARAFFINE PAINT CO., - 116 Battery Street,

SAN FRANCISCO.

E. G. JUDAH, Agent, - 221 South Broadway,
LOS ANGELES.

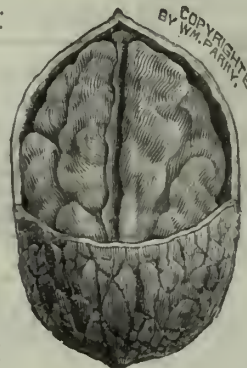
WE GIVE ESPECIAL ATTENTION TO

Fruit Trees! Deciduous Fruit Trees!

ALEXANDER & HAMMON'S

Rio Bonito Nurseries, Biggs, Butte Co., Cal.

KAGHAZI



PERSIAN

:- SOFT SHELL :-

:- WALNUT! :-

Our Stock of TREES and VINES is Most Complete
in EVERY CLASS of Fruits.

A LARGE STOCK OF THOMPSON'S SEEDLESS GRAPES.

SHIPPING, CANNING and DRYING Fruits of all kinds.

Best Assortment of RAISIN and TABLE GRAPES in California.

Early Shipping Plums a Specialty.

SPECIAL PRICES FOR TREES IN LARGE QUANTITIES.

DURING the last three years, trees grown on the FEATHER RIVER BOTTOM LANDS, at RIO BONITO, BUTTE COUNTY, have been much sought after, and the demand for them is increasing all over the State where they have been planted. Owing to the peculiar adaptability of the soil and climate of this section for growing nursery stock, the trees making a very large and well-furnished system of root growth, and maintaining a correspondingly strong and vigorous top, maturing the wood thoroughly, we are enabled to supply our patrons with the best of trees, healthy in every respect, entirely free from insect pests, and in perfect condition for transplanting.

If You Are Thinking To Plant Trees, It Will Pay You To Correspond With Us Before Purchasing.

ALEXANDER & HAMMON,
BIGGS, BUTTE COUNTY, CALIFORNIA.

PRUNE TREES

FOR SALE—50,000 Trees on Myrobalan Stock.

Imported from one of the first French nurseries. Scions from an orchard near Saratoga. Fruit raised in this celebrated district has taken for us six first-class awards, INCLUDING HIGHEST AWARD, COLUMBIAN EXHIBITION. Apply to

BALFOUR, GUTHRIE & CO., 316 California St., San Francisco, Cal.
Agents for Saratoga Packing Company.

NAPA VALLEY NURSERIES.

NEW CATALOGUES NOW READY.

Fruit, Nut and Shade Trees, Grape Vines, Etc., Citrus Fruits, Ornamental Shrubs, Flowering Plants, Roses, Palms, Bulbs, Seeds, Etc.

Fruit and Nut Trees propagated from bearing orchards at Sausal Fruit Farm; Unirrigated, Clean and Healthy. Do not fail to correspond before making purchases. Satisfaction guaranteed.

LEONARD COATES, - - - NAPA, CAL.



Vol. XLVI. No. 23.

SAN FRANCISCO, SATURDAY, DECEMBER 2, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market Street.

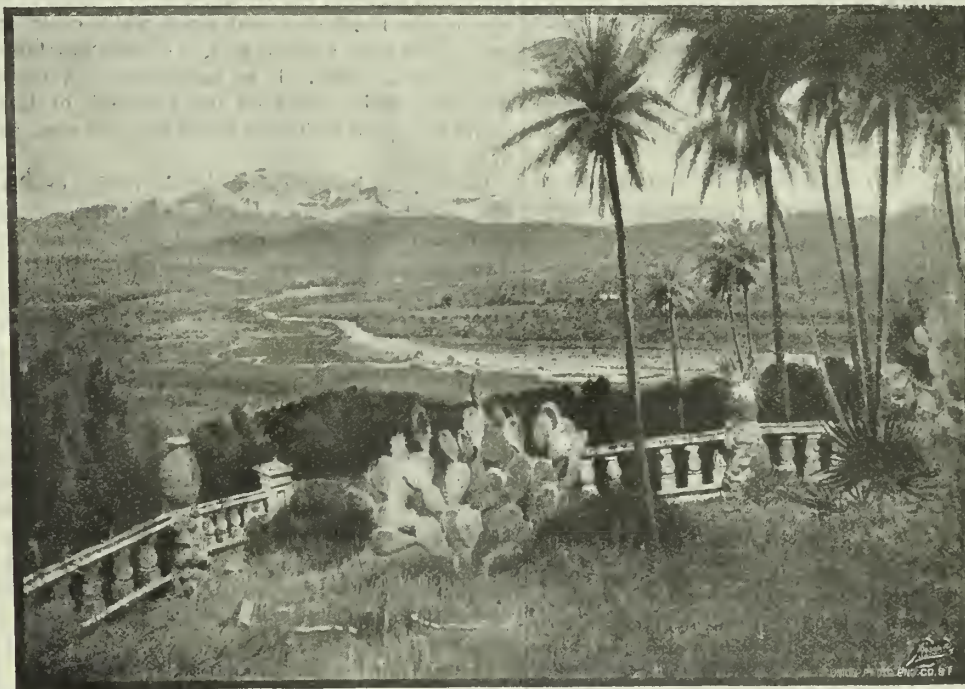
Sea Waves and Sadness.

The many ways proposed to round up agricultural depression in Great Britain are at least entertaining to read. One writer in an English exchange proposes to cure current ills by reclaiming the salt marshes, and thus girt the English coast with arable fields. A liberal supply of this class of soil, says this writer, is what is now wanted for the cure of agricultural depression, so that farmers would be provided with the raw material suitable for competing against the newly broken-up prairie lands of America, which, owing to the fertility they also possess, combined with cheap transit of produce into English markets free of any duty, has been the means of forcing much of the exhausted and naturally poor lands of the country out of cultivation. If England had only thought of this sooner it would not have been necessary to colonize Englishmen all over the world. According to the calculations of the writer, such lands have yielded heavy crops within three years after banking out the salt water, and ten years' rents have covered all costs of reclamation. This would seem to be a promising avenue for the outlay of England's surplus capital, and it should in a striking way appeal to British patriotism, for it would be a new way in which Britannia might rule the waves.

It should indeed make Englishmen more comfortable to see more food within their own boundaries. A high English authority states that this year not more than 17 out every 100 of the population can be fed with home-grown breadstuffs, and the "Man of Mark Lane" adds the startling statement: "Of all wheat, English and foreign, 11,164,000 quarters are held, and the wants of the country for the unexpired ten months of the cereal year are not less

should help the price more than it has so far. Our English contemporary is of the same mind, for he says: "That, with this truly formidable quantity of over eleven million quarters to be made up, value should be below

not get a penny additional to alleviate his sufferings because the outside world rolls in wheat on his home markets. And our wool and sugar and fruit producers are to be put through the same paces. These are indeed triumphs of



IDEAL SKETCH OF A SOUTHERN CALIFORNIA VALLEY.



SCENE ON SPRING STREET, LOS ANGELES.

than 23,000,000 quarters. The supplies afloat reach 2,656,000 quarters, but of this quantity 2,000,000 are coming from remoter countries, like California and Chili, Argentina and New Zealand. Were war declared to-morrow, even with an inferior power, the odd 656,000 quarters are all that we could depend upon receiving—nine days' supply!"

We do not suppose there is any danger of such a catastrophe, though things do look a little squally in Europe, but the very moderate supply of grain abroad

cost price of the grain to the grower, is an astounding triumph of political economy. A few more such triumphs, and political economy will be as extinct as the dodo, seeing that the only people who have essayed to live by such economy will have died of it." This is a cruel arraignment of free trade which is a British notion. And yet those who are attempting to force the idea upon this country as a boon to American agriculturists do not seem to know that British agriculture is dying of it. The English grain-grower, with his wretchedly poor crop, can-

political economy, and our English friend's acceptance of their outcome is heroic. But it will not be so sad as he anticipates. It will be the people who undertake to enforce the doctrines upon an unwilling producing class who will win the extinction on this side of the water.

Los Angeles and Southern California.

We give on other pages of this issue a review of the important convention of fruit-growers held in Los Angeles last week, and it is natural that the adornment of our opening page should be of the southern type. One of the most tasteful souvenir publications which we have seen is a neat pamphlet entitled "Vistas in Southern California," just published by Bilicke & Co. of the Hollenbeck Hotel of Los Angeles. It is equipped with new engravings of southern scenes, of which we reproduce two on this page. The first is an ideal sketch in which the artist produces a very attractive foreground by grouping plants expressive of the local climate, and in the middle and background portrays characteristic features of the scenery. Broad valleys thickly planted leading to mesas and foothills, also warm and productive, which are backed by high snow-clad mountains—such are true to the southern land in all their wealth and picturesqueness. The date palms of the padres, the cactus and fan palms native to the country, may fitly look down together upon the prosperity and progress of the present day. Its greatness neither padre nor prophet ever foretold; in fact, even the older Californians of the present generation have to question their senses to determine whether they contemplate reality or the fabric of a dream.

Nor is the beauty and wealth of the rural landscape more startling to the senses than the wonderful development of the towns, of which the second engraving gives an inkling. Los Angeles of to-day is as great a contrast to Los Angeles of a score of years ago as are the verdant orchards to the arid waste upon which the twin giants work and water have created them. The picture gives but a glimpse of the miles of well-built streets.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 15 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half inch (1 square).....	1.00	2.50	6.50	22.00
One inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Registered at S. F. Post Office as second-class mail matter.

Our latest forms go to press Wednesday evening.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLOKAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, December 2, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—Ideal Sketch of a Southern California Valley; Scene on Spring Street, Los Angeles, 373.
EDITORIALS.—Sea Waves and Sadness; Los Angeles and Southern California, 373. Equine Affairs; The Week; Miscellaneous, 374.
Fruit-Growers' Convention, 374, 375, 377.
PATRONS OF HUSBANDRY.—Editorial Observations; The Secretary's Column; From Fulsar Grange, 385.
HORTICULTURE.—Does Mulching Retard Tree Growth? 377.
THE APPLARY.—Production of Comb Honey, 378.
THE STABLE.—A Plea for the Pacing Horse; The Coming Demand for Horses; Trotting Records of the Year, 378.
THE STOCK YARD.—Calf Rearing, 378.
THE VETERINARIAN.—Distemper in Dogs, 379.
POULTRY YARD.—Turkey-Growers' Methods, 379.
THE DAIRY.—Succotash Ensilage for Cows; That Big Canada Cheese, 379.
THE HOME CIRCLE.—Miscellaneous, 380.
DOMESTIC ECONOMY.—Miscellaneous, 381.
YOUNG FOLKS' COLUMN.—Miscellaneous, 381.
AGRICULTURAL NOTES, 382.
MARKET REPORTS.—The Local Produce Market, 385.

BUSINESS ANNOUNCEMENTS.

(NEW THIS ISSUE.)

	PAGE.
Casaday Gang Plow—Oliver Chilled Plow Works.....	388
Olives—J. E. Packard, Pomona.....	383
Agents Wanted—King Publishing Co., 132 Market St., S. F.....	386
Nursery Stock—Fancher Creek Nursery, Fresno.....	387
Plows—Deere Implement Co.....	388
Plows—Baker & Hamilton.....	382
Pumps—A. T. Ames, Galt.....	386
Nursery Stock—Oroville Citrus Association, Oroville.....	387

See Advertising Columns.

The Week.

This week's rain should start things to moving with a rush. There has been a good depth of penetration over the northern half of the State up to Wednesday, and if the weather observer has not missed his cue, the whole State will catch it well before the storm is over. The start of the plows should also start trade and brighten up things generally. It is unofficially announced that the banks propose to celebrate New Year's by loosening their grip upon their coin sacks, and if this be so money will again be available on good security for all business purposes. This fact, with the favoring season, should stimulate planting, improvements and development, generally. It is no longer a time for repining, but rather to pull off the coat and go to work. Too much time has already been given to doubt and do-nothingism.

Nothing brightens a California Thanksgiving like a good rain-storm. This year, then, we should have a bright one. To give our employes a chance to do their duty in this line, the RURAL goes to press one day earlier than usual this week.

THE wine men are encouraged by what they hear from Congressman Geary. He says the idea of an internal revenue tax on native wine has been abandoned, and changes in existing laws which he hopes to secure are the following: To provide for the manufacture of brandy from all seed and stone fruits, where now it can be made from grapes, peaches and apples; to permit the bottling of spirits in bond; to permit the blending of brandy in bond; to permit the reduction of original proof in casks; to permit the selling of brandy in bond.

AND NOW the horticultural inspector finds Florida oranges being sold by hawkers on San Francisco streets, and as if this fact was not alone insult enough, the oranges are loaded with scale-bugs. Oh Florida! would you thus undermine our citrus interests?

ANOTHER human death from glanders is reported, this time from Fresno county. People never seem to learn the terror of this incurable disease, but go along with glandered horses in spite of law and gospel. It is taking a frightful risk.

SAN BERNARDINO only had to pay for 419 jack rabbit scalps this month, as compared with 1,400 last month.

PRUNE PLANTING is popular in San Luis Obispo county this year. They say 3000 acres will be planted.

Equine Affairs.

The horse interest is having its full share of the current depression and discouragement. A number of conditions seem to have coincided to cast it down, and when the horse interest does sink it goes in clean up to its eyes; it is not content with ordinary groveling. It is not a drop in the dust, with a quick rise and a briar brush to restore it to brightness; it is a roll in the mud—hateful, clinging and staining mud which necessitates renovation and a fresh start. The horse interest is, in fact, stricken at all points. The general financial situation has sharply curbed investment in speed or pleasure animals, except on the part of a few who have the fullest faith and the deepest pockets. The common run of turf patrons are out of the race, consequently the demand for ordinary good-chance horses has slumped. They could be quoted by the dozen for less than former retail rates. The result will be that horses with good pedigree and prospects will be scattered far and wide. They will be reduced to all sorts of indignities. They will push the mustang to the wilderness; the cowboys will have mounts worthy the establishments of gentlemen, and the ranges will gain what the paddocks lose. The disposition to breed and rear, which has been for several years stimulated by the wave of exceptional interest and demand, will be changed to neglect of the service of the finest sires, and mares which could produce really good stock will run wild, to consort with the leaders of abandoned bands. If we had at hand the market for horseflesh which exists on the continent of Europe, it would be glutted with stock which has even some pretense to breeding.

But it is not by any means the depression of the fancy stock which alone afflicts the horse interest. The cable-road could hardly have displaced more horses if it had used horse-ribs to form its cable-tube. And then the electric roads have emptied more private stables than the cable did car-stables. Running for miles into suburban regions, connecting towns which were isolated, and facilitating communication from farm-house and suburban villa to city and village centers, the electric roads have for the time being cast phaetons and surreys under the sheds to dust and rust, and turned off family horses at buyers' offers. The bicycles, too, have either displaced horses or prevented investment in them, and thus added another stone to the monument of the horse demand. Thus from all sides have come conditions tending to create an over-supply of medium and light-weight horses, and producing the dullness under which the breeding interest is now struggling.

It is possible that a similar trouble, though less grievous in degree, might have come about even had not the using of these classes of horses been thus reduced. The stimulation of the speed fancy would have resulted, perhaps, in an excessive supply of small horses even if the ordinary demand had continued. There certainly are now droves of such animals which cannot be now profitably disposed of. The call for such horses for orchard and vineyard work, though large, cannot cope with the supply. It is a splendid time for the investor in horticultural property to get his horseflesh cheap, and this fact should not be overlooked by those who are advancing colony schemes. If fruit farms should multiply fast enough to employ the horse stock now available, the nurserymen could hardly furnish trees enough for the planters. It is also a time of great advantage to the butcher and the baker and the milkman. They can get pedigreed fliers which will make it very difficult for the city youngsters to get out from under their wheels.

But this condition of the horse market will not, of course, long prevail. Already, as intimated, breeding has been checked. The present supply will be scattered all over this half of the world. There will come again a time when well-bred horses will be sought for, and they will be hard to find. In all probability the horse will again contest the fashion with the bicycle, and the extension of the electric roads will carry the suburban district farther into the country and create anew the demand for the driving outfits. The speed fashion will of course take a new run when things improve, and we shall see again the rush for blood and for the establishment of breeding farms such as was recently experienced. Of course those who then have the blood will enjoy the reward. When the returning wave will strike no one can tell, nor can one predict what the new fashion will be. There is nothing to do but to wait and to seize the flood which will lead to fortune under the rearrangement of equine affairs.

CALIFORNIA dried fruits and nuts seem to be doing rather better in New York. Large receipts seem to be easily handled.

THE Florin fruit-growers are organizing to advance their own interests as fruit shippers.

ANOTHER creamery is projected in Humboldt county.

FRUIT-GROWERS' CONVENTION.

Report of the Proceedings at Los Angeles Last Week.

CO-OPERATION THE KEY-NOTE OF THE MEETING.

ADJUDGED, THAT THE TIMES DEMAND DIRECT SYSTEMS OF MARKETING.

Exhaustive Reports on Marketing, Transportation and Kindred Matters—Mr. Adams' Plan for a Dried Fruit Exchange—The State Board of Horticulture Warmly Endorsed—The Next Convention to Be Held at Sacramento—Etc., Etc., Etc.

The State Convention of Fruit-Growers, which assembled at Los Angeles last week, was the seventeenth in the series of similar annual gatherings. Its sessions lasted four days and were attended by representative fruit-growers from almost every county in the State. The list of registrations numbered about a hundred, the average attendance being about three hundred. The essays and discussions of the meeting took a wide range—too wide a range, in fact—including matters both directly and remotely connected with the horticultural interest. There were reports and addresses concerning the situation as to transportation, co-operation, scientific plans for preserving fresh fruits in transit, marketing, every phase of cultivation, protection against predaceous insects, etc., etc. In addition to these formal presentations, there were innumerable discussions based upon them. It is not possible for the RURAL to give in a single number even a synopsis of all this valuable talk. Our representative had formed this plan, but the prodigious volume of the matter soon overwhelmed him. We shall take up the chief doings, and this week, next week and the week following give, under separate heads, reports of the things which seem to be most important. This is the only practicable plan, since to report the proceedings in full would fill up the whole reading space of the RURAL for every issue during the next three months.

The key-note of the whole convention was co-operation. It was in the air; and every paper or address not severely confined to technical matters dealt with it, in one form or another. The feeling was profound and universal that the situation of the fruit interest of California calls for better systems of marketing, and that such better systems can only be created by those whose interests are bound up in the prosperity of the fruit-growing industry. There was no disposition to make war on the merchants; but the feeling was expressed over and over again that to sell our fruits in the right way and with the best results, some plan would have to be devised by which the grower should operate through agencies organized in his own interest and subject to his direct control. No part of the proceedings was heard with greater interest than the address of Mr. E. F. Adams (printed below) summing up the considerations and outlining a co-operative plan for the projected Dried Fruit Exchange. And in the vote pledging the convention to Mr. Adams' plan there was not only unanimity, but enthusiasm.

Many of the northern delegates were surprised to learn that the southern part of the State was already far ahead in the work of practical organization. This fact was fully developed in an address by Mr. Chamblin of Riverside, who is known as the father of co-operation in the southern citrus belt. Although thus called, Mr. Chamblin is by no means fatherly or venerable in appearance. He is an energetic, forcible man in middle life, himself an orange-grower and profoundly impressed with the necessity of co-operation. Following Mr. Adams' address, he declared that the prosperity of southern California was based upon the citrus fruit industry; that if that industry were to suffer seriously it would involve the wiping out of enormous values, not only in orchard property but of property in every other form. Another twelve months, he said, of such conditions as we now suffer under, will cut fifty per cent from the value of every form of property excepting actual cash. He had no fear, however, that this would happen, for he had faith that the spirit, ability and industry which had developed the country would devise means to preserve what had been so magnificently created. He then proceeded to unfold what had been accomplished during the past eight months in the way of organizing a co-operative association for handling the citrus fruit crop of southern California. The plan was a general marketing agency, working in connection with local or community associations. It proposed to preserve or to create community but not individual brands of fruit, and to give each producer a fair share

of the several phases of the market through the season. This, in brief, is the plan of an organization which the orange-growers of southern California have gone into almost without exception. In Riverside, the greatest orange district in the world, ninety-five per cent of the growers have joined the association. It is not too much to say that it is the strongest association of original producers in the world.

The effort to create a similar organization for the handling of dried deciduous fruits is now to be made by Mr. Adams and his associates. This chiefly concerns the northern and middle sections of California, but the southern people do much in the line of dried fruit and will come heartily into the movement, if we may judge by the unanimity of those who were present at the convention. To put this dried-fruit movement on its feet, a meeting is to be held in this city (San Francisco) on the 29th inst. Every grower of deciduous fruit is invited and urged to attend, and there ought to be a rousing meeting.

Contemporaneous with the sessions of the convention, meetings were held by the State Association of County Horticultural Commissions. Their discussions covered a wide range, going into the observations of each during the year in his district. No detailed reports of these meetings can be made, but each commissioner will carry home with him much that will assist in the performance of his duties. One excellent result, relating to public convenience, was attained in the form of an agreement to use uniform certificates and tags in nursery stock shipments. It was further determined that, in case of root knot being found in an invoice of trees, only the trees affected, and not the whole consignment, should be condemned. This matter of root knot came in for a large share of discussion both at the Commissions' meeting and in the general sessions of the convention. That it is a growing and an alarming evil was the universal testimony. But, although it was much talked about, there was no definite result. Prof. Hilgard of the State University knew practically as little about it as anybody else, but promised to make it the subject of special study in the immediate future.

A large share of the humor of the convention grew out of a claim for legal services upon the Association of Commissioners put forth by the law firm of Young & Powers of San Francisco. The history of this claim is essential to an understanding of it. Two or three years ago the Annual State Convention recommended a comprehensive enactment by the State Legislature with reference to horticultural interests and appointed a committee to attend to the matter. This committee asked the State Association of Horticultural Commissioners to put the matter before the Legislature. The Commissioners prepared a bill, but it was thrown out by the Judiciary Committee of the Legislature. Then, to make sure work, the Commissioners engaged Young & Powers to draft a bill and watch its progress (as to amendments, etc.) through the Legislature. The work was done, the whole proceeding—resulting in our present horticultural law—costing in the neighborhood of a thousand dollars. To meet this expense an assessment was levied upon the several counties and some of them paid up; but the larger number neglected to do so. The fee of Young & Powers (\$500), though admitted to be just and due, has not been paid. Mr. Young was at Los Angeles to urge the claim and to prevent it from being outlawed, served summons and copy of complaint—citing them to appear in court in San Francisco within ninety days—upon each member of the Association of Commissioners. These papers were the theme of everybody's wit during the whole of the session. The matter was brought before the Convention and Secretary Lelong of the State Board of Horticulture was made a committee of one to stir up the counties, collect the money and pay the bill.

Those who keep the run of State Board affairs are of course familiar with the ill-feeling entertained by certain elements against the present official organization of the Board. It was supposed that there would be a big fight in the convention and a distinct tremor went through the hall when the matter came up. But we are happy to say that there was no fight. One or two persons objected to a resolution which implied a compliment to the State Board and moved to strike out the approving words. The motion failed and the compliment remained. At the next session a resolution expressing confidence in the Board and approval of its work was presented, received with cheers and passed with barely a half dozen votes in dissent. There were no further references to the matter.

Sacramento, Santa Rosa and Oakland each, through representatives on the floor of the Convention, presented gracious invitations to the next Annual Convention. The matter was submitted to a vote, which resulted in the choice of Sacramento, and there in November of next year the Eighteenth Annual Convention of California Fruit-Growers will be held.

In the lobby of the Grand Opera House, in which the sessions of the convention were held, a register was placed,

and over it a printed request for each visitor to sign his name; and from this book we take the following list of names. It is not, however, a complete list of the persons in attendance, since many failed to see or failed to respond to the invitation to register. We give the list as it stands:

James E. Gordon.....	Saratoga	C. J. Platt.....	Agua
Judson Williams.....	Fallbrook	Jas. MacIlhenny.....	Redlands
C. F. Phillips.....	San Francisco	C. J. Curtis.....	Redlands
S. McKinley.....	Los Angeles	W. D. Curtis.....	Palms
Alfred Wright.....	Pomona	Geo. B. Warner.....	Santa Ana
O. L. Livesey.....	Fairmount	A. I. Hall.....	Duarte
C. H. McKevitt.....	Santa Paula	Gen. E. Bouton.....	Los Angeles
A. S. Chapman.....	San Gabriel	I. H. Thomas.....	Visalia
E. W. Maslin.....	Loomis	D. H. Hurley.....	Fresno
A. C. Thompson.....	Duarte	J. Payton.....	Beaumont
W. E. Collins.....	Ontario	H. L. Seales.....	San Francisco
D. H. Thomas.....	Santa Ana	Gus Wolf.....	Tacoma, Wash.
P. T. Adams.....	Tustin	Rev. C. F. Loop.....	Pomona
O. M. Morris.....	San Bernardino	Alfred T. Perkins.....	Alameda
C. E. Mack, Jr.....	Sacramento	Edw. M. Ehrhron.....	Mountain View
D. T. Fowler.....	Fresno	Chas. W. Godfrey.....	Moreno
Frank Lignian.....	Fowler	O. C. Thompson.....	San Diego
M. Braugher.....	Santa Rosa	Joel B. Parker.....	Orange
A. D. Williams.....	Santa Paula	Ira F. White.....	Pomona
D. G. Wood.....	Visalia	O. N. Cadwell.....	Carpenteria
A. W. Mathewson.....	Farmersville	G. H. Hecke.....	Woodland
Geo. F. Beales.....	Visalia	Dr. Thos. Cogswell.....	San Diego
Mrs. C. Rogers.....	Modesto	L. C. McKeby.....	Ventura
J. L. Sprague.....	San Jose	T. B. Atkinson.....	Pomona
A. R. Sprague.....	Fairmount	J. T. Bogue.....	Tudor
B. E. Hutchinson.....	Fresno	J. G. Deaderick.....	Carpenteria
Joshua Keene.....	Santa Paula	Jas. Hutton.....	Santa Maria
I. J. Hartfield.....	Niles	C. B. Messinger.....	Pomona
J. M. Gregory.....	Perris	G. G. Crane.....	Saltcoy
A. G. Raymonte.....	Miramonte	Asa Hall.....	Azusa
Elwood Cooper.....	Elwood	A. A. Goodden.....	San Diego
Jno. S. Calkins.....	Pomona	R. C. Allen.....	San Diego
E. C. Zane.....	Yolo	W. Barry.....	Niles
R. J. Blowers.....	Woodland	H. F. Tilden.....	Niles
Geo. C. Roeding.....	Fresno	Mrs. C. E. Mack.....	Sacramento
I. R. Bennett.....	Ojai	N. B. Muscott.....	San Bernardino
Fred C. Miles.....	Penryn	Nathan W. Blanchard.....	Santa Paula
Edw. Berwick.....	Monterey	C. C. Thompson.....	Pasadena
Edw. T. Adams.....	Wright	L. N. Everett.....	Santa Ana
J. J. Pratt.....	Yuba City	Lewis Walker.....	Ventura
J. R. Ward.....	Huron, S. Dakota	H. P. Stabler.....	Yuba City
E. A. Silvey.....	Manzana	T. P. Weber.....	Santa Paula
N. B. Smith.....	Ventura	F. A. Foster.....	Ventura
Jos. Hobart.....	Nordhoff	P. E. Platt.....	Sacramento
B. D. Storrs.....	Pasadena	T. L. Bahlinder.....	Chico
A. Graves.....	Whittier	C. A. Milmore.....	Chula Vista
Leigh Overman.....	Hamford	J. W. Mills.....	Pomona
Eben Boalt.....	Palermo	Mrs. Hattie Jones.....	Yuba City
C. L. Northcraft.....	Pomona	T. A. Rice.....	Ventura
Benj. Colling.....	Fruitland	C. L. Peacock.....	Ball's Ferry
C. C. Austin.....	Fillmore	F. C. Vignolo.....	Ball's Ferry
W. L. Phillips.....	Claremont	W. Strawbridge.....	Whittier
C. H. Richardson.....	Pasadena	J. J. Wakefield.....	Claremont
Priestley Hall.....	Riverside	Leonard Parker.....	Anaheim
Peter Jones.....	Palmdale	D. W. McLeod.....	Riverside
Hiram Hamilton.....	Orange	J. D. McNab.....	Riverside
C. A. Coffman.....	Rivera		

Nothing could have been in better spirit or in better taste than the hospitality of the Los Angelenos. When, in its issue just preceding the convention, the RURAL PRESS pronounced the Los Angeles greeting "warm as its sunshine, sweet as its gardens of flowers, and generous as the city's conceptions of its own future," not a word too much was said. There was a local committee of reception and entertainment, of which Mr. G. J. Griffith was the leading spirit, and its forethought smoothed all the ways of the visitors. Numberless excursions were provided—one to Santa Monica, another to Redlands, Colton and other nearby points, another to Indio, and still another to Mt. Lowe, on the new inclined railroad. Besides these, there were drives about Los Angeles, to Pasadena, through the San Gabriel valley, and elsewhere. Those who partook of these several diversions were filled with delight and enthusiasm for Los Angeles and its beautiful surrounding country. But over and above these organized methods of entertainment were the ten thousand instances of civility of a personal and informal sort, and of which each visitor had his full share. Everybody seemed to find in the way of companionship and entertainment just what he liked best, and all felt that the stay was too brief.

The limitation of space and the necessity—on account of Thanksgiving Day—of going to press one day earlier than usual combine to curtail the report of the convention in this number. We give below, under special heads, some of the notable work of the session; and next week will follow it with another installment. Possibly the work of assimilation will be easier if the proceedings are taken in broken doses.

PRESIDENT COOPER'S ADDRESS.

A Plan to Secure More Parasitic Insects—Miscellaneous Suggestions for Laws in Aid of Horticulture.

President Cooper, of the State Board of Horticulture, was present at the opening and delivered his annual address in person, but it was under the most serious physical disabilities. The day before the convention he was taken seriously ill, and was, therefore, able to be present only two or three times during the four days' session.

After a few words concerning the financial disasters of the year, Mr. Cooper plunged into the question which was in everybody's mind, namely, that of co-operation. In urging the establishment of a bureau of statistics, he said:

The discussions by the raisin-growers, the prune-growers and the orange-growers will convince every thoughtful person that there must be unity amongst the producers to avoid overstocked markets and under-selling; also that the fruit-growers must sell their own fruits. A bureau of statistics with a competent statistician could supply the necessary information to every branch of the fruit industry; with this information the growers of like products could unite and determine how and where to sell their crops—baphazard shipments to a dull market will always be uncertain in the results. It is time that we cease to make shipments with the risk of not getting proceeds sufficient to pay the railroad freights and expenses of drayage and commissions.

From this subject Mr. Cooper passed to that of legislation, renewing his suggestions of last year as to vagrant

laws, transportation, etc. He then traversed the growth of efforts to rid orchards of pernicious insects by the introduction of predaceous insects. He considered this the true method of fighting pests and declared it to be a duty of the General Government to institute search the world over for insects that would assist the orchardist in keeping his trees clean and in productive condition. We quote:

In 1874 the United States Government sent out six parties composed of a large number of scientists with their assistants—three expeditions in the Northern hemisphere and three in the Southern—for the purpose as above mentioned. European Governments did as much or more; no expense was spared in trying to obtain more accurate knowledge on this point. With this disposition to study and investigate, does it not occur to you as being most remarkable that intelligent races through so many generations have never sent out expeditions to search for parasites, the natural enemies of agricultural and horticultural pests?

But, while regarding it a duty of the Government to send out expeditions for this purpose, Mr. Cooper declared that life was too short to wait for the Government to do it; and he therefore suggested that the fruit-growers take up the matter on their own account and organize a bureau with State help, if it could be secured, to do the work of searching and investigating.

Turning again to fruit pests, Mr. Cooper presented an exhaustive treatise on the history of their introduction into Europe and America. To the pernicious industry of botanists who accompanied Capt. Cook in his voyages of discovery over a century ago, he thought was due the introduction of various pests into Europe. These botanists brought home from the countries they visited all manner of plants and with them a swarm of evil insects hitherto unknown in Europe. From this, he traced the history of pests down to our own time and our own State. Proceeding to treat of the helpful parasites, Mr. Cooper said:

The "Icerya purchasii" is known in that country as the "Australasian Bug," the Vedalia as the "California Ladybird."

But little is known, comparatively speaking, of the various ladybirds. There are, so Mr. Koebele reports to me, about 50 species in Australia that prey upon the various insects that disturb plants and fruit trees. About four years ago the walnut trees in my neighborhood were attacked by an aphid. It spread very rapidly and caused the trees, leaves and small twigs to become as black as the olive tree, from black scale. The walnuts were smaller, meat imperfect and the nuts difficult to husk. It was quite alarming to me.

Last year I noticed a spotted yellow ladybird in considerable numbers on the trees about the picking time in the fall. Early this spring, and as soon as the tree put out its leaves (in our locality this takes place from 25th of March to April 1st, and in full leaf about the 25th of April), the ladybirds were there in great numbers. On May 28th the second brood were hatching. I might mention in this place that while I had not observed in the previous fall but the ten-spotted "ladybird," there were three different ladybirds in about equal numbers in the spring on the trees—the spotted yellow, the spotted red and the common red ladybird. In my walnut orchards they could be counted by the millions. I at once conceived the idea that they might be useful in other directions. I caught many of them and placed them wherever any species of aphid was at work. I noticed particularly that they devoured the aphid on the orange trees. I caught about 100 of them and put on an apple tree infested with woolly aphid. The following day not one could be found; they had flown away in search of more palatable food. Then I collected the eggs. I found the eggs very plentiful in the walnut orchards, mostly on the under side of the leaves, and in clusters of from 25 to 40 in a place. I plucked two or three of these leaves and placed in the crotches of two different apple trees in places where the food was near at hand. The eggs hatched out three or four days after being placed there. The larva fed on the aphid increased in size very rapidly. I saw them picking up the woolly aphid and carrying it off as you sometimes see ants carrying crumbs of bread. After the larvae became full grown, made fast and the new ladybirds hatched out; they remained on the trees and there was not the least vestige or sign of woolly aphid left. Here was the secret of the whole business. In the coming spring I shall have a cluster of eggs placed on every apple tree. This is a very simple thing to do; once in the apple orchard, they will remain there as long as there is any food. The walnut trees this year had very little black on them; the fruit was good and easily handled. I sent specimens of these three ladybirds to Dr. Horn. When I know more about them I will report. Some ladybirds are migratory in their habits. The "Leis Conformis," sent to me by Mr. Koebele from Australia, and which I have not seen for a long time, was found 18 miles away, while others apparently have to be transported from orchard to orchard when not more than a quarter of a mile distant.

The fruit-growers will have to reciprocate in the distribution of these useful insects, and by giving a little time and study in their management will find great gain in so doing. We have sent out about 500 colonies of the Rhizobius, so that in the coming spring they will appear in great numbers in every locality where sent.

One of our greatest enemies in apple and pear growing is the codling moth, I would urge that a special effort be made to search for the natural enemy of this insect. Another destructive enemy both to the orchard and farm is the grasshopper. The parasite for the latter exists in west Australia; it has been known for many years and can be obtained readily at a moderate cost. See annual report 1890, pages 39 and 40; also Koebele's report, 19 and 20.

I have extended this subject in detail for the purpose of supporting my suggestion to have formed a permanent bureau to search for predaceous insects.

Regarding what is known as the Florida purple scale, recent reports of its spread in southern California are very alarming. I would recommend the most radical measures in arresting its further spread.

In conclusion I beg to call your attention to the importance of having stricter quarantine laws; no plant or tree, that is not free from insect pests or fungoid disease should be permitted to enter the State further than is necessary to make an examination. Let us in our efforts determine that no more pests shall get a foothold in California.

The suggestions made in this address were made subjects of special committee appointments. A committee composed of E. W. Maslin, H. C. Kells and I. W. McIntyre was commissioned to wait upon the State Legislature in the interest of the proposition for a State Bureau of Statistics; to ask an appropriation to support search for parasitic insects and to ask for the enactment of more efficient vagrancy laws. Another committee consisting of Ellwood Cooper of Santa Barbara, Abbott Kinney of Los Angeles, S. F. Leib of Santa Clara and N. P. Chipman of Tehama, was commissioned to report to the next Fruit Growers Con-

vention a plan of organization, etc., for a bureau to search for parasites in foreign countries, etc.

MARKETS AND TRANSPORTATION.

A Report on These Matters by a Special Committee—Prospects of Expediting Fresh-Fruit Shipments—Reflections as to Marketing.

At the October meeting of the State Horticultural Society, held at San Jose, President Lelong was authorized to name a committee to report upon three propositions, viz., (1) As to the possibility and practicability of putting California fresh deciduous fruits into new markets; (2) As to shortening the time of transit and reducing the expense; (3) As to what proportion of gross receipts from sales in the East go to the producer. Complying with this instruction, Mr. Lelong named Mr. Alfred Holman, editor of the *RURAL PRESS*, Mr. B. N. Rowley and Mr. John Isaac as such committee. Mr. Lelong aided the committee by putting at their disposal every facility available in the office of the State Board of Horticulture; and of this aid the committee made the fullest use, and to it they are indebted for much that is reflected in their report.

This report was called for on the opening day of the session, but some correspondence essential to its completeness did not arrive until Wednesday evening and it was not until then that it was delivered. The full report, as read by Mr. Holman, chairman of the committee, was as follows:

GENTLEMEN: Your committee appointed at San Jose on October 27th, 1893, to investigate,

1st. On the prospects of finding a market in the cities and sections not yet reached by growers and associations;

2d. On the prospect of securing quicker time for fruit shipments; and,

3d. To report on cost of picking, packing, handling and transporting fresh deciduous fruit in carload lots, with the view of ascertaining the proportion received by growers from gross sales of shipments to the Eastern markets, beg leave to report:

First. From information received from the railroad companies and other sources we find that there were shipped, for the fruit season of 1893, up to and including the month of October, from Sacramento, 4372 cars, consigned to the following points; this statement covers shipments from Sacramento only. The greater number of these cars contained upwards of 24,000 pounds of fruits:

FRESH FRUIT SHIPMENTS FROM SACRAMENTO, JUNE TO AND INCLUDING OCTOBER, 1893.

Destination.	No. of Cars.	Destination.	No. of Cars.
Aberdeen, Cal.	1	Montreal, Canada	33
Boston, Mass.	187	Minneapolis, Minn.	189
Buffalo, N. Y.	16	Mitchell, S. Dak.	1
Baltimore, Md.	2	McPherson, Kas.	1
Burlington, Ia.	6	New York City, N. Y.	857
Butte, Mont.	52	New Orleans, La.	69
Chicago, Ill.	1,965	Omaha, Neb.	171
Cleveland, O.	46	Philadelphia, Pa.	34
Cheyenne, Wyo.	7	Philadelphia, Pa.	18
Cincinnati, O.	7	Pittsburg, Pa.	8
Davenport, Ia.	5	Peoria, Ill.	8
Denver, Col.	150	Pueblo, Col.	9
Des Moines, Ia.	1	San Antonio, Tex.	6
Dubuque, Ia.	8	St. Louis, Mo.	71
Grand Island, Neb.	2	Sioux Falls, Ia.	28
Helena, Mont.	61	Sioux Falls, S. Dak.	62
Galesburg, Ill.	1	St. Joseph, Mo.	18
Houston, Tex.	3	St. Paul, Minn.	109
Kansas City, Mo.	100	Spencer Port, N. Y.	1
Kearney, Neb.	3	Spokane, Wash.	9
Lincoln, Neb.	49	Spring Valley, Ill.	1
La Crosse, Wis.	1	Toronto, Canada	1
Leadville, Col.	2	Toledo, O.	1
Louisville, Ky.	8	Winnipeg, Canada	8
Milwaukee, Wis.	20		
Total	4,372		

This leaves 29 cities in the United States, with a population in excess of 50,000, to which no fresh deciduous fruit is directly shipped from California. Many of these are in sections in which we can hope for but little demand for our products, and others derive their supply from the great distributing centers. Enough, however, remain to show that there is still a vast unworked field for the introduction of our fruits. The list above given shows the points reached. As it may be of interest to know where our fresh fruits do not go, the following list of these cities is appended:

CITIES AND TOWNS OF OVER FIFTY THOUSAND POPULATION TO WHICH NO SHIPMENTS OF CALIFORNIA FRESH FRUITS ARE MADE.

Population.	Population.
Albany, N. Y.	94,928
Allegheny, Pa.	105,287
Bridgeton, Conn.	48,866
Cambridge, Mass.	70,028
Camden, N. J.	58,313
Charleston, S. C.	54,955
Columbus, O.	88,150
Dayton, O.	61,220
Evansville, Ind.	50,766
Fall River, Mass.	74,394
Grand Rapids, Mich.	60,278
Hartford, Conn.	53,290
Indianapolis, Ind.	105,436
Jersey City, N. J.	163,003
Louisville, Ky.	161,129
Lowell, Mass.	77,696
Lynn, Mass.	55,727
Newark, N. J.	181,830
New Haven, Conn.	81,293
Patterson, N. J.	78,347
Providence, R. I.	132,147
Reading, Pa.	58,661
Rochester, N. Y.	133,896
St. Joseph, Mo.	52,324
Scranton, Pa.	75,215
Trenton, N. J.	57,468
Troy, N. Y.	60,966
Washington, D. C.	230,329
Worcester, Mass.	84,655

The chief distributing centers now reached, and at which regular auction sales of California fruit are held, are Chicago, Minneapolis, St. Paul, Kansas City, Pittsburg, New York, Cleveland, Buffalo, Boston, Philadelphia. There are one or two other points where auctions are held when fruit arrives in quantities. Dividing the United States into six shipping districts, we find that

	Cars.
The seaboard district, including New York, Boston, Philadelphia and Baltimore, took	1,370
District including Ohio, Kentucky, Tennessee and part of southern Illinois took	138
District including Mississippi, Alabama, Georgia, part of Florida, and New Orleans, took	159
District west of the Mississippi river, excepting Colorado, took	1,030
Colorado took	291
While the district including part of Illinois, with the cities of Chicago and St. Louis, took	2,436
Total	5,424

The facts and figures above presented show those sections which we do not reach, or reach only to a very limited extent.

CONCERNING FASTER SERVICE.

In respect to the second point under consideration, the securing of more rapid transportation, your committee would report that in the course of their investigations they interviewed personally or by correspondence the traffic managers or other officials entitled to speak for the Southern Pacific, the Atlantic & Pacific, the Union Pacific, Rio Grande Western, Chicago & Rock Island. The Southern Pacific assured us that the fault was with the Eastern companies, who do not fully realize the importance of the fruit industry or the necessity for quick time in fruit transportation. Mr. Gray stated that his company had promised to give 45 hours to fruit trains to Ogden, and that they had made within half an hour of schedule time. He gave the assurance that his company was fully alive to the importance of the rapid movement of fruit trains, and would co-operate with any movement which the fruit-growers would make to that end. This assurance we consider very important in its relation to the outcome of inquiries made elsewhere and reported below.

Later, Mr. Rowley, a member of our committee, had an interview

with Mr. G. W. Luce, General Agent Freight Department of the Union Pacific Railroad, and that gentleman expressed the attitude of his company as follows:

"Permit me to state that while we do not desire to endeavor to shift the burden from our line and its connections east of Ogden to that of the Southern Pacific Company, yet I desire to say that the line east of Ogden was more regular and the trains were handled at a greater rate of speed than west of Ogden, and, in connection, I wish to advise that we made arrangements with the Southern Pacific Company last season to make 45 hours to Ogden, in which case we were to make with our connections (Chicago & Northwestern or the Chicago, Milwaukee & St. Paul) 80 hours Ogden to Chicago. We further endeavored to arrange, for the past two seasons, to have the Southern Pacific Company make 36 hours Sacramento to Ogden; we, in that case, would be willing to make 75 hours Ogden to Chicago, actual running time Ogden to Chicago to be 72 hours, and three hours for switching in Chicago. Will state, further, that we stand ready to make this arrangement for the next season's business.

"Would suggest in connection with the above, if it be possible, you arrange a regular time for departure of these fruit trains from Sacramento and schedule the same to arrive at Ogden at a certain hour. If this can be done, it will insure much better service through than if the trains are delivered to us at Ogden irregularly.

"The Union Pacific have always recognized that fast service is necessary in the handling of deciduous fruits of California, and it has always been our aim to co-operate with our connections to the fullest extent with this end in view, and we will heartily do so in anything they might suggest which would be the means of placing the fruit in the very best time in the markets of the East, which we appreciate is growing each year, and it is our intention to foster the industry and to assist in placing the fruit at its destination in the best possible condition."

With a view of ascertaining what time could be had by diverting fruit shipments at Ogden via the Rio Grande Western, the Denver & Rio Grande and the Chicago, Rock Island and Pacific railways, we made inquiry and were informed by Mr. W. H. Snedaker, Western Representative of the Rio Grande Western, that his road was prepared to give California fruit shipments prompt service in trains of eight to ten cars, from Ogden to Pueblo in 36 to 40 hours. In this connection, Mr. Frank McCormick, Western Representative of the Chicago and Rock Island, stated that his road would co-operate with their connections (the roads above named) in giving quick service, naming 42 to 44 hours from Pueblo to Chicago. This would make the time from Ogden to Chicago, by the Pueblo route, 78 to 84 hours.

From these statements it will be seen that if the Southern Pacific Company will co-operate with its Eastern connections in the matter of reducing time of transporting fresh fruits to Eastern markets, a very material reduction can be made in the time consumed in transit, as compared with the record of the past season. By study of the above propositions it will be seen that they promise 111 hours (by the Union Pacific) or 116 (by the Pueblo route), as against an average of 192 to 216 hours for the fruit shipments of 1893. There are two contingencies—both very important—namely, (1) That the Southern Pacific will shorten its time from 45 to 36 hours between Sacramento and Ogden, and (2) That the Union Pacific and the other roads named live up to the propositions as above quoted.

CONCERNING FREIGHT RATES.

Incidentally, your committee investigated the question of a reduction in freight rates from California to Eastern points, but received no encouragement from railroad companies in this direction. The Southern Pacific claims that it is now moving fruit at the lowest profitable rate, and that the mileage rates from California are now much lower and the service better than those from Florida fruit districts.

In a communication from Mr. Gray, traffic manager of the Southern Pacific, the following statements are made, which are here presented as giving the railroad view of the matter:

"The fact is, speed of transit, weight of rolling-stock and other matters taken into consideration, the California fruit service is now done more cheaply and on a smaller margin of remuneration to the carrier than any similar service in the world. I enclose copy of statement showing the rates on oranges from Florida to Chicago, St. Paul, Cincinnati, St. Louis and Kansas City, also showing the rate per ton per mile from San Jose, California, to same points, and also to New York City. By this it appears that our rate varies from \$1.12 per ton per mile to \$7 cents per ton per mile to Boston; while rates from Florida points range:

"To Chicago from \$1.31 the lowest, to \$1.78.
"To St. Paul from 1.37 the lowest, to 1.49.
"To Cincinnati from 1.37 the lowest, to 1.92.
"To St. Louis from 1.54 the lowest, to 2.01.
"To Kansas City from 1.70 the lowest, to 2.61.

"When the character of the service is taken into consideration, there is no comparison between our rates and those at the East. I am told it frequently takes longer to get fruit from Florida to Chicago and points in the northwest than from this coast to same points, notwithstanding the fact that we have to overcome several ranges of mountains.

"To correctly understand the situation and the rates charged, it must be remembered that a large portion of the deciduous fruit is now transported in refrigerator cars.

"The minimum weight of fruit in these cars is 24,000 pounds, the rate on which to Chicago being \$1.25 per 100 pounds from San Jose, the cost would be \$300 per carload of 24,000 pounds. For the service west of Ogden the amount received by the Southern Pacific Co. is \$140.76.

The weight of an ordinary fruit car is.....24,000 lbs.
Excessive weight of refrigerator car.....16,000 lbs.
Excessive weight of refrigerator, return.....16,000 lbs.
Weight of ice East bound.....8,000 lbs.
Weight of fruit.....24,000 lbs.

Total weight.....64,000 lbs.

"Dividing this total weight (64,000 lbs.) by the revenue west of Ogden \$140.76, gives 22 cents per 100 pounds, or an average for 870 miles between San Jose and Ogden of, in round figures, one-half a cent per ton per mile."

From a railroad standpoint the only apparent hope for lower freight rates lies in the replacement of the present cumbersome system of refrigeration with some appliance equally effective and of less weight.

CHARGES OF PACKING, CARRYING, ETC.

In regard to the third matter under investigation, your committee addressed a number of letters to prominent fruit-growers and shippers, asking for information that would form a basis for estimating the cost of picking, wrapping, boxing, hauling and placing on board the car and transporting to the East the various kinds of fruit. To these letters several replies have been received, and to their authors your committee is indebted for the following facts and figures. We find that the several charges above enumerated, average for each package as follows:

Peaches, boxes.....\$.64
Pears, boxes.....1.23 1/2
Cherries, boxes......49
Apricots, boxes......66
Apricots, crates......70
Plums, crates......70

If your fruit sells for an amount in excess of these figures, such excess represents your profit, less commission paid on such excess. These figures are based on shipments in refrigerator cars and represent the average cost of all expenses incidental to fruit shipments from orchard to Eastern purchasers, cost of cultivation and value of fruit, nothing taken into consideration.

SUGGESTIONS IN CONCLUSION.

Referring again to the first object of our inquiry, namely, the question of putting California fruits into markets not now reached, there is small satisfaction in the statistics which we have presented: That in the vast region comprising the populous States of Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, New York, Connecticut, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, North Carolina—we sell on an average yearly 1370 carloads of fresh fruit; that in another great region comprising Ohio, Indiana, Kentucky, Tennessee and the southern third of Illinois we sell only 133 carloads; that there is a list of nearly forty towns in the East, each of fifty thousand inhabitants and upward, to which California fruits never go direct—these facts are interesting enough, but they have no real value save as they confirm the familiar statement

that our products are not fairly put into their natural markets; that the districts in which our fruits are offered to consumers are almost insignificant when compared with the wider districts where fruit is wanted, but to which it never goes. These facts lead up to and point distinctly to one conclusion, namely, that the methods of distribution currently practiced are pitifully inadequate and inefficient.

The present method of marketing our fresh fruits is the dispatch of carload lots to a few central points, where they are sold at auction for local consumption, or, possibly, for reshipment in small lots to contiguous communities. No direct shipments are made to points where the local demand will not justify the sending at one time of a whole carload; and it is for this reason that so many large towns never get a taste of California fruit. Since they cannot take a carload of 24,000 pounds, then we cannot serve them at all. We are told by experts that from a railroad standpoint this is the only practical method of shipment; that to dispatch a single car with two or more distinct consignments for two or more distinct points on direct lines of road is practically out of the question. It would be as presumptuous as it would be rude to question the expert ability of the gentlemen from whom our committee has made inquiry or the sincerity of their replies; but we believe and claim that an utter misconception of the conditions and requirements of the fruit traffic lies at the foundation of their theories. A system of shipment from the places of production to central points, with reshipment from these depots to minor points will do well enough for miscellaneous perishable commodities, but in the case of fresh fruits it is totally insufficient. The application of this system to California fresh fruits and the Eastern markets involves practical elimination of all but the large centers from the field of consumption and so contracts the volume of our sales. How this affects the producer need not be told.

When our expert friends declare that it is not possible to ship direct to points which cannot take a full carload, they have in mind the conditions and regulations which now prevail on the railroad lines with which we deal. And this brings us to the point that the railroads have taken no steps in the way of providing a suitable equipment for the California fresh-fruit traffic. Apparently they do not realize the magnitude of the trade nor understand its requirements. To this great special traffic, the very life of which depends upon their co-operation, they give only such rough-and-tumble facilities as belong to a miscellaneous freighting business. Now, if the roads had for the California fresh-fruit traffic special cars built with compartments; if they had a sufficient number of these cars to meet all demands promptly; if they had locomotives in sufficient numbers to haul them promptly and rapidly; if the fruit trains were given the same track rights allowed to express trains—if these suggestions were realities, does any man of sense doubt that some things which the experts declare impracticable would be very simply and easily done? For example, would it not be possible under such conditions to load a six-compartment car at Vacaville or Ontario with six separate lots of fruit for the six cities of Tiffin, Mansfield, Canton, Zanesville, Columbus and Springfield, all in the State of Ohio, and to make the deliveries in a satisfactory way? Does anybody doubt that it would?

It is our judgment that to reach new markets some such combination of equipment and train service is essential; but it would be Utopian to expect it to come of its own motion. Its natural and essential prerequisite is the creation at this end of the route of a shipping system which will require and exact such service. The great express companies, not the railroads, have made the American expressage system, with its messengers on every train, its depot at every railway station and its distributing servant in every village. As the necessities of the service grew the railroads, under the pressure of specific demand, provided them; but if they had been left to their own devices, the great expressage system would never have been brought into existence. And so it will be with us. So long as we leave our necessities without organization to plead keenly for themselves, we shall have just the kind of service always given to an unsystematic traffic. When we have created a shipping system ready to operate as the express companies do, then we shall secure facilities for transportation proportionate to the magnitude and value of our fruit interest.

Opinions differ widely as to the right way to create such an organization. We are told by persons who are entirely sincere, that the producer is outside of his natural sphere when he undertakes to be his own marketer; that, like a certain brand of sarsaparilla, fruit selling is a thing peculiar to itself and that it must be left to experts; or, in other words, since fruit production is one thing and fruit marketing another, that the producer should stick to his orchard and leave the distribution of his product to the commission merchant. Now we agree that fruit marketing is a special trade; that it calls for business training and acquaintance with markets, etc.; but we deny that these qualifications are found with commission men more than among the producers themselves. As a matter of fact, after many years of trial, the commission system has failed. It does now but what it did in the beginning, namely, it sells our fruits at auction in a few general markets. It has not, like the great oyster companies, like the great express companies, like the Standard Oil Company—not to mention a dozen other equally notable instances—established agencies away from the centers and so widened the field of fruit consumption. The inefficiency of the commission-house system is demonstrated by the fact that after many years of exclusive control of our business, our fruit products are still unknown or at least not commonly sold in the larger part of the Eastern market.

And the fact of inefficiency is not less clear than the cause of it. Generally speaking the commission interest is foreign to us. It has only a commercial relation to us—about the same sort as California merchants have with the people of the Sandwich Islands. It is not possible under such conditions that our work should be well done. And in our judgment it will not be well done until the California spirit is in it. It is our profound conviction that the future welfare of the fruit interest of California, as it is dependent upon the Eastern market, rests upon the co-operative support of a State exchange operated in the direct interest of the fruit-growers and having its agencies not only in the great cities but throughout the whole vast region beyond the Rocky mountains. What Adams & Co. can do, Wells, Fargo & Co. can do, what the Standard Oil Co. can do, what a firm of Yankee shoemakers can do, surely the great horticultural interest of California can do. We are told that suitable men cannot be found to work for an association; that expert commercial ability can only be developed by the interest of personal ownership. We don't believe it. The express companies and the railroad companies seem to be served by paid agents with ability and devotion and there is no reason why we cannot find men to do our work in the same spirit. The career of the California Fruit Union proves that the co-operative principle can in fact be successfully applied; and what, let us ask, would be easier than the evolution of such a system as we suggest from such a good foundation as this same Fruit Union affords?

For the suggestions herein embodied we claim no credit for originality. If nobody else had ever thought of them before, we should distrust our own judgment. But we have only set down things long familiar to everybody. As regards the plan of shipment direct to minor points in broken loads in compartment cars, so competent a railroad man as Mr. W. H. Mills long ago suggested and approved it; as to the suggestion for general co-operation, that happily seems in a fair way to be made a reality. The two things together, your committee believes, are the best hope of the California horticultural interest.

ALFRED HOLMAN.
B. N. ROWLEY.
JOHN ISAAC.

As Mr. Holman concluded the reading of this report, Mr. Adams rose and pronounced it one of the best, if not the very best paper ever read before a Fruit Growers' Convention in this State. He proposed a vote of thanks to the committee and a vote of instruction to the secretary to print the report in pamphlet form for distribution in advance of the regular official report of the session. Both votes were promptly given.

DRIED FRUIT EXCHANGE PROJECT.

Plan Outlined in an Address by Mr. E. F. Adams—
Warmly Approved by the Convention.

There was no formal report to the Convention from the committee having in hand the project for a State Dried Fruit Exchange, but all that such a report could have stated was set forth in an address to the Convention by Mr. Edwin F. Adams, the leading spirit in the project. Mr. Adams stated the plan of the projected Exchange and summed up the considerations in support of it in an address of half an hour, which awoke great enthusiasm. Mr. Adams said:

MR. PRESIDENT:—What I shall have to say will relate wholly to the marketing of dried fruits, of which only I have any such knowledge as would warrant my taking the time of this assembly. The conditions in this branch of our industry are entirely different from those attending the marketing of fresh fruits, either citrus or deciduous, which are sold by different methods, through different channels and by different people. Including raisins, the proceeds of our dried fruits considerably exceed the proceeds of all other fruits and fruit products of the State, wine and brandy included, and the ratio of their greater volume is likely to increase. The importance of the subject is therefore sufficiently apparent.

I shall speak in advocacy of co-operation in marketing, and, as I have had some experience in organizing co-operative fruit-marketing associations, and as these papers are printed for general circulation, I shall not hesitate to begin with the statement of some elementary facts and principles, with which possibly all here are familiar, but which I have found actually new to large numbers of orchardists.

For example, I find that most orchardists think little of any "market" beyond the local buyers whose agents visit their orchards to buy their fruit. Their product, when it leaves their farms, so far as they are concerned, seems to vanish into space. By what routes, and to whose profit in finally reaching the tables of those who eat it, they seem mostly to have given no thought. As a matter of fact, our product, in the hands of the local buyer, is no nearer market than it was in the hands of the grower. When the local buyer gets it he has to do what the grower might have done for himself—find a customer for it. The market for our dried fruits is with the wholesale grocers, who, through the retail trade, distribute substantially all our dried fruits to the consumer.

Right here let me say that many growers, enthusiastic for co-operation, believe that we should ignore wholesale men and sell retailers direct. I do not wonder that growers, unfamiliar with mercantile affairs—and it is no more to their discredit to be ignorant of mercantile details than for the merchant not to know how to prune an orchard—should suppose this to be desirable. I will therefore state just why we cannot do it.

Retailers do not buy in carload lots; the overland freight on less than carload lots is prohibitory, and always will be. Hence selling retailers involves the maintenance of expensive Eastern agencies selling one article alone in competition with other established firms selling everything the grocer buys. They could eat us up, and would promptly do it. Every wholesale grocer whose field we should invade by seeking his customers would drop California fruits like a hot poker, and put all his strength on imported goods. We could not possibly reach a quarter of the retailers, and, for the portion of the trade we could get from those we did reach, we should lose the trade of all the rest so far as the wholesale man could accomplish it.

Retailers buy on credit. For the most part they will not, and in fact cannot, buy otherwise. Co-operative concerns must sell for spot cash, as credit involves inevitable losses, which co-operative concerns must not risk. Peddling goods to retailers can only be done at a loss and will never be tried. Sell to whoever will buy in carload lots, and let that end it.

Our market then is with the wholesale grocers. The question is how to reach that market with the least charge on the goods. The answer is simple and obvious. Concentrate our fruit, under our own control, in such quantities that we can fill any order in any amount, of any variety or size desired, and sell it to them. There is no mystery and no difficulty except the securing of capable men to manage the business effectively and economically, which can always be done by proper judgment.

Commissions on dried fruits are usually five per cent. This involves pay for two distinct and entirely different services—first, the concentration of the fruit from the orchards into carload lots at shipping points, and secondly, the finding of wholesale grocers to buy it. The first service is performed by the active young men whom we all know at this end of the line, and the second by another set of equally active young men at the other end whom we never see. The commission-house pays both sets of young men out of its five per cent, together with telegrams and traveling expenses, and takes the balance for profit. I do not think the rate too high, or the possible profits unreasonable. We can, however, save one-half of it by concentrating our own fruit; but out of that we must pay the expense of concentration and our own telegrams. Out of the whole we ought to save say one per cent, which is probably about the usual profit in the commission business.

I have described the commission business as it theoretically is. If all our goods were practically sold that way, possibly there would be no adequate reason for co-operation; and yet, after all, there is one fundamental and irremovable objection to it—by this means we entrust the selling of our goods to those who have no interest in maintaining prices; on the contrary, as it is usually more difficult to find customers than to find goods for sale, all commission men are bound to sell customers just so cheaply as they can without absolutely losing the confidence of consignors. So long as they are not obviously underselling they do not care a rap whether the fruit goes high or low; neither, in fact, does the wholesale merchant or the retailer, who only care that no competitor buys cheaper than they. The only parties really interested in prices are the consumers, who naturally wish to buy as cheaply as possible, and the grower, who quite as naturally wants all that the traffic will bear; so that I am not sure that even if the commission business were conducted in an ideal manner it would not pay roundly for the growers to combine and assist in fixing prices for their own goods.

But the commission business is *not* conducted in an ideally honest manner; far from it; it is rotten from end to end, and the primal reeking curse of the thing is that every man, woman and child engaged in the commission business is also a buyer on his own account, and no human being was ever so constructed by nature or reconstructed by grace as to sell other people's goods squarely and honestly in competition with his own.

There are, I think, in the commission business, men as upright and honorable as I have ever known, but I do not think them equal to this strain; and, if some of them are, we know that there are also among them, as among all other classes of business men, a certain number of very dirty people, and how shall the grower distinguish?

The existing abuses of the dried-fruit trade are about as follows:

1. The grower is utterly uninformed at the beginning of each season of the real value of his product, which will be determined by the amount in stock left over, the prospects for new crops, not only in this country but throughout the world—all fruit crops of all varieties competing with all other crops—and the financial condition of the country.

2. Under this state of things, it is entirely easy, and believed to be common, for a few large operators to make early sales, either real or fictitious, at very low rates, causing these sales to be

telegraphed back here with the most terrifying accounts of prodigious fruit harvests impending everywhere.

3. Upon which local buyers often, and probably usually, supplied with funds by the men who have made the short sales, start out to hunt for growers in distress for money, from whom, by the temptation of a good advance paid then and there, they can buy his fruit green at rates which will enable the low-priced short sales to be filled at a round profit. A few short sales made East at low rates and a few purchases made here under financial pressure at still lower rates, and the thing is done. The price is set at both ends, and the growers, except the few strong men who can wait till their weaker brethren have sold out, are helpless. And a little later, when the season has advanced and all the cheap goods have been found out and taken into camps, these same men will send their agents seeking consignments to sell in competition with the cheap goods which they have bought and own; and these consigned goods, upon which liberal advances have been made, they take East, where interest and storage accumulate, and one after another the wearied growers let go and write the agents to sell for what they can get. At the present time there are probably 500 carloads of consigned prunes alone in Eastern cities, and I know not how many of raisins, which the astute buyers at that end know perfectly well are their meat at their own price if they will only wait a little, and that is why we are having a hard market for dried fruit f. o. b. The worst thing to be done with dried fruit is to consign it East. Its proper place is in California until it is sold.

We have endeavored to meet these conditions in Santa Clara county by organization, concentrating our own fruit and selling it, at the same time giving great publicity to the facts affecting prices, and so enabling each grower to judge for himself of values. We have not revolutionized the market, but we have enormously steadied it. The Santa Clara County Fruit Exchange has sold about \$300,000 worth of dried fruit, and will probably handle fruit to the amount of a half million during the year. Other organizations there, working not through us, but in harmony with us, will probably handle half as much more. We have gone a great distance to make improper transactions in fruit impossible, but we have not altogether succeeded; we had too many cheap goods to compete with. In the early part of the season our worst competition was from the south. Knowing positively as we did the shortness of the apricot crop, it was impossible for us to get even 8 or 9 cents for good apricots, when growers here at the south were taking from 5½ to 7 for apricots as good as ours, and as our people had to have money we let them go; but it made our hearts bleed, and we registered a vow to come here before the next season and implore you southern people to join hands with us for our mutual good. And it was no new thing. In 1891 apricots were selling in Ventura county, green, at \$15 per ton, when they were selling in Santa Clara county for \$50; and the freight and waste of the Ventura fruit to suitable drying ground could not have exceeded \$5 per ton. Just now our worst competition is consigned goods, and we look for no improvement until they are closed out, and we want you here to join us in stamping out that practice, ruinous alike to the consignors and everybody else.

The method which we propose is by the establishment of a State fruit exchange, somewhat on the lines of the Santa Clara county associations. We desire you to concentrate your own fruit by means of local associations, and when so concentrated, while retaining control of the prices, unite with us in establishing one general agency to find customers and distribute information. The proper distribution of information will render it impossible for buyers to get fruit, except from the most ignorant, much below its value, for all growers when properly informed may be depended upon to get all they can for themselves. But that is not enough. Growers must not only be informed of the value of their product, but must have a way provided to get that value. We have had experience and we know how to do it. It is not by abusing the middlemen, or cursing the railroad; it is by uniting and acting. Fruit-growers of California, shall we unite and act?

A moderate estimate of the result of the work of our Santa Clara associations is that by the information which we distributed and the steady influence which we have exerted on the market, is that we have saved to the people of our own vicinity a quarter of a million of dollars, and to the State at large not less than a half million. If we will all unite we can double the record, and once more I ask shall we proceed to do it? The State Horticultural Society, a body of earnest and successful fruit-growers, has taken the lead in the matter and caused the formation of a State exchange. We, who were entrusted with that duty did not hesitate to act, knowing that the time was all too short for what is necessary to be done; but the body which called us into existence, although respectable, is limited in number, and we feel that the organization should really represent the whole State, and that representatives of the whole State should select men in whom they have confidence to go on with it, and to this end a State convention is to be called to meet on the 29th of December, to endorse the act of the State Horticultural Society—which it is not doubted that they will do—and to select the men who shall serve as directors for the year 1894.

It is my hope that this subject will be deemed of such importance as to warrant reference to a special committee of fruit-growers, instructed to report thereon at an early point in our sessions, upon our plans for a State exchange, so that should they meet the approval of this convention they may have the advantage of its endorsement.

At the conclusion of Mr. Adams' remarks, he was warmly applauded, and in response to his suggestion a committee was appointed to consider and report upon the matter in question. The next day the following report was made to the Convention and adopted without a dissenting vote:

To the Fruit-Growers' Convention:—Your committee appointed to consider the question of co-operative fruit marketing have had the subject under consideration and respectfully report as follows:

We are satisfied that the conditions which have already brought disaster upon some branches of the fruit industry of California will, if unchecked, speedily bring similar disaster upon all other branches.

We believe that the only remedy is that the growers shall themselves assume the marketing of their own product and that the time has now come to apply that remedy.

We heartily approve and endorse the methods of co-operation already adopted by the citrus growers of southern California and the dried fruit producers of Santa Clara county, which we find substantially alike in principle, differing only in detail to meet the different requirements of the dried and fresh fruit trades.

We regard it of the most importance that the great co-operative movement now in progress should be so directed that all interests involved should work, not only in harmony, but in actual consultation with each other.

To this end we strongly approve the movement originated by the State Horticultural Society, for the organization of a State fruit exchange, and urge all individual growers and all co-operative societies to unite in its support, trusting to the combined judgment of all interests to direct its movements to the general good.

We especially urge the importance of a large attendance from all parts of the State at the meeting called by the State Horticultural Society for the 29th of December next, for the purpose of settling and endorsing the plans for the exchange, awakening enthusiasm in its support and selecting the men to carry it on for the first year.

I. H. THOMAS, Chairman, Tulare county,
T. H. B. CHAMBLIN, Riverside county,
D. T. FOWLER, Fresno county,
EDWARD BERWICK, Monterey county,
N. W. BLANCHARD, Ventura county,
R. C. KELLS, Sutter county,
H. A. BRAINERD, Santa Clara county,
EDWARD F. ADAMS, Santa Cruz county,

Los Angeles, Nov. 22, 1893.

Committee.

HORTICULTURE.

Does Mulching Retard Tree Growth?

In the higher mountain valleys of California and in parts of Nevada there is injury done by early growth and bloom of fruit trees during the spells of warm weather, followed by a return of wintry temperature. There has always been an impression that such growth would be prevented by covering the snow around the trees with rubbish to prevent its melting, so that the ground beneath might be kept frozen. Prof. Bailey, of Cornell University, considers this a delusion both from experiments he has made and from what is known of plant physiology. We quote from a bulletin just issued as follows:

It is a general opinion that a mulch or heavy cover placed upon the soil about plants when it is frozen will retard flowering and the maturing of fruit; yet the practice appears to be often unsatisfactory, and there are reasons for supposing that the philosophy of the subject is not commonly understood. The subject is one of increasing importance, for every effort must be made to reach the market when there is least competition from other sources, and in New York at least this competition comes chiefly from early products produced in States to the southward. It is also essential that every means be used to escape the late spring frosts which kill the flowers. Careful experiments upon the effects of mulches were made at this station this year.

The last winter was severe at Ithaca. The ground froze deep in December, and the frost did not leave it until the middle of March. Upon the 28th of February, 1893, the snow being well settled and a foot and more deep in the open fields, heavy mulches of coarse manure and litter from horse stables were placed about apples, almonds, buffaloberries, blackberries, raspberries, currants, gooseberries, grapes, juneberries, peaches and quinces, and strawberries were mulched later. Observations were also made upon roses which were mulched later in the fall for winter protection.

The apples and other tree fruits comprised trees which were set in the spring of 1889. Half of a large wagon-load of mulch was placed about each tree, covering the snow deep for a distance of three feet or more in all directions. The small fruits were mulched heavily to the middle of the rows, or 3½ to 4 feet in each direction. A heavy wagon-load of mulch was sufficient to cover about ten feet of row. On the 29th of March these mulches were examined, and, although the frost had left the fields fully ten days before, the earth under the cover was still solidly frozen and from six to eight inches of snow persisted. Here, then, was an excellent opportunity to study the effects of a cold soil upon the vegetation of plants. On the 13th of April there was still frost and snow under the gooseberry mulches, and yet both mulched and unmulched plants seemed to be starting alike. It was apparent that the temperature of the soil exerted no influence upon the swelling of the buds, for the buds which projected above the mulch were as forward as those upon untreated plants, while the buds immediately under the mulch, upon the same twig, were wholly dormant. The protruding portions of the mulched plants maintained their forwardness and produced leaves, flowers and fruit at the same time as the contiguous plants which were not treated. Crandall currants, juneberries, roses, grapes, and all the tree fruits, behaved similarly throughout the season. The mulched blackberries, raspberries and Victoria currants seemed to be a day or two behind the others in starting, but they very soon caught up and there was no difference in season of bloom and maturity of fruit.

With the strawberries the case was far different. General Putnam and Oregon Everbearing were mulched March 25th, when the ground was completely thawed out. The mulch covered the plants and the entire space between the rows to the depth of three inches. On the 15th of May this mulch was removed. At this time the unmulched plants were in full leaf, and were nearly ready to bloom. The plants under the mulch were just starting into leaf and the growth was weak and bleached. The plants were endeavoring to push themselves through the cover to the light and air. The mulch was forked off the plants, and they gradually assumed a normal color and habit and bloomed June 1st. The bloom was delayed from ten days to two weeks, according to the depth of the covering. The plants did not seem to recover entirely, however, and the fruitage was somewhat lighter than on the normal plants; but it was delayed about a week.

All this is what the botanist would have expected. It is well known that plants store up starchy matters in their bulbs or branches to be used in the growth of the adjacent parts in early spring. The earliest bloom of spring is supported by this store of nutriment, rather than by food freshly appropriated from the soil. This is well illustrated by placing well-matured twigs of apple or willow in vases of water in winter, when the buds will burst and flowers will often appear. It was admirably enforced by a simple experiment which we made last winter in connection with this inquiry. On the 15th of February, a branch of a nectarine tree which stood alongside the horticultural laboratory was drawn into the office through a window. This office was maintained at the temperature of a living room. On the 6th of April the buds began to swell, and the young leaves had reached a length of three-fourths inch a week later. The leaves finally attained their full size upon this branch, before the buds upon the remaining portion of the plant had begun to swell. This experiment is by no means a novel one, for essentially the same thing has heretofore been accomplished with the vine and other plants; but it must impress upon the reader the fact that much of the bursting vegetation of springtime is supported by a local

store of nutriment, and is more or less independent of root action.

These various experiments and observations show that a mulch can retard flowers and fruit only when it covers the top of the plant as well as the soil. If the ground could be kept frozen for a sufficiently long period after vegetation begins, the plant would consume its supply of stored food and might then be checked from inactivity of the root, but this would evidently be at the expense of injury to the plant; but, in practice, it is fortunately impossible to hold the frost in the soil so long. It is evident, too, that the covering of strawberries and other low plants, for the purpose of retarding fruit, must be practiced with caution, for a mulch of sufficient depth to measurably delay vegetation is apt to bleach and injure the young growth and to lessen the crop. Yet it can sometimes be used to good effect, and fruiting can be delayed a week, perhaps even more.

THE APIARY.

Production of Comb Honey.

Only a small portion of the honey product of California can be profitably put into sections, but the subject is interesting to all who have bees. At the meeting of bee-keepers during the World's Fair there was quite a discussion on comb honey. R. F. Holtermann read a paper. A locality is to be preferred in which the honey flows are heavy rather than prolonged. The greater number of pounds of honey gathered in the least time the more desirable for the production of comb honey. There is such a diversity of opinion regarding hives that he hesitated to say much on the subject, but believed that any material variation from the depth of the Langstroth is a mistake. A super with section holders, consisting of two sides and a bottom bar, with separators, a follower and a wedge, was his preference. Sections should be $4\frac{1}{4}$ by $4\frac{1}{4}$ inches square. Thickness is a disputed question. In Canada nearly all the bee-keepers use sections $1\frac{1}{2}$ inches thick. In the United States the thicker sections are used—seven to the foot, or $1\frac{1}{2}$ inches. He believed the tendency was toward thinner sections. Regarding bees, their comb-building characteristics and honey-gathering qualities must be looked after instead of their individual beauty. He feared that queen-breeders were bowing too much to popular opinion, knowing that beautiful bees and queens catch the eye and please the customer for the time being. He took issue with the statement that colonies could be too strong early in the season. If a colony became crowded too early to put on sections, he would put on an extracting super until the time arrived for putting on sections. The sections should be filled with full sheets of light foundation. No one who wishes to raise comb honey to perfection will ever care to prevent swarming entirely. Swarms should be hived on the old stands upon very narrow strips (starters) of foundation, or else upon full sheets of foundation. Which shall be used depends upon the locality. If it is where there is danger of pollen being carried into the sections, then full sheets of foundation should be used. When starters are used, one day should be allowed to elapse before the sections are put in place. When swarms are hived on starters they are likely to build some drone comb, especially if the queen is old. Mr. Holtermann did not consider it practicable to requeen the colonies before the swarming season. He would allow the bees to build such combs as they might, taking great care to rear all queens from the best stock, and then in the fall put the bees upon good combs, if they had failed to build good ones, and feed them sugar for winter stores. The combs removed can be sorted over and those having drone comb patched up with pieces of worker comb, or else they may be melted into wax. He gave no upward ventilation. Bees are opposed to upward ventilation, and when given they attempt to stop it by the use of propolis, and the result is daubed sections. He advised shade upon the top and even the sides of the hives. The use of the bee escapes was advised. Mr. Holtermann worked for comb honey until the season was near its end, then turned his attention to the production of extracted honey. This prevented cull sections, unless it was in an exceptional year. Feeding back extracted honey for the production of comb honey was opposed, upon the ground that it would granulate early in the season.

R. L. Taylor—Why do you prefer to use starters in the brood nest when hiving swarms?

R. F. Holtermann—Because we will get more honey. The bees may be weak in numbers in the fall, and we have to do some unting in the fall, possibly some feeding of sugar, but it will be done at a profit.

E. Kretschmer—It depends upon the length of the season as to whether the use of starters only will be the most profitable. When the season is short, starters will pay the best, because they force into the sections what honey does come in. Foundation allows the bees to become the more quickly established in the brood nest, and if the flow will only continue, they will make up for all time lost in filling the brood nest.

N. D. West—Mr. Kretschmer is correct. There is also another point as regards the size of the hive. If we give a large brood nest, it is filled with honey that would otherwise have gone into the sections. I prefer to use five or six frames filled with foundation. Later in the season I would add more frames.

Dr. H. Besse—Would not Mr. Taylor use drawn comb? R. L. Taylor—I would not destroy them, but I did not get so much when they were used as when I used foundation. My experiment was divided into three periods. During the first week the swarms upon starters gained the least; in the next week they did better, and in the third week they did the best.

THE STABLE.

A Plea for the Pacing Horse.

"Twenty years ago," says William A. O'Daniel, in the *Kentucky Stock Farm*, "a large per cent of the horses of my acquaintance could pace, and did pace naturally, 60 per cent of them. They do not now. The wild and unthoughtful craze for the trotting horse will, if not checked by something, eventually annihilate the pacing gait. Why should it not be done? Because it is the greatest and most natural of all the gaits of a horse. Mules are being more and more used for all purposes where the walk only is used for drawing freights, etc. Now, why do I think the pace the most superb of all equine movements, and that it will in time become more in demand? Anatomically speaking, it is the most natural, and therefore the most speedy with the least amount of fatigue. Think first of the fraction of one front foot and one hind foot on opposite sides pulling at the same time. A diagonal draw you see at once. Not so in the pace—both feet on the same side on the ground at once. The height raised and force used by a horse trotting on city streets soon ruins his shoulders, while in the pace the horse not raising his feet so high, nor striking the ground with such force, renders him not so liable to lame himself, and he lasts very much longer, uninjured and sound. Furthermore, he can pull more and go faster in a pace than in a trot. The above statement, if true, makes my position secure, that the pace is the most natural gait.

"If pacing horses had been bred as trotting ones what would the American pacing record be to-day?—far ahead of the trotting record! It has kept pace with it without the shadow of a showing. There was never a true saddle horse without the pacing movement and build, the build of the pacing horse being more active, more speedy in all movement—the trotting horse from time immemorial being considered a slow runner. All trotting horses cannot swim, all natural pacers can—easily and at first opportunity. I have known the horse without the pacing movement to actually drown in still water.

"I defy any man to produce a natural pacer that will not swim easily, rapidly, and without seeming exertion. These are stern facts. Try it. Straws show which way the wind blows, and the above I consider mightily in favor of the pace, being God-given and according to all the laws of nature. The early wear of the trotting horse compared with the sound longevity of the pacer makes millions of difference to American buyers. The races of pacing horses are more speedy, there is less breaking, greater ease to the horses, less boots, etc. And if the premiums were put upon pacing racing that class of horses would gain an impetus on this continent unparalleled in the history of the American turf. Why not do it?

"The terrible jolts of the trotting horse soon make him an institution of the past, while the easy swing of the pacer carries him along more swiftly and leaves him a record-breaker on the race course long after the trotter has been leaning against the wall of his stable. Gentlemen of judgment and lovers of horses arouse yourselves to this, the most important issue of horse breeding in America to-day!

"In conclusion let me say the perfect horse depends upon it. You can get more speed with half the training and have your horse longer on all four of his feet. Let every horseman recall to mind all the pacers they know to be off their feet. Rare, indeed, do you see them place one foot in front of the other when they stop to rest. I trust all scientific horsemen will wake up to the best interests of their profession."

The Coming Demand for Horses.

The *Breeders' Gazette* is disposed to take a hopeful view of the future of horse breeding in spite of present depression. It says:

Horse breeding is not "gone to the dogs" in this country nor will it ever go there. What is wanted is a little more brains in the business—a little clearer knowledge of what is wanted and how to produce it. There are several things that in this connection may be profitably taken into account. As to the present and probable near future of the demand, the rapid increase in the luxurious style of living that is now prevailing calls for an enormously increased supply of carriage horses, well bred, shapely and thoroughly trained; the extension of trade and commerce calls for a large, heavy animal, that can draw heavy loads a short distance and at a rate of speed that is consistent with safety in the crowded streets of our cities, and such horses, weighing 1600 to 1800 lbs., are in demand at prices that would astound many farmers. The roadster, too, is in demand. This is a sinewy, robust animal that is capable of speeding for hours at a gait of not less than eight or ten miles an hour, and covering a few miles at even a quicker pace. This is a horse of luxury and is an animal of high breeding and thorough training to fit it for use in all circumstances. Horseback riding is also steadily growing in popularity as a fashionable amusement and recreation, and here is a field for intelligent breeding as well as training that can very properly go hand in hand with the ordinary work of the farm. In short, the growing demands of commerce, of business, of pleasure and of fashion in the matter of horses will furnish to farmers a pretty sure market for such as can be brought up to the standard required by these demands.

Trotting Records of the Year.

The world's trotting record has not been touched this year, and, in fact, the only horses that have shown anything like the ability to lower the 2:04 of Nancy Hanks are that great mare herself and the king of trotting stallions, Directum, 2:05 $\frac{1}{4}$. But with this single exception the work

of 1893 has been wonderfully good. In nearly every class of events there have been miles trotted close to the best mark of the past, and in several instances a marked lowering has resulted.

THE STOCK YARD.

Calf-Rearing.

This is a subject of constant interest to the stock-breeder, and accounts of expense are always read with interest. The following is that of J. E. Sharp as he gives it to the *Breeders' Gazette*: The chief requisites in calf-rearing are proper housing and feeding. The first being indispensable to profitable rearing and comparatively easy to secure in all localities, the best conditions will admit of but little modification without detriment to the animals themselves. These conditions are large, roomy box-stalls, well lighted, well ventilated, well drained, with a southern aspect and having in addition an enclosed yard for exercise on favorable occasions. As to feeding, it is impossible to lay down any hard-and-fast rule for universal observance, except as to the main necessity of frequent and suitable feeding; and the latter by no means implies the use of any particular kind of food or mixture of kinds, for the methods adopted and foods used will perhaps vary to some extent with every feeder, and possibly with equally good results. There is a great variety of foods suitable for calf-feeding, and which, used with intelligence, will answer the purpose with excellent effect; the use of individual kinds of food depending on their nutritive properties and commercial values, which conditions render their use profitable or otherwise—a matter too frequently overlooked by the average farmer. In this, as in all other branches of stock-feeding, the best results can only be secured by the feeder whose practice manifests no serious flaw when subjected to the full light of scientific investigation. No farmer can longer afford to ignore the teachings of science which in recent times has done so much for agriculture and stock management in every bearing, and which is gradually lighting up the passages along which we have long been groping with uncertain steps, encountering often difficulty and sometimes disaster.

The times for feeding will depend on circumstances, which in the calf period are ever changing. Taken from its dam at about a week old, the first duty is to teach it to drink milk, which requires to be fed several times a day at first in small quantities at a proper temperature, any deviation of which produces an immediate ill effect and is consequently to be closely guarded against, for a calf once started should never be allowed to lose its calf-flesh. A small sheaf of oats, a handful of sweet hay, and a small quantity of meal mixed with a little chaff, all placed within easy reach of the calf, will soon attract the attention of the youngster, who quickly proceeds to nibble at and gradually increase the consumption of each in proportion to the agreeableness of its taste and its own wants. It will always be observed that a calf placed in company with older and more advanced ones will take to feeding much more quickly than when placed alone. Having so far advanced as to procure nourishment from dry matter, the milk will be gradually changed in character until skim-milk only is fed. In respect to the use of skim-milk an extended experience and close observation has led us to the adoption of a method which we regard as highly important. The good or ill effects attending the use of milk is dependent on the quantity fed and the temperature and condition of the same. But in spite of all our exertions to secure perfect conditions, circumstances will occasionally arise to cause a variation, and consequently to produce an ill effect. This danger we have obviated by the use of roots, especially mangolds, for which all farm stock show a decided preference. In conjunction with the meals and chaff a few sound and juicy slices are given, for which the calf quickly shows a strong liking, and in proportion to the quantity of this consumed the milk is lessened until it is entirely withheld. The skim-milk, being no longer required for the calves, is with excellent advantage fed to the pigs, in addition to dry substances, and this use of it is perhaps the most economical possible, furnishing much bone and muscle in young pigs, and producing pork of the highest quality, exceeding in firmness of the lean meat and whiteness of the fat.

In the meantime and in future much care has to be exercised in the manner in which the food is supplied and regulated. Fed in too large quantities an accumulation of various foods in the crib soon produces fermentation and decomposition, easily calculated by means of the noxious odors arising to injuriously affect the delicate sensibilities of the calf and deprive it of its appetite; thus at once effecting the double purpose of robbing the calf's back and the farmer's pocket. Such a condition (and by no means an uncommon one) is the result of the most reprehensible practice of treating the little animal very much as though it were an engine whose fire needed only to have the fuel thrown in in order to consume it, independent of all conditions. It is all the more reprehensible in that it may be avoided by exercising a little care in removing all surplus food which may be utilized by other animals without waste.

It is very important that the calves be placed so as to be easily accessible at all times, thus avoiding any chances of delay or neglect which a less convenient location is apt to occasion. This is the reason why autumn and early-winter calves progress much more satisfactorily than summer ones, which from their being often at a considerable distance from house and yard when in the pasture during busy times may easily be overlooked or neglected. We have always obtained the best results from calves reared during autumn and early winter, these being well able to care for themselves when turned out to pasture in the following summer and autumn, whereas the latter ones from their tender age are unable to withstand the showers and chills of autumn and need a second rearing.

THE VETERINARIAN.

Distemper in Dogs.

A Boston veterinarian gives the *Cultivator* an essay on the subject which may be of use to some of our fanciers. Distemper is a febrile disease, and is produced by a specific poison which increases as the disease progresses, the membranous lining of the digestive and respiratory organs becoming affected, and not infrequently the cerebral and nervous system becoming deranged. The elevation of the temperature is not uniform, as it varies according to the locality and constitutional ability to resist the disease. The phases of the disease, its progressive changes, or what is generally called its pathological symptoms, are, in a general way, about as follows. This may not be found entirely correct as regards individual cases, but in the average cases the following symptoms will be found correct: While the disease is coming on the animal, that is, what is known as the period of incubation, there will be a slight rise in temperature, depression and disinclination to move manifested, sneezing and cold in the head. As it progresses, coldness and general shivering are observed, the visible mucous membranes are injected and streaked with yellowish red.

The fever increases as the disease advances, and the specific action of the poison commences by an inflammation of the conjunctive and nasal membranes; both eyes and nose frequently run considerably, the discharged fluid being of a serous nature; the lining membrane of the mouth and bronchial tubes becomes affected about the same time, and now the disease become more pronounced, and a cough sets in. This may become distressing and frequent, or otherwise, according to the severity of the case. The duration of this stage is usually about a week or ten days.

If the disease is to terminate favorably, the subsidence of the different symptoms may be confidently looked for, but if the tertian or intermittent fever increases, and the usual complication, pneumonia, ensues, the duration of the disease is prolonged, and a favorable recovery can hardly be expected, as there must be considerable prostration, loss of appetite and inability to successfully fight against the disease. When a thick, tough material is expectorated or ejected from the mouth, you can come to the conclusion that the bronchial tubes or lungs are affected; there may be also a discharge slightly streaked with blood.

Should the lung tissue itself be affected, the difficulty of breathing will soon point this out. Upon examining the animal, if the sides of the chest feel tender when touched or gently pressed, the likelihood is we have pleuritis or inflammation of the investing membrane of the lung; the breathing under such circumstances will be short, quick, painful, laborious and feeble.

With respect to prognosis, or our opinion as to the result of the case, we should say it is generally conceded that when the temperature is high and variable, the lungs affected and the nervous system involved, the case will in all probability end fatally. What is particularly discouraging and to be dreaded is catarrhal pneumonia, to which, in case the sufferer is young, he will most certainly succumb. Portions of the lungs collapse and others become emphysematous, that is, a collection of air beneath the pleural and interlobular cellular tissue of the lung. Now, should the dog survive, he will in all likelihood be a victim to chronic cough. The general average from mortality from distemper is about 20 per cent, which increases in cold weather.

Treatment: As we stated above, distemper is due to a specific poison, and we now state there has been no antidote as yet found for this; therefore we are compelled to permit the disease to run its course; sustain the strength of the patient, and unless when unavoidable, interfere as little as possible while the usual course is pursued by the disease. Of course we will moderate its severity, and when danger is threatened subdue the symptoms as much as is considered safe. When the patient is young, vigorous and healthy, low diet only ought to be given, and this of a laxative nature.

The dog should not be permitted to go out in cold, wet, moist or even variable weather. This caution should be carried into effect, as if we are fortunate enough to escape the complications, lung and bronchial, above mentioned, we are comparatively safe. When the dog is recovering is the time he is most apt to expose himself to wet, cold, etc., in which case he will run a great chance of getting cold; result, a collapse, and in all cases this is more dangerous than the original complaint. In serious cases, when we have cough and catarrh, with vomiting, it is absolutely necessary that we offer our services to assist nature, instead of allowing her to take almost entire charge as heretofore. While the symptoms are mild our treatment should not be active.

In the line of medicine we would suggest 20 drops of belladonna (Homœopathic) in half a pint of water, a teaspoonful of which should be given the animal four times each day. The vomiting may be controlled by giving tincture nux vomica, prepared in the same way alternately. The nux vomica will tend to impart tone to the stomach and regulate the bowels. The food should consist of milk or mutton broth. In case of offensive diarrhoea we give mercurous solution alternated with gellseminum, prepared and given as above. (This character of treatment has been very successful with us.)

If we have to deal with the catarrh and lung affection, we give byronia and aconite as above. If the lung affection is troublesome, apply to the chest and pleural region, with a little friction, a mixture of four parts of olive oil to one of croton oil. The temperature of the barn or kennel should be comparatively low and even.

In some cases the disease attacks the brain and its membranes. This we treat with hyoscyamus, giving five drops in a teaspoonful of water once every half hour until convulsions are controlled. As a tonic to be given in the con-

valescent stage the nux vomica and gellseminum, previously mentioned, is superior to any other; both being nerve tonics they are particularly indicative at the time.

POULTRY YARD.

Turkey-Growers' Methods.

California turkey-growers will read with interest the practices of a leading Rhode Island turkey-man, as described by Samuel Cushman of the Rhode Island Experiment Station:

In 1892 George Tucker raised 425 turkeys from 35 hens. He credits his present success largely to having procured from Connecticut a very fine gobbler, by means of which he increased the hardness of his flock.

He has since been more careful in selecting new blood. He found that young turkeys which were kept near the house or under the trees in the orchard did not thrive. Many had swelled heads, and soon died. On the other hand, those placed on the highest and driest pastures, where there were no trees and but a light growth of grass, did the best of all. They roost out in the trees the year through, and but few are lost.

In the spring a sufficient number of nests are made for the hens by placing barrels by the walls and fences near the house and barns, or by laying wide boards against the walls. In them is placed leaves or cut straw. The turkeys generally take possession of these nests, though some persist in seeking out nests of their own. Sometimes several lay in the same nest. To prevent this, a nest in which a turkey has commenced to lay is, after she has deposited her egg, shut up for the remainder of the day to keep out intruders. Glass nest eggs are used. Eggs are gathered daily to prevent their being chilled, and that rats may not get them. They are kept in pans, having a few oats in the bottom to prevent their rolling about. Each panful holds two sittings and is dated, that their age may be known. When a hen sits on the nest for two nights 17 of the oldest eggs are given her. The eggs laid by her during the two days are not left in the nest. The nests are first shaped so that they will not be so flat as to allow the eggs to roll out, or so deep as to cause them to be piled one upon another. The turkeys do better if not fed while sitting. However, by feeding hens with a little dough when the eggs are due to hatch, they are contented to stay in the nest longer.

When the turkeys are a couple of days old, and seem quite strong, they are placed in a basket, and with the hen removed to a remote part of the farm. Triangular pens, made of three boards 12 feet long and one foot high, are placed in the fields where it is intended the flock shall stay until nearly grown. They are not located near together, lest the different flocks attract each other's attention. But four or five of the pens are put in a 20-acre field. The little turkeys or poults are put in one of these pens with some dough, and the hen is gently placed beside them.

In releasing the hen Mr. Tucker takes pains to step quietly back toward the wind, that, if frightened, she may go in a direction in which the cries of her young may be heard, and bring her to them. The pens are removed to fresh ground frequently. Care is taken that pens are placed on ground free from hollows which may hold water. Some turkeys, when hovering their brood in such places, will remain in them while they fill with rain and the brood drowns. After five or six days, when the young are strong enough to follow the hen without being worn out, and have become familiar with the attendant, so that they will come when called, they are led out of the pens and allowed free range.

In feeding and looking after this number of turkeys, the attendant, usually one of Mr. Tucker's daughters, has to walk about three miles to go the rounds. Until four weeks old their food consists of corn meal mixed with sour milk. They are given sour milk to drink, no water being given them. When four weeks old cracked corn is mixed with the meal, and the quantity is gradually increased, until, at eight or ten weeks old, their feed consists of cracked corn, moistened with sour milk.

Until June 1 they are fed three times a day. From June 1 to July 15 they are fed twice a day. After this Mr. Tucker used to give them no feed until they commenced to come to the house in the latter part of September, when a little corn was given them daily. Of late years he thought they did not get enough without it, and has continued the feed the whole season. In November they are given all the corn they will eat. They like Northern white Flint corn the best, fatten most rapidly on it, and the quality of flesh is also finer when it is given. If fed new corn they have bowel trouble. Mr. Tucker usually gives old and new corn mixed for fattening.

When the young turkeys get to be the size of quails, two hens and their flocks usually join forces, and roam together until fall. In the fall the sexes separate, the gobblers going together in one flock and the hens in another. About Thanksgiving the litters hatched in the latter half of May weigh, gobblers 18 to 20 pounds and hens 10 to 11 pounds each. Mr. Tucker does not care to raise second litters. When he has them it is because the hens have stolen their nests. He has considerable loss among late turkeys, and if such birds are kept over winter they get sick more readily. As disease very quickly spreads among turkeys, he looks upon them as disease breeders.

The turkeys of the early litters that are lost generally die during the first week, or in August, when two or three months old. There are no foxes, weasels or skunks on the island.

Mr. Tucker prefers birds with short legs, as they have plumpest bodies. His turkeys are a mixture. Many are of a light gray color, similar to Narragansett turkeys. There are also buff, brown and dark birds. He prefers the brown and gray to the black, as they look better when dressed. He finds medium weights sell best, except at Thanksgiving and Christmas or New Years.

THE DAIRY.

Succotash Ensilage for Cows.

A paper on more economical feeding of live stock, by Prof. James W. Robertson, Dairy Commissioner of Ontario, gives some new matter in relation to ensilage and other matters. From it we extract, as follows: There are some matters in the home practice of the farmers which need more serious attention than the restrictions which these two governments have seen fit to impose upon our cattle. Farmers of Ontario should study economical methods of feeding in order that they may produce cattle at the least possible cost, because wasteful feeding will so increase the cost of production that no market within reach, under the most favorable circumstances, can leave a profit to the feeder.

In conjunction with well-cured corn ensilage, five pounds per head per day of meal seems the maximum limit for the economical fattening of steers; and very little above that seems the maximum limit of meal per day for the economical feeding of milch cows. We carried on a very comprehensive test during the last two years at the Central Experiment Farm to discover if there was any constant relation between the quality of the food which was given (in its content of meal or grain), and the quality of milk which was yielded (in its richness or percentage of solids). We found that the addition of meal to the ration of cows after it reached from five to seven pounds per head per day was not economical in point of either the quality or the quantity of the milk which they gave in return. We made something like 20,000 separate tests of the milk in order to have such a measure of data as would enable us to draw conclusions which would certainly not be erroneous or misleading.

From five to seven pounds of meal per day seems a small allowance for a milking cow or a fattening steer, but if that amount can be saved to the farmers it would mean many millions of money per year to the cattlemen of Canada.

For some years I have been seeking to discover some substitute for the expensive and rich meals which have been fed with corn ensilage in order to make it a complete ration for fattening steers or feeding milch cows. At last I venture to think that I have been successful in discovering a substitute which is within easy reach of every farmer in Ontario, and almost every farmer in the Dominion who keeps cattle. I have here samples of ensilage made from Indian corn and horse-beans which have been grown together in the same rows. The sunflowers and horse-beans supply the albuminoids and fat in which the corn is deficient.

The method of growing is as follows: One-half bushel of horse-beans are mixed with one-third bushel of Indian corn; these are sown or planted in rows three or three and a half feet apart on one acre. When the crop is grown the product from two acres of that mixture is put with the heads from one-half an acre of sunflowers (the Mammoth Russian sort). The albuminoids from the beans and sunflowers, thus provided in the ensilage, will be equal to four and a half pounds of mixed cereals added to every feed of fifty pounds of corn ensilage. Besides, the albuminoids in the green and succulent state of these plants are likely to be more digestible than in the ripened grains.

The value of this to the farmers and cattle-keepers in Ontario is not quite evident at first sight. The advantages are as great as though a farmer could get nearly 40 bushels of mixed cereals per acre, in addition to his Indian corn crop, without the expenditure of any more labor or money than in the growing of the corn alone. The extra cost of growing one-half an acre of sunflowers, and providing the seed for the horse-beans grown on the two acres in the rows with the corn, is equal to \$15. Against that extra outlay the farmer gets from the two and one-half acres enough additional feed to be equal to 115 bushels of mixed wheat, barley and oats. That is equal to a clear gain in cash (valuing the mixed grain at one cent per pound), of almost \$14 per acre more than from the growing of Indian corn alone, and the growing of ripened grains to feed with it in order to make it a complete and well-balanced ration.

That Big Canada Cheese.

Readers who saw the mammoth cheese at the World's Fair may be pleased to learn how it came out. It weighed 22,000 pounds and the judges say of it: "In October, 1893, we examined the mammoth cheese from Canada in the Agricultural Building by boring into it with a trier to a depth of 33 inches. We report that the cheese is sound from the rind to the center, that it draws perfectly solid and cuts close in the texture. It has a good clean flavor, which is quite tasty. In our opinion it has kept its flavor remarkably well. We found the color uniform and true. The workmanship of the making is most creditable. We attach a score card which shows 95 points out of a possible score of 100 points, and recommend that a medal and diploma be awarded to the dairy commissioner for Canada, being informed of the condition under which the mammoth cheese, now 13 months old, was exhibited during the summer in a building with a glass roof, where the temperature often stood over 100 and it is a surprise to us all."

The Canadian achievement at the World's Fair was phenomenal. The total number of exhibits of cheese from Canada was 539, which secured altogether 490 awards. Nine of the exhibits from Canada secured 99½ points out of a possible 100 for perfection. Five of these lots were from Ontario and four from Quebec.

THE HOME CIRCLE.

Love Unexpressed.

The sweetest notes among the human heart strings
Are dull with rust;
The sweetest chords adjusted by the angels
Are clogged with dust;
We pipe and pipe again our dreary music
Upon the self-same strain,
While sounds of crime and fear and desolation
Come back in sad refrain.

On through the world we go an army marching,
With listening ears,
Each longing, sighing for the heavenly music
He never hears.
Each longing, sighing for a word of comfort,
A word of tender praise,
A word of love to cheer the endless journey
Of earth's hard, busy days.

They love us and we know it; that suffices
For reason's share;
Why should they pause to give that love expression
With gentle care?
Why should they pause? But still our hearts are
aching
With all the gnawing pain
Of hungry love, that longs to hear the music,
And longs and longs in vain.

We love them and they know it; if we falter
With fingers numb
Among the unused strings of love's expression,
The notes are dumb.
We shrink within ourselves in voiceless sorrow,
Leaving the world unsaid,
And side by side with those we love the dearest,
In silence on we tread.

Thus on we tread, and thus each heart in silence
Its fate fulfills,
Waiting and hoping for the heavenly music
Beyond the distant hills.
The only difference of the love in heaven
From love on earth below
Is here we love and know not how to tell it,
And there we all shall know.

—Constance Woolson.

Dr. Trifulgas's Double.



HE wind roared Whoo-oo-oo! Mi-i-ish! the rain was pouring in torrents. The fury of the gale bowed the trees on the Volsinian coast and beat upon the cliffs of the mountains of Crimma. The lofty rocks along the shore were gnawed by the waves of the vast sea of Niegallocride.

Whoo-oo-oo! Whi-i-ish!

At the end of the harbor is the little town of Luktrop. A few hundred houses, four or five steep streets, which look like ravines, paved with pebble stones and roughened by the scoria ejected by the neighboring volcano, Vanglor. During the day it emits sulphurous vapors; at night, ever and anon, huge tongues of flame. Like a lighthouse, the Vanglor shows the harbor of Luktrop to the coasters whose keels cut the waves of the Niegallocride.

On the other side of the town are some ruins of the Crimmian period. Then comes a suburb which recalls Arabian villages, with white walls, round roofs and sun-scorched terraces, a heap of stones flung there haphazard, like a pile of dice whose angles were worn off by the steps of time.

Among other buildings is the Six-Quatre, a name given to an odd-looking structure, with six windows at one side and four on the other.

A steeple dominates the town—the square belfry of St. Phililene, with a chime of bells which are sometimes stirred by the tempest. It is considered a bad omen, and always inspires terror throughout the country.

Such is Luktrop. Then outside are scattered houses, standing amid the broom and furze, as in Brittany. But it isn't in Brittany. Is it in France? I don't know. In Europe? I don't know that, either. At any rate, don't look for Luktrop on the map—not even in Steller's Atlas.

Tap! A timid knock was heard on the narrow door of the Six-Quatre at the left angle of the Rue Messagiere. It was one of the most comfortable houses, if the word can be applied to Luktrop.

The knock was answered by savage barking, intermingled with howling, like the barking of a wolf. Then a window above the door opened. "Deuce take these troublesome people," said an angry voice.

A young girl, wrapped in a shabby cloak, who stood shivering in the rain, asked if Dr. Trifulgas was at home.

"He is or isn't—according to circumstances."

"I've come to ask him to go to my dying father."

"Where is he dying?"

"On the coast of Val Korinon, four miles from here."

"What is his name?"

"Vort Kartif."

"Vort Kartif?"

"Yes, and if Dr. Trifulgas—"

"Dr. Trifulgas isn't in."

And the window closed abruptly, while the roar of the wind and the rush of the rain blended in a deafening noise.

This Dr. Trifulgas was a hard man. His old dog Hurzof, a cross between a bull dog and a spaniel, would have had more pity. His house, Six-Quatre, inhospitable to the poor, opened only to the rich. Besides, he had a regular scale of charges for his services—so much for typhoid fever, so much for a congestion, so much for pericarditis and other diseases which doctors invent by the dozen. Now, Vort Kartif was a poor man, a member of an insignificant family. Why should Dr. Trifulgas disturb himself, and on such a night?

"Just getting up was worth ten fretzers," he muttered as he went back to his bed.

Scarcely twenty minutes had passed when the iron knocker again struck on the door of the Six-Quatre.

The doctor, in a rage, again leaned out of the window.

"Who's there?" he shouted.

"I am Vort Kartif's wife."

"The man at Val Korinon?"

"Yes, and if you don't come he will die."

"Well, you'll be a widow."

"Here are twenty fretzers."

"Twenty fretzers to go to Val Korinon, four miles off! No thank you! Deuce take me if I will."

And the window banged again. Twenty fretzers! A fine piece of business! Risk a cold or lumbago for twenty fretzers, especially when, the next morning, he was expected at Kiltroon by the rich Edzingov, from whose gout he made fifty fretzers a visit.

With this agreeable prospect Dr. Trifulgas slept still more soundly than before.

"Whoo-oo-oo! Mi-i-ish! And then tap! tap! tap! This time three blows from the knocker, plied by a more resolute hand, blended with the noise of the storm. The doctor woke, but in what a temper! When the window was opened, the wind burst in like a bombshell!

"It is for Vort Kartif."

"That miserable fellow again?"

"I am his mother."

"May his mother, his wife and his daughter die with him!"

"He has an attack of—"

"Well, let him defend himself."

"They have sent you some money," the old woman added; "an installment on the house which was sold to Dontrop on the Rue Messaglier. If you don't come, my granddaughter will be fatherless, my daughter a widow, and I shall have no son."

It was pitiful and terrible to hear this aged woman's voice, to think that the wind was chilling the blood in her veins; that the rain was drenching her thin form!

"An attack of epilepsy is worth two hundred fretzers," replied the heartless Trifulgas.

"We have only one hundred and twenty."

"Good evening!"

And the window shut again. But on reflection one hundred and twenty fretzers for a two hours' walk, including the visit—that was sixty fretzers an hour, a fretzer a minute—the profit was small, yet after all not to be despised.

Instead of going back to bed the doctor slipped into his coat, put on his high boots, his thick overcoat and his mittens; then, leaving his lamp burning beside his Codex, open at page 197, he unbolted the door of Six-Quatre and stood upon the threshold.

The old woman was there leaning on her staff, emaciated by her eighty years of poverty.

"The one hundred and twenty fretzers?"

"Here they are, and may God increase them to you a hundred-fold."

"God! The money of the poor! Did anybody ever see the color of it?"

The doctor whistled to Hurzof, lighted a small lantern, hung it round his neck and turned toward the sea.

The old woman followed him.

What a tempest of wind and rain! The bells of St. Phililene began to ring. A bad omen! Pshaw! Dr. Trifulgas was not superstitious. He believed in nothing, not even his own science, except for the income it brought him. What weather and what a road too! Stones, slippery with seaweed; scories crunching under the tread! No light except the faint, wavering rays from Hurzof's lantern. Sometimes there was a burst of flame from the peak of Vanglor, amid which huge, grotesque silhouettes seemed to hover. We do not know what lurks at the bottom of these fathomless craters. Perhaps they are the souls of the under world, which turn to vapor in rising.

The doctor and the old woman followed the curves of the little bays on the shore. The sea was white with a livid pallor—the whiteness of mourning—glittering with a phosphorescent light along the line of surf, which broke in shining waves upon the strand.

Both climbed to the bend in the road, be-

tween the downs, where the broom and furze met like a thicket of bayonets.

The dog had come close to his master and seemed to say:

"Ha! A hundred and twenty fretzers for the strong box! That's the way to get rich! More land for the vineyard! Another dish on the supper table! Another bone for faithful Hurzof! Let us nurse the sick rich people and bleed—their pockets."

At this point the old woman stopped, and, with a trembling finger, pointed to a ruddy light shining through the gloom. It came from Vort Kartif's house.

"There?" asked the doctor.

"Yes," replied the old woman.

The dog howled plaintively.

Suddenly the volcano, with a roar which seemed to shake it to its foundations, sent forth a sheaf of flames which appeared to touch the clouds. Dr. Trifulgas was thrown down by the shock.

Swearing like a trooper, he rose and looked around him.

The old woman was no longer there. Had she disappeared in some chasm in the earth, or was she concealed in the heavy mist?

The dog was standing erect on his hind legs, with his mouth open and his lantern out.

"Let us go on," murmured Dr. Trifulgas.

The worthy man had pocketed his money. He must earn it.

There was only one glimmer of light—perhaps half a mile away. It came from the room of the dying or dead man. That was the house. The old woman had pointed to it. No mistake was possible.

Amid the roaring of the wind, the rush of the rain, the whole fury of the tempest, Dr. Trifulgas walked swiftly on. As he advanced, the house, standing alone in the fields, became more and more clearly visible.

It was strange how closely it resembled the doctor's residence, Six-Quatre, at Luktrop; the same arrangement of the windows in front, the same little vaulted door.

Dr. Trifulgas hurried on as fast as the hurricane would permit. The door was ajar. He pushed it open, and the gale banged it after him rudely. The dog, left outside, howled, pausing at intervals like the singers between the verses in a psalm.

Strange! One would think that Dr. Trifulgas had returned to his own home. Yet he had not grown bewildered and made a circuit. He was really at Val Korinon, not at Luktrop. Yet there was the same low, vaulted corridor; the same winding wooden staircase, with its wide railing worn by the friction of many hands.

He went to the landing. A faint light filtered under the door at Six-Quatre. Was it a delusion? In the dusk he recognized his own room, the bed with its yellow canopy; on the right the old pearwood chest, at the left a strong box where he meant to deposit his 120 fretzers. There stood his leather-cushioned armchair, his table with its twisted legs, and on it near the dying lamp his Codex, opened at page 197.

"What ails me!" he muttered.

What was it? A chill of fear crept through his veins. His pupils dilated. A cold perspiration came through the pores of his skin.

He must hasten. The lamp was going out for want of oil. He must look at the dying man.

Yes, there was the bed—his bed, with pillows and canopy, closed by flowered curtains. Was it possible that this was a poor man's wretched pallet?

With a trembling hand he grasped the curtains, parted them and glanced within.

The dying man, with his face in full view, lay motionless, as if about to draw his last breath. The doctor bent over him.

Oh, what a cry escaped his lips, answered by the mournful baying of the dog outside.

The dying man was not Vort Kartif, but Dr. Trifulgas. It was he whom the congestion had attacked. A cerebral apoplexy, with a sudden accumulation of water in the cavities of the brain, with paralysis of the side of the body opposite to the seat of the injury.

Yes, it was he for whom a physician had been summoned; he, who in the hardness of his heart had refused to go to the poor man; he who was dying.

Dr. Trifulgas was like a madman. He felt that the case was hopeless. The gravity of the symptoms increased every moment! The action of the heart and respiration were about to cease. Yet he had not wholly lost the consciousness of existence.

What should he do? Lessen the quantity of blood by means of bleeding? Dr. Trifulgas was a dead man if he delayed.

Bleeding was still practiced at that time, and, as at the present day, the doctors cured of apoplexy all who were not destined to die of it.

Dr. Trifulgas seized his case of instruments, took out a lancet and cut the arm of his double. The blood did not flow. He rubbed the chest violently; the action of his own heart was falling. He put hot bricks to the feet—his own were growing cold.

Then his double started up in bed, struggled violently for breath and drew a long sigh. And Dr. Trifulgas, spite of all that his knowledge could suggest, died under his hands.

The next morning only a corpse was found in Six-Quatre—the body of Dr. Trifulgas. It was interred with great pomp in the cemetery of Luktrop after numerous others which he had sent there—according to the most approved formula.

As to old Hurzof, they say that since that day he has darted through the country with his lighted lantern howling like a lost dog.

I can't vouch for the truth of the rumor, but so many queer things happen in this land of Volsinea, near the suburbs of Luktrop.

But, I repeat, don't look for this place on the map. The best geographers have not yet agreed as to its situation in latitude, or even in longitude.—Jules Verne.

Thoughts for Thanksgiving.

Make my mortal dreams come true
With the good I fain would do,
Clothe with life the weak intent,
Let me be the thing I meant.

—Whittier.

That life is rich which never misses an opportunity to do a kindness. Whether this kindness may be shown to the rich or the poor, the great or the unknown, is of very little consequence, and is, indeed, a matter beyond our rightful province. It is one's responsibility as well as privilege to take advantage of every opportunity, as it presents itself, and the way these opportunities multiply in daily life, if one is swift to recognize them, is one of the most interesting facts in the entire panorama of living. The woman who remarked that she never minded her own business but once in her life, and then she was sorry for it, had grasped the right clue to life. For one's "own business" is a very elastic term. It includes far more than one's personal concerns. It is a part of individual responsibility that reaches out in many and in varied directions. The person who interprets his "own business" to mean nothing beyond his personal affairs will find himself living a very narrow, hard, selfish and colorless life. If his neighbor has any need of "mind, body or estate" that he can meet there lies a part of his "own business." If his neighbor is cold or hungry or ill clad, and he can relieve him, wholly or in part, there is his business. If there are needs, or sorrows, or anxieties—less visible and tangible, but even more real, because they involve mental or spiritual suffering—there lies his own business. One may well turn from all his personal concerns and devote his utmost energy and his time and his power of thought to meeting an emergency or need in the life of his neighbor. And whoever needs him is his neighbor. The term does not designate material proximity, but spiritual gravitation.

The higher plane of Christian living will not, indeed, ever be reached until the clumsy methods of public philanthropy shall give place to the subtle and sympathetic methods of private and personal service. Doing

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder
ABSOLUTELY PURE

good should not need to be a profession, an occupation separable and separate from ordinary life; it should be the natural, spontaneous accompaniment of the hourly and daily living. It is really not necessary that, in order to assist in serving humanity, one should migrate to some new locality and advertise his purpose, either *viva voce* or in the press. To do good should be the spiritual condition and not in the least a matter of geography. As things go now, public and professional philanthropies are far better than no philanthropies at all, and it is far better to migrate across a city and found a social settlement than it is to live in selfish indifference to the needs of the less fortunate. But the time will come when formal charities will be superseded by the spontaneous and all-pervading love and sympathy, in simple and natural relations. If each individual in the world simply did all that was in his power each day for the persons whose lives come in natural contact with his own—whether in the relations of servants, or friends, or acquaintances, or strangers—the entire world would be regenerated at once. Nor need this interfere in the least with his ordinary work and pursuits. Everything is possible to courtesy and to love. They are spiritually expansive, and, like the miracle of the loaves and the fishes, the more they are given, the more they increase. The more they are divided the more they are multiplied. There are certain things that if one does for another consume time and strength as well, but—if done out of loving impulse this time and strength will be transmuted by some divine alchemy into renewed energies, which will give him infinitely greater impetus in his own special work. Indeed, his individual work can safely be trusted, if the call to action elsewhere comes to him. It is he that loseth his life that shall find it. These words are not a mere rhetorical phrase, but they stand for the profoundest and most practical truth. The "laying up treasures in heaven" is simply the creating of spirituality by holding the thought and doing the deed that is generous and loving. It is by means of this phase of achievement and this quality of atmosphere that we build up an extension into the spiritual world.

The one great truth is that we need to divest ourselves of the idea that doing good is a matter of self-sacrifice and martyrdom. On the contrary, it is the only condition of completeness of life. It is the bloom, the flower, the fruit. All else is rudimentary, and this is the condition of inflorescence.

"Clothe with life the weak intent:
Let me be the thing I meant!"

—Lillian Whiting, in Boston Budget.

Studs Versus Buttons.

Strange that our strong-minded husbands and brothers have worn studs so long and found them so superior to buttons, and we women have congratulated ourselves upon having no longer the unpleasant duty of sewing theirs on, and yet have not generally learned to use them upon our own clothing! I have found the small, mother-of-pearl, three-eighths of an inch size studs a labor-saving medium and very satisfactory, says a lady correspondent in an exchange. The two button-holes in each place instead of one being accomplished in the new garment, and there is no annoyance on the score of fastenings. Corset-covers and night-dresses need hardly be looked at when they come in from the wash; button-holes do not show wear until the garment is very old; but those dreadful little three-cornered holes that the button will make, under the influence of a seven-pound iron and a strong right arm, are most depressing and hard to mend neatly! Get, then, the studs, and, having a piece of narrow "baby" ribbon or tape, sew the studs down the side of it, allowing a little more distance between each on the ribbon than there is between the holes in the garment. Put them in the clean garment from the wrong side, and the ribbon does not show, but is a sure guard against dropping a single one, which, if we believe said brothers and husbands, is sure to roll under the bureau or to some unget-at-able place, to the utter subversion of morals and temper.

Memory.

If you would have a good memory, charge your mind with affairs. Not remembering things is only your habit of mind, growing out of your indifference to the things about you; it is indeed because you do not charge your mind with what is going on about you. Many of us complain that we do not remember names; it is because we do not try to. Fix the habit of catching a name and holding it, even if you haven't time, and it will grow upon you to such an extent that before you realize it you recall names as readily as faces.

DOMESTIC ECONOMY.

Thanksgiving Pies.

It may be too late for making pies for this Thanksgiving Day, but a good pie is a thing for all time. The following is Miss Farmer's way of teaching pie-making at the Boston cooking school. Both puff and plain paste were made, Miss Farmer using the puff paste for the patty cases and for the rims and tops of the mince pies, the plain paste being used for the bottom crust of the pies. She considers a pie made with puff paste more healthful than if made with the plain paste, on account of its lightness.

Puff Paste.—The materials used were one pound (four cups) of pastry flour, the yolk of one egg, one teaspoonful of salt, one teaspoon of lemon juice, ice water sufficient to mix, and one pound (two cups) of the best butter.

The buttermilk should first be removed from the butter by a thorough washing. To do this, heat both the bowl in which the butter is to be washed and the hands with hot water, then fill the bowl with ice water, divide the butter into three parts and wash thoroughly, squeezing and working it until it feels waxy. Unless the buttermilk is removed, the crust will not rise. When washed, pat and flatten it out until no water flies from it, and chill, wrapping it in a towel and laying in a pan, with a pan of ice above and below it. Having prepared the butter, make a hollow in the flour, and put in the salt, lemon juice and yolk of egg and pour on gradually the ice water, mixing it into a stiff dough. Toss on to a floured board and knead until smooth. Pat and roll out, using a long, light sweep and not bearing on, then fold in one part of the butter which has first been dredged with flour and rolled out thin, roll out again and repeat the process until all the butter has been worked in. Then fold, making three layers, turn half around, pat and roll out, repeating seven times, and using as little flour as possible. Chill thoroughly before using.

To make the patty cases, roll the chilled puff paste to the desired thickness, cut carefully with a round cutter, cut the centers from half of the rounds with a smaller cutter for the rims, and, after moistening slightly with ice water, set the rims upon the lower rounds. Chill thoroughly before baking. To bake puff paste, considerable heat is needed, about the same amount as for baking biscuit. After the paste has begun to puff up, the heat may be decreased somewhat. It order that they may be baked evenly, they must be watched and turned around so that they shall rise evenly.

Plain Paste.—Into two cupfuls of flour, to which has been added half a teaspoonful of salt, cut quarter of a cupful of lard and mix to a stiff dough with ice water. Toss on to a floured board, pat and roll out. Dot over with bits of butter, dredge with flour, fold, pat and roll out again. Repeat, using quarter of a cup of butter in all, then fold three times and chill thoroughly before using. It is better to make pastry the day before it is to be used. This is a very simple recipe for pastry and may be made richer if liked. The lard gives a flakiness which butter does not give, but butter has the better flavor. The butter and lard may be worked into the flour together, which will hasten the process very much, always remembering to keep as much of the flour between the butter and the fingers as possible.

Mince Pies.—The bottom crusts of Miss Farmer's pies were made of the plain paste, while the rims and tops were of the puff paste. The lower crust was carefully fitted on so that no air should be between the pan and the crust, and cuts were made on the top to allow the gases to escape. Miss Farmer prefers perforated tin plates to earthen ones, and says that the pies bake more satisfactorily in plates that have been used to some extent. Unless a thick pie is liked, the rims may be omitted, the upper crust being fitted directly on the lower. For the filling, directions are given below.

Mince Meat.—Cook together two and a half pounds of meat and one and a quarter pounds of suet until the meat is tender. Cool in the water in which it was cooked. Chop the meat fine; there should be four cupfuls. Add eight cupfuls of chopped apples, the suet and stock, two pounds of raisins stoned and cut in pieces, half a pound of citron cut fine, a cup and a half of molasses, one quart sweet cider, two cupfuls of boiled cider, three cupfuls of brown or maple sugar, a cupful and a half of white sugar, two and a half tablespoonfuls of salt, one tablespoonful each of allspice and cinnamon, a teaspoonful of cloves, half a teaspoonful of pepper and one nutmeg grated. Simmer one and a half hours. Add a cupful and a half of

brandy, one cupful of sherry and the juice of two lemons, the Cushing process liquor being preferred at the cooking school. This is a foundation recipe for mince meat, and, of course, may be varied to suit the tastes of the family for whom it is provided. Any kind of fruit syrup is also good to add. By cooking the suet with the meat, as directed, the former will not make itself unpleasantly prominent in the pie, as is sometimes the case.

YOUNG FOLKS' COLUMN.

How We Carried the Cable.

IT was in 1814, during our war with England, that Jessup and I were farm boys, near Sackett's Harbor.

"There lay the fine American frigate Superior rapidly fitting out for action, and all the time very closely watched by the British forces on the water and on the Canadian shore.

"The stores, cannon and sails for the British ships were easily brought all the way from England by water, but we Americans had to load and unload ours a dozen times before we could get them by the way of the Oswego river from the Atlantic seaboard.

"Everything had gone well, and all the fittings for the frigate had arrived except the big cable. The other stores had been shipped round at night in boats, but by the time the cable arrived the British guard boats were too vigilant and numerous, and there lay the great cable of eight-inch rope, weighing 9600 pounds and 600 feet long, still 16 miles from its destination. No cart was strong enough to carry it through the woods, yet it could not remain there, as the enemy would certainly try to capture it. What was to be done? The stirring times and a sight of so many soldiers and sailors had inspired us two boys with martial ardor, and as Bennie Jessup could play on his father's fife and I was possessed of an old snare drum, we had often spent our spare time together practicing, and did very well.

"It was a bright morning in May that Bennie bounded into the lot where I was hoeing, crying, 'Hurry up, Frank, and bring your drum. They called for volunteers in the village this morning to carry the cable over to Sackett's, and 200 men have volunteered. Farmer Smith says I can go to blow the fife, and the men are calling for you to bring your drum.'

"In ten minutes we were down at the tavern. There lay the cable stretched along the path, with the men standing at each side of it. There were sailors, soldiers, farmers and farm boys, and a half dozen Oswego Indians, and Lieut. Smith, running up and down, giving orders and telling every one to hurry up, as every moment was precious. 'Hooray for the band! Here they are!' shouted the men, as Ben and I appeared, quite out of breath.

"Go up front," ordered the officer. 'All hands lift cable. Forward, march!' and as we struck up a lively quickstep with fife and drum no two boys were prouder than we. What a sight it was! That immense rope lying on the men's shoulders like the back of some leviathan serpent, and the 400 legs of the men moving back and forth like those of a centipede, as away they went over hill and dale to the tune of fife and drum, while one of the village boys carried a flag. The man who led off was a gunner by the name of Joalsson, who was on his way from the coast to join the Superior. He had a fine voice, and kept the men amused by singing sea songs and cracking jokes.

"Of course, the work was very hard and galled some shoulders, so the men rolled up their jackets for cushions, while at every resting-place some who were used up dropped out, to be replaced by others.

"At last Sackett's Harbor was in sight, and the people came to meet us. Such a hurrahing and banging of guns were never heard in that town before, as we proudly marched, Bennie and I playing a tune very popular then, to which all hands sang the following chorus:

Now I hear the redcoats say,
We'll strike our tents and run away.
Up they jump and away they run,
Without a bayonet or flag or gun.
Over the border, sans parade,
Peacock feather and red cockade,
Red cockade and peacock feather,
We Yankee lads will fight forever.

"Hello, boys! You are not going home right away, are you?" called out cheerily handsome Lieut. Smith to Ben and me. 'Those are fine lively marches you play together. I want you to stay and enlist with us on the Superior as fifer and drummer. It

won't be for very long, and you will find it easier than farming.'

"Bennie and I looked at one another inquiringly, but as he was the oldest I let him speak for both.

"What is the pay, sir?"

"Five dollars a month and found."

Those were big wages for boys those days, but Bennie was cautious and asked:

"How often will you salmon us, sir?"

"Oh, not at all," laughed the officer, heartily. 'Salmon are not in ship's stores, for sailors are not farmers.'

"All right, sir. Then we will join," replied Bennie, and in a short while we were both enlisted as volunteers on the fine frigate Superior, bound out on the lakes to fight for our country, and to witness the greatest lake battle in history."—Harper's Young People.

MRS. M. H. OBER,

Phelan Block, 816 Market, S. F.

Branch, 1236 San Pablo Avenue, Oakland.

All qualities Ypsanti Union Suits for ladies and children. Headquarters for the Coast. JAROS Hygienic Union Underwear.

Sample pieces and Catalogue sent free.

TIGHTS.

Knee and ankle, open and closed seat, \$1.25 up. All qualities. Fine Black Hosiery for ladies and children.

Sponge Silk for underwear. Cleopatra and Delsarte Girdles. R. F. Sensible Waists for ladies and children.

MRS. MILLER'S PUBLICATIONS.

Book on mother and babe, a few hints for expectant mothers. Send for circular. Also Physical Beauty. Treats on the care of the body. Monthly Magazine, \$1 a year. Physical Culture by Mahel Jenness, 50 cents.

Only authorized agent for EQUIPOISE WAIST and JENNESS MILLER GOODS.

DIAMONDS!

GENUINE AND FIRST QUALITY.

Warranted Pure White and Perfect, and of Extreme Brilliance.

This diagram shows the approximate sizes of the stones



	1/8	1/4	3/8	1/2	5/8	3/4	7/8	1 K
1-16 carat....	\$4 00							
1/32 carat....	\$8 00							
1/64 carat....	\$15 00							
1/128 carat....	\$25 00							
1/256 carat....	\$35 00							
1/512 carat....	\$50 00							
1/1024 carat....	\$70 00							
1/2048 carat....	\$90 00							
1/4096 carat....	\$110 00							

I will retail these stones at the above wholesale prices and mount them in the latest styles in Rings, Pins, Studs, Ear Screws, Combination sets, etc., at cost of gold and labor.

Diamond Engagement Rings a Specialty.

DIAMONDS, WATCHES and FINE JEWELRY sent C. O. D., with privilege of examination, on receipt of \$1.00 to guarantee charges, or sent express or post paid if cash accompanies order.

Correspondence solicited. Particular attention paid to mail orders.

Jewelry of every description in stock and made to order. Strictly First-Class work. No imitation Goods.

JOHN H. DRUMGOLD,

Manufacturing Jeweler, Watches and Diamonds, Room 113, Phelan Building, S. F.

Nerve Tonic

Blood Builder

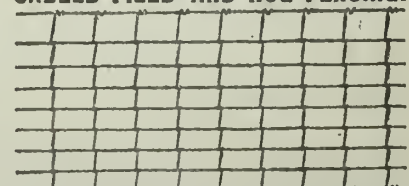
DR. WILLIAMS' PINK PILLS FOR PALE PEOPLE

Send for descriptive pamphlet.

Dr. WILLIAMS' MEDICINE CO., Schenectady, N.Y. and Brockville, Ont.

50c. per box. 6 for \$2.50.

CABLED FIELD AND HOG FENCING.



Also Steel Web Picket Fence and Steel Wire Fence Board. Write for circulars.

DEKALB FENCE CO., 33 High St., DeKalb, Ill.

JNO. WOODLOOK, 26 Beale St.,

SAN FRANCISCO, CAL.,

General Agents for Pacific Slope.

\$100 for the Best Advertisement

For SEAL'S SKIN SOAP for Complexion and Toilet.

All advertisements must be in by January 1st, 1894.

Send 25 cents for sample cake and full particulars to

A. J. MCKNIGHT,

1125 Mission Street, San Francisco, Cal.

AGRICULTURAL NOTES.

CALIFORNIA. Butte.

Oroville Register: There is money in pickling olives at half or even a third of the present price for the pickled fruit. What is of greater importance, the more fruit there is grown the less meat and vegetables there is required. One can live upon olives and bread. At one time when the Italians threatened to be overcome by their enemies it was the boast to many that as long as they had a sack of bran to make flour and a jar of olives for food they could not be conquered. When you grow olives you are growing a food as much as you are in producing wheat or corn. They are not like oranges or raisins, a luxury, a pleasure dish as it were that will only be consumed in limited quantities, no matter how cheap they may become. On the other hand, if olives can be put up cheaply, families will lay in large quantities. Where a family now buys a dollar's worth, they will then buy five times as much, for each member, from the oldest to the youngest, can live and thrive and grow fat upon this fine fruit. The ripe olives are not a condiment; they are equal to fat and lean meat combined. They take the place of lard and butter to a great extent, and no family can have too great a quantity of fine olives in their larder.

Oroville Register: A good example of winter vegetables can be seen in the garden of Wm. Dunstone of Wyandotte, where he has several varieties of fine vegetables now ready for the table. These include young and tender corn and green peas. The vegetable wagons are peddling cauliflower, turnips, squashes, pumpkins, radishes, lettuce and other vegetables. Joe Gardella tells us that on several occasions he has supplied the hotels here with green corn on New Years.

El Dorado.

Republican: B. D. Mason has sent to Oregon and secured four Mongolian pheasants such as were recently secured by the Grizzly Flat Game Club. Five birds were ordered, but one died on the road, the others coming through all right. The original price of the birds and the express charges make them cost over \$5 apiece by the time they are received. Ben says he intends to set them free in the vicinity of Killough's place, between Placerville and Gold Hill. The birds that were taken to Grizzly Flat appear to be doing well and are likely to increase.

Kern.

Californian: Mr. Hunt of the Kern Valley Nursery reports that there is already much more inquiry for trees than last year or the year before at this time. Apricots are the first in demand, with prunes and pears running neck and neck a close second. The demand for peaches thus far is a very slow fourth, which, if not speeded up shortly, will be distanced.

Californian: One very singular peculiarity of Orange Cling peaches, and scarcely ever seen with any other kinds, is the almost unvarying regularity with which a second crop forms each year. While the first peaches are coloring and ripening, blossoms appear, and in due time a second set of peaches form and ripen in turn. This second crop is as queer as its occurrence. The fruit is of good color, fine grain and flavor, but always misshapen. It grows in all varieties of odd shapes, and always looks as unlike a peach as is possible. The fruit never has a pit, but in place thereof is a dark center, no harder, however, than the pulp of the fruit. In addition, the peaches, though often set very thick upon the trees, 200 to 300 pounds weight and sometimes more, are always small, varying from the size of a schoolboy's marble to that of a mountain quail egg. When asked to what use they can be put, one orchardist replied, "They make first-class hog feed."

San Luis Obispo.

San Miguel Courier: Messrs. De Tracey and Asmus, of the Baron Von Schroeder ranch, while in town Tuesday exhibited a specimen box of the dried prunes coming from that ranch. They were the finest we have ever seen, although the gentlemen informed us that they were not first grade. These prunes were double or three times the size of those dried at San Miguel this year, and of a beautiful velvety, chocolate-brown color.

Arroyo Grande Herald: Almost a blockade of grain prevails at the Santa Maria depot, and it is feared that the rains will damage some that is piled outside on the platforms before it can be removed.

Santa Barbara.

Lompoc Record: The drier is disposing of about five tons of apples each day. The proprietor proposes to put through 150 tons at least. This amount of fruit taken for drying purposes ought to raise the price of all first-grade fruit remaining.

Santa Clara.

San Jose Mercury, Nov. 21: The dried-fruit shipments to Eastern points last week were very heavy, and by looking over the appended statement it will be seen that many varieties of dried fruit went forward. The largest consignment was dried prunes, which amounted to over 1,000,000 pounds. The total green-fruit shipment amounted to very nearly 1,000,000 pounds, and was made up of grapes and apples. On the narrow-gauge route the local shipments were large.

Santa Cruz.

Pajaronian: Over 4000 tons of sugar have been shipped from the factory to date. Preparations are being made to ship the better quality of the syrup to San Francisco (all running over 80 per cent) for refining. Strawboard boxes will be used for packages. When these

shipments begin the daily sugar output of the Watsonville factory will be the largest recorded by any beet factory on the continent.

Sonoma.

Tribune, Nov. 24: A great many farmers about Healdsburg have concluded to wait no longer for rain and in the past week have been sowing grain by means of harrowing the ground. However, the majority are putting off the planting of seed until the rainy season sets in.

Republican: E. W. Woolsey & Son have some pumpkins on their place at Fulton that weigh over 200 pounds each. They will sow about 100 acres of grain this fall. Mr. Woolsey says he can't complain of hard times, as he received a good price for his grain and fruit. The only thing he can find fault with is the price of wool. Where he received \$65 for a sack of wool last year he got only \$15 this year. He got 24 tons of dried prunes off ten acres and received 4 1/2 and 5 cents per pound; 40 tons of peaches. He has 75 acres of orchard in all.

Democrat: The grape season practically was at an end last week, but a few loads of grapes of the late varieties were taken to the must factory last Monday and Tuesday. The shortage in the crops has not affected the growers so much as the depression in the market. In some vineyards the crop of Missions fell about 50 per cent below the usual yield and half the Zinfandels were ruined by the September rains; however, in other vineyards which are situated in the lowlands the yield was very good and in all the varieties, with the one exception of Zinfandels, it averaged from seven to eight tons to the acre.

Healdsburg Tribune: At the Chase winery in Alexander valley 1400 tons of grapes were crushed, making 215,000 gallons of wine, mostly claret. The production of white wine is about 55,000 gallons and it will be distilled into French cognac and shipped to Bremen, Germany. It was contracted for some time before the grape season opened and Mr. Chase expects to realize a good profit out of it. About 50 barrels of the cognac will be ready for shipment by Christmas.

Sutter.

Farmer, Nov. 24: The shipment of fruit East from this place since our last report is as follows: One carload each of canned fruit from the cannery to Bloomdale, Ill., Waterloo, Ia., and Chicago, also a carload of dried peaches, pears, prunes and apricots to the latter city; one carload of dried prunes, peaches and nectarines from Rancho Sutter to Chicago and a carload of raisins from C. E. Williams to the same city. To-day, Friday, R. C. Kells will load a car of prunes for Chicago and J. B. Wilkie a carload of raisins to the same place. J. P. Onstott sends a carload of raisins to Omaha to-day or to-morrow and Harter Bros. a carload of raisins to Chicago.

Farmer: Before the next fruit season there will be erected at this place a large ice house and shipping shed and other facilities to accommodate the large and growing green-fruit shipping trade from this county. A spur will be put in west of the Farmers' Union iron warehouse and will be run under the shed where cars can be loaded easily and where they can be stocked with ice before leaving.

Tulare.

Times: Andrew Sorenson of Dinuba is not only a successful teacher, but a successful farmer in a small way. He grew a squash vine this summer that was 52 feet 4 inches in length. He also managed to hatch out chickens by an incubator in 19 days—two days less than the standard time.

Register: Hogs are going out of the county at a lively rate now. N. W. Hammond bought about 800 last week, and a good many Tulare county farmers are getting paid in sums ranging from \$500 to \$1000, and some are drawing down nearly \$2000 at a time. Such sums come handy along about tax-paying time.

Times: Visalia is coming up on pumpkins. At the store of S. Levy & Bro. is one labeled 215 pounds that hails from Pumpkin Hollow.

Times: W. S. Farr brought to the Times office the other day a monster Early Rose potato. It looks like four large potatoes grown together, and is of very curious shape. This big spud was raised by Mr. Farr on the Morrow ranch, two miles northeast of Cottage. The potato crop in that section is an average one. Mr. Farr has raised two crops this season that averaged about 70 sacks to the acre each. He has stored the last crop and will not sell the potatoes till spring.

SPECIAL ANNOUNCEMENT.

We have made arrangements with Dr. B. J. Kendall Co., publishers of "A Treatise on the Horse and his Diseases," which will enable all our subscribers to obtain a copy of that valuable work free by sending their address (enclosing a two-cent stamp for mailing same) to Dr. B. J. KENDALL CO., ENOSBURGH FALLS, VT. This book is now recognized as standard authority upon all diseases of the horse, as its phenomenal sale attests, over four million copies having been sold in the past ten years, a sale never before reached by any publication in the same period of time. We feel confident that our patrons will appreciate the work, and be glad to avail themselves of this opportunity of obtaining a valuable book.

It is necessary that you mention this paper in sending for the "Treatise." This offer will remain open for only a short time.

Hay Pressing.

If you are interested in pressing hay write Truman Hooker & Co., San Francisco. They will save you money

BENICIA PLOWS



Their MERITS are:

They are made by the
Benicia Agricultural Works
With California Capital and Labor.
There is just as good money
There is no better labor.

Every year they
Take Premiums
Over Eastern Plows.

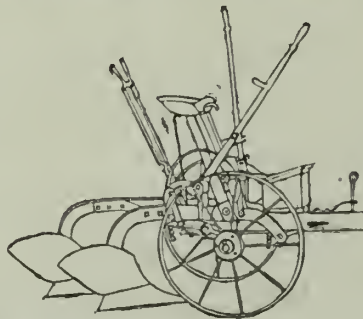
They are better made
Last longer and
Cost no more than
Any of their Competitors.

Made to suit all Work,
Garden, Orchard, Vineyard,
Stubble, Breaking, Subsoil, &c.
Every Plow marked "Benicia"
Which means "GUARANTEED"
By the oldest Implement House
On the Pacific Coast.

BAKER & HAMILTON

SAN FRANCISCO AND
SACRAMENTO

EUREKA GANG PLOWS.



The ONLY Gang Plow
That will work in all soils
And under all conditions
Without trouble and breakage.

Many styles and sizes.
Different bottoms
For different soils.

We Make them,
We Guarantee them.

Used on the largest farms in the state: Wil-
ness—the "Glenn Estate," Gov. Stanford's Ranch,
Miller & Lux, Jno. Finnell, and many others.

BAKER & HAMILTON,

SAN FRANCISCO and SACRAMENTO.

Guano Fertilizer!

PLAIN AND NITROGENOUS
SUPERPHOSPHATES.

GUANO FLOUR.

Complete and Special Fertilizers

FOR ALL KINDS OF

Fruit, Grain, Sugar Beets, Vegetables, Etc.

MANUFACTURED BY THE

MEXICAN PHOSPHATE & SULPHUR CO.

For circulars and other information address

H. M. NEWHALL & CO., Agents,
309 & 311 SANSOME STREET,
San Francisco.

HAYWARD'S SHEEP DIPS

Hayward's famous Paste and Liquid
Dips received the Highest Award at the
World's Columbian Exposition, also the
Prize Medal at the California State Fair.
Dips from all over the world were ex-
hibited at Chicago and practical sheep
men pronounced Hayward's the best and
most effective medicine for the cure of scab
and general benefit to wool.

CHRISTY & WISE,

General and Sole Agents for the Pacific Coast,
Office—Fifth and Townsend Streets,
San Francisco.

FARM-POULTRY.

The Best Poultry Paper
IN THE WORLD.

Write for SAMPLE COPY: Sent Free.

"It opened up a new field
and cultivated it thor-
oughly."—So says the Fanciers' Journal.

"FARM-POULTRY is cov-
ering itself with glory."

—Thus the Philadelphia Farm Journal writes us.

It is worth \$1.00. It Teaches How to

Sent on Trial Make Money with

Six Months for A Few Hens.

ONLY 25 CENTS.

IF YOU MENTION THIS PAPER.

One department "Answers to Correspondents,"
is worth ten times the subscription price to anyone
explains many things apt to trouble even old breed-
ers. Send for Index to first 3 Vols. free: Judge your-
self, if as much instructive matter can be bought any-
where, for many times the price. Remit cash or
stamps. This special offer good for only three months.
I. S. JOHNSON & CO., 25 Custom House St., Boston, Mass.

Sure Way to Make \$100.

Send 25 cents for particulars, including sample cake
of SEAL'S SKIN SOAP for Complexion and
Toilet.

A. J. McKNIGHT,

1125 Mission Street, San Francisco, Cal.

MEYER'S SLIP SHARES!

FOR SALE BY

DAVID N. HAWLEY,

No. 318 MARKET STREET.

TREE WASH.

OLIVE DIP.

"Greenbank" Powdered Caustic
Soda and Pure Potash.

T. W. JACKSON & CO..

Sole Agents,

No. 5 Market Street, San Francisco, Cal.

THE American Bee Journal,

(Established 1861.)

It is the Oldest, Largest, Best,
Cheapest and the Only
weekly Bee-Paper in all
America. 32 pages, \$1.00
a year. Send for free sample.
\$1.00 BEE-BOOK FREE

W. W. YORK & CO., 14 Fifth Ave., Chicago, Ill.

Seeds, Plants, Etc.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrobalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond
Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

Santa Rosa Nurseries.

AN IMMENSE AND WELL
ASSORTED STOCK.

TREES TRUE TO NAME.—Warranted clean and
raised without irrigation.

PEARS AND PRUNES at about HALF USUAL
PRICES till my surplus is sold.

Price List mailed free.

Address R. W. Bell, Santa Rosa, Cal.

GOLD DUST.

"Gold Dust Cling," says H. E. Van Deman, U. S. Pomologist, "is a yellow cling of medium size, round and regular in shape, and very firm in flesh. The color is very attractive, being dark yellow with a very red cheek. It bears heavily and carries to market with very little damage. Coming as it does before the main peach crop is gathered, it is about the first yellow cling of any special value and therefore finds a ready sale. Each year it gains in favor, but as it is a variety but recently originated the public know little of it. It is a very profitable variety." Price \$1 each, \$5 per half dozen. For sale by SACRAMENTO RIVER NURSERY COMPANY, Growers of HIGH-GRADE Fruit Trees, Walnut Grove, Sacramento County, California. Our Specialties—Genuine Tragedy Prunes, Olyman and Japan Plums on true Myrobalan whole root seedlings—we use no piece roots nor cuttings; price 15 cents each; Sacramento River Bartletts and Peaches—price 10 cents each. Large quantities at lower rates. WE GUARANTEE OUR TREES TRUE TO NAME.

Trees, Vines and Plants,

—FOR 1893 and 1894.—

Terms on Application.

ADDRESS, - - L. D. BUTT,

Penryn, Placer Co., California.

MYROBALAN PLUM AND MAZZARD CHERRY SEED.

Fresh Crop Now Ready for Shipment.

FULL PRICE LIST OF

FRUIT STOCKS AND SEEDS
ON APPLICATION.

THOMAS MEEHAN & SONS, GERMANTOWN, PA

SPARK'S MAMMOTH. A SUPERIOR QUALITY OF APRICOT.

Fine for Canning, Drying and Shipping.
They run 3 and 4 to the pound. The Largest and Finest
fruit of the Apricot variety.

ADDRESS

N. B. SMITH, Ventura, Ventura Co., Cal

B. F. GODFREY & CO., NURSERYMEN,

Davisville, Oal.

Write for Catalogue and Prices.

OLIVE TREES

In Variety for Nurserymen,
Dealers and Planters.

Will also contract now to propagate Rooted
Olive Cuttings for persons who wish to
plant them in nursery spring of 1894.

OLIVE CULTURE IN CALIFORNIA,

Sixteen pages, mailed free.

Address:

JOHN S. CALKINS,
POMONA, LOS ANGELES COUNTY, CAL.

OLIVE TREES.

ALL KINDS OF

Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,

Pomona, Cal.

OLIVES.

Missions and Nevadillos.

A NO. 1 TREES,

Two-Year-Old, 4 to 6 feet High.

Extra Inducements offered to intending buyers both
as regards choice trees and very low prices. Order at
once or open correspondence with me.

J. E. PACKARD, Pomona, Cal.

OAK LAWN NURSERY.

90,000 First-Class Fruit Trees
AT LOWEST PRICES.

MUST BE SOLD.
PLEASE WRITE AT ONCE.

HARRY E. HULBERT,
211 THIRD STREET,
SANTA ROSA, - - SONOMA CO., CAL.

Pepper's Nurseries.

ESTABLISHED IN 1858.

For Sale at Low Rates, a General Assort-
ment of Hardy Deciduous Fruit Trees.

I do not buy trees to sell; what is offered is grown in
my own grounds and free from scale bugs. No scale
bugs of any kind to be found in the Nursery. No agents
employed. Order direct from the nursery and procure
your trees true to label. Order early, as early planting
is the most successful with deciduous trees. Prices fur-
nished on application.

Address W. H. PEPPER Petaluma, Cal.

OLIVE TREES FOR SALE.

Twelve years experience has taught me how to
PROPERLY root the olive. No artificial heat used.

Address
W. ALSTON-HAYNE Jr.,
Montecito P. O., Santa Barbara, Cal.

OLIVE TREES.

Apply for Catalogue.

C. F. LOOP & SON, - - Pomona, Cal.

CALIFORNIA FRUITS

AND HOW TO
GROW THEM.
By Prof. Edward
J. Wickson.

A practical, explicit and comprehensive book embodying
the experience and methods of hundreds of successful
growers, and constituting a trustworthy guide by which the
inexperienced may successfully produce the fruits for which
California is famous. 600 pages, fully illustrated. Price \$3.
Postpaid. Send for circular. DEWEY PUBLISHING CO.
Publishers, 220 Market Street, San Francisco, Cal.

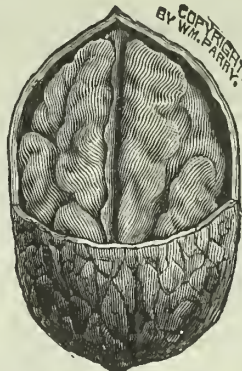
WE GIVE ESPECIAL ATTENTION TO

Fruit Trees! Deciduous Fruit Trees!

ALEXANDER & HAMMON'S

Rio Bonito Nurseries, Biggs, Butte Co., Cal.

KAGHAZI



PERSIAN

:- SOFT SHELL :-

:- WALNUT! :-

Our Stock of TREES and VINES is Most Complete
in EVERY CLASS of Fruits.

A LARGE STOCK OF THOMPSON'S SEEDLESS GRAPES.

SHIPPING, CANNING and DRYING Fruits of all Kinds.

Best Assortment of RAISIN and TABLE GRAPES in California.

Early Shipping Plums a Specialty.

SPECIAL PRICES FOR TREES IN LARGE QUANTITIES.

DURING the last three years, trees grown on the FEATHER RIVER BOTTOM LANDS, at RIO BONITO, BUTTE COUNTY, have been much sought after, and the demand for them is increasing all over the State where they have been planted. Owing to the peculiar adaptability of the soil and climate of this section for growing nursery stock, the trees making a very large and well-furnished system of root growth, and maintaining a correspondingly strong and vigorous top, maturing the wood thoroughly, we are enabled to supply our patrons with the best of trees, healthy in every respect, entirely free from insect pests, and in perfect condition for transplanting.

If You Are Going To Plant Trees, It Will Pay You To Corre-
spond With Us Before Purchasing.

ALEXANDER & HAMMON,

BIGGS, BUTTE COUNTY, CALIFORNIA.

STOCKTON NURSERIES,

ESTABLISHED 1853.

FRUIT TREES. FRUIT TREES.

GRAPE VINES.

Also Fine Stock of Shade and Ornamental Trees, Shrubs, Palms, Roses and Carnations.

Correspondence Solicited.

PLANTS IN GREAT VARIETY.

E. C. CLOWES, STOCKTON, CAL.

PRUNE TREES

FOR SALE—50,000 Trees on Myrobalan Stock.

Imported from one of the first French nurseries. Scions from an orchard near Saratoga. Fruit raised in this celebrated district has taken for us six first-class awards, INCLUDING HIGHEST AWARD, COLUMBIAN EXHIBITION. Apply to

BALFOUR, GUTHRIE & CO., 316 California St., San Francisco, Cal.
Agents for Saratoga Packing Company.

NAPA VALLEY NURSERIES.

NEW CATALOGUES NOW READY.

Fruit, Nut and Shade Trees, Grape Vines, Etc., Citrus Fruits, Ornamental Shrubs,
Flowering Plants, Roses, Palms, Bulbs, Seeds, Etc.

Fruit and Nut Trees propagated from bearing orchards at Sausal Fruit Farm; Unirrigated, Clean and Healthy.
Do not fail to correspond before making purchases. Satisfaction guaranteed.

LEONARD COATES, - - - NAPA, CAL.

LOW PRICES ON

ALMOND TREES!

California Paper-Shell, Nonpareil, Ne Plus Ultra and
I. X. L.

A pamphlet on Almonds mailed free of charge on application. A large supply of the GOLDEN PEACH and
FRENCH PRUNE. All kinds of leading fruit trees for sale. No charges made for mailing trees.

Address, PERCY W. TREAT,

Davisville Nurseries, Concord, California.

McKEVITT'S EARLY.

The New Yellow Freestone Peach!
FIRST AND BEST OF EARLY YELLOW PEACHES.

RIPENS IMMEDIATELY AFTER THE ALEXANDER (White Cling), which is the earliest
peach in market.

Fruit is round, of medium size, VERY HIGHLY COLORED, flesh firm and sweet.
THIS PEACH HAS BEEN SUCCESSFULLY SHIPPED EAST FOR FIVE YEARS and
is no new, untitled variety.

Tree healthy, strong grower, and heavy bearer, never having missed a crop.
A limited number of yearling trees for sale this season. Apply early before stock is exhausted.

FRANK B. McKEVITT, : : : : VACAVILLE, CAL.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

L. F. EATON, Breeder of A. J. H. R. Jerseys. Choice young stock for sale to make room for others. Florin, Sacramento Co., Cal.

JERSEYS AND HOLSTEINS, from the best Butcher and Milk Stock; also Thoroughbred Hogs and Poultry. William Niles & Co., Los Angeles, Cal., Breeders and Exporters. Established in 1876.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER SAKS & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS—The best A. J. C. C. Registered Prize Herd is owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

WM. NILES & CO., Los Angeles, Cal., Breeders of nearly all varieties of Poultry, Dairy Cattle and Hogs.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

R. H. CRANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

SWINE.

H. J. PHILPOTT, Niles, Cal., Importer and breeder of Teumseh and other choice strains of Registered Poland-China Hogs.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, new Prices.

BERKSHIRES & POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. William Niles & Co., Los Angeles, Cal. Established 1876.

MONROE MILLER, Elsie, Ventura County, Cal., Breeder of Registered Berkshire Hogs.

P. H. MURPHY, Perkins, Sac. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.

OHAS. A. STOWE, Stockton, Regist'd Berkshires.



In These Dull Times

You Can Largely Increase Your Income by buying an Incubator and engaging in the chicken business. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember, the best is the cheapest. **PACIFIC INCUBATOR CO.**, 1317 Castro St., Oakland, Cal.

FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank.)

Importer, Breeder, Exporter.

S. O. White Leghorn
S. C. Brown Leghorn
Barred Plymouth Rock
Black Minorcas,

Eggs, \$3 per 13. Send for circular.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.



HALSTED INCUBATOR

COMPANY.
1312 Myrtle Street, Oakland, Cal.
Send Stamp for Circular.

LIGHTNING LARGEST WELL MACHINERY Works. All kinds of tools. Fortune for the driller by using our Adamantine process, can take a core. Perfected Economical Artesian Pumping Rises to work by Steam, Air, etc. Let us help you. **THE AMERICAN WELL WORKS**, Aurora, Ill.; Chicago, Ill.; Dallas, Tex.

RED SEAL GRANULATED 98% LYE

HAS NO EQUAL

FOR DESTROYING SCALE BUGS AND OTHER INSECT PESTS ON TREES AND PLANTS.

FOR TREE WASH!

—USE—

One pound to 5 gallons of water.

Thousands of Orchardists testify to its value, using it in preference to all other preparations. Where the Red Seal is applied it kills the insects and at the same time forms a coating through which others cannot penetrate. When used in the above proportions, it is a

GREAT BENEFIT TO THE TREES.

Put up in SIFTING-TOP CANS, so that any quantity may be used and the balance preserved uninjured.

MANSFIELD LOVELL,
124 California St., San Francisco.

P. C. TOMSON'S



P. C. TOMSON & CO. PHILADELPHIA

SOLD

—BY—

ALL GROCERS.

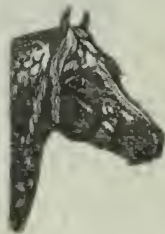
FOR HOUSEHOLD PURPOSES

The Red Seal Lye is indispensable.

USED AS DIRECTED it will take the place, and at 75% less cost, of all other alkaline preparations, soaps, etc., now on the market. ONE CAN will make 10 to 12 lbs. of Hard Soap, or 200 lbs. of Soft Soap. See directions in can.

It cleans floors, kills roaches and bugs of all kinds, cleans milk vessels, tin or wood; keeps farming implements bright and free from rust; is a perfect disinfectant; softens water, washes dishes and clothes; and can be put to a thousand uses in place of soap or other preparations.

P. C. TOMSON & CO.,
Manufacturers, Philadelphia, Pa.



ONLY 25 YEARS OLD AND A GIANT!

THE H. H. H. LINIMENT

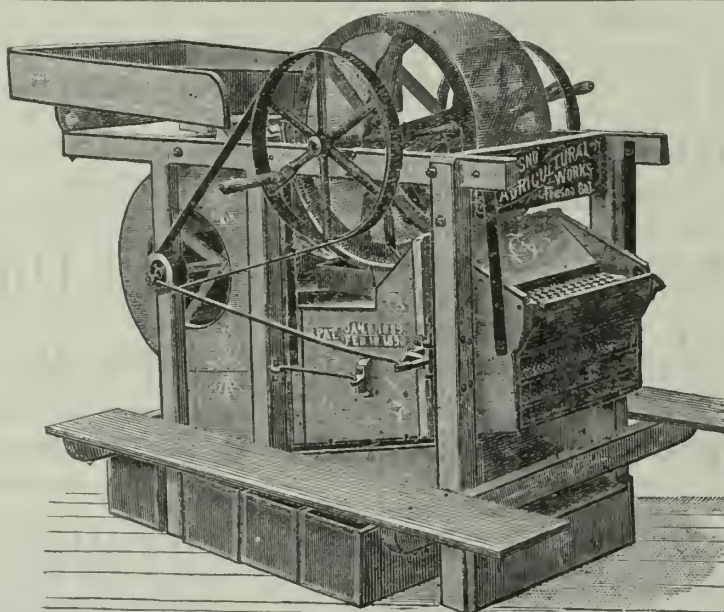
HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.



SEND FOR CATALOGUE OF RAISIN MACHINERY TO
FRESNO AGRICULTURAL W'KS, FRESNO, CAL.

FRANCIS SMITH & CO.,

MANUFACTURER OF

SHEET IRON & STEEL PIPE

FOR TOWN WATER WORKS.

Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes.

NO. 130 BEALE STREET, SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.



BERKSHIRE SWINE.

Prize Herd of Southern California.

PIGS OF ALL AGES FOR SALE.

SESSIONS & CO., Los Angeles, Cal.

P. O. Box 686.

Send for Price Lists

OF GUNS

And all Articles used by Hunters and Anglers.



GUNS SENT ON TRIAL,

OLD GUNS TAKEN IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.



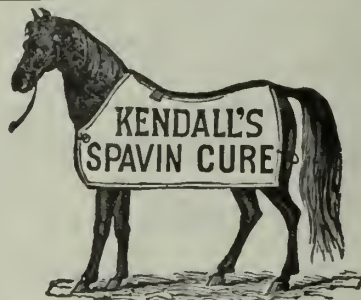
See That?

That's the mark by which you can always distinguish the good from the bad in Horse Blankets. It's a guarantee of quality, durability—absolute perfection. The 5/A Blankets are made with a view to good looks as well as good service. They make a horse feel better, look better and do better. Ask the dealer for the 5/A Blankets, and don't accept any of the so-called "just as good" kind. 5/A Blankets are made in 250 styles and you can easily get one to suit you. Always look for this trade mark.



Made only by

WM. AYRES & SONS, Philadelphia.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STAR, LANE CO., OREGON, Feb. 8th, 1892.

DR. B. J. KENDALL CO.,

Dear Sirs:—I have used your KENDALL'S SPAVIN CURE for the last twelve years never being without it but a few weeks in that time and I have made several wonderful cures with it. I cured a Curb of long standing. Then I had a four year old colt badly Swelled; tried every thing without any benefit, so I tried your liniment, and in a few weeks he was well and his shoulder filed up all right, and the other, a four year old that had a Thoroughpin and Blood Spavin on the same joint, and to-day no one can tell which leg it was on. These statements can be proven, if necessary; the four year olds are now seven and can be seen any day at Cottage Grove, Or.

S. Z. FANTON.

Price \$1.00 per bottle.

DR. B. J. KENDALL CO.,

Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular.

E. FOUGERA & CO.,

30 North William Street, New York.

California Inventors

Should consult DEWEY & CO. AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as Journalists and large practice as Patent attorneys enables them to offer Pacific Coast Inventors far better service than they can obtain elsewhere. Send for free circulars of information. No 220 Market St., San Francisco Cal.

PATRONS OF HUSBANDRY.

Editorial Observations.

We had planned to give in this week's RURAL a summary of the proceedings of the National Grange; but find it impossible. Thanksgiving Day sends us to press a day in advance of the usual time and the editor has only just returned from the Fruit Growers' Convention at Los Angeles. Therefore, there is no time to compile the matter wanted which can only be gotten at by a laborious study of the Syracuse papers. The matter will be forthcoming next week.

The Grange was only moderately represented at the Los Angeles convention, which leads to the reflection that there is no better field for grange work than in the fruit-growing districts. On the final day of the convention, Mrs. Hattie E. Jones of Yuba City Grange got the floor, stated the facts as to Secretary Morton's recent utterances against organization among agriculturists and proposed a resolution of disapproval with a demand for Mr. Morton's removal. There was a little talk in the way of protest, but the sentiment was too strong to resist and the resolution carried by a vote almost unanimous.

The Secretary's Column.

The following resolutions were adopted by Temescal Grange, No. 35, P. of H., at a regular meeting held Nov. 18, 1893:

WHEREAS, It appears that the following language has been used in a speech before the World's Congress at Chicago by Mr. Sterling J. Morton, Secretary of the Department of Agriculture, to wit: "The American farmer has foes to contend with. They are not the natural foes—not the weevil in wheat, not the murrain in cattle nor the cholera in swine nor the drouth nor the chinch bug. The most insidious and destructive foe to the farmer is the 'professional' farmer, the 'promoter of granges and alliances,' who, for political purposes, farms the farmer." * * * He will not succeed better by forming granges and alliances—which generally seek to attend to some other business than farming, and frequently propose to run railroads and banks and even to establish new systems of coinage for the Government—than he will by individual investigation of economic questions. Humanity generally, and the farmer particularly, has no enemy equal in efficiency for evil, to ignorance. Therefore, each tiller of the soil, each farmer, should, for himself individually, investigate the various methods of cultivating land, of producing good crops and of securing remunerative markets;" and

Whereas, The creation or establishment of the office of Secretary of Agriculture was largely, if not mainly, due to the influence of the order of Patrons of Husbandry; and

Whereas, The said office was created and established in order that the large industrial occupation of agriculture should have a fitting representative and a voice in the executive councils of the nation, defending and advocating the interests of the farmers in said councils, and not for the purpose of traducing and maligning a large and prominent part of the representative element of that interest; therefore be it

Resolved, That this grange takes exception to, and emphatically resents, the use of said language quoted as being used by Mr. Morton, as being language conveying imputations not warranted by facts, entirely uncalled for, traducing, maligning and insulting to the order of Patrons of Husbandry; and he it further

Resolved, That this grange considers Mr. Morton unfit and altogether unworthy of representing the interests of the agricultural industry of our country, and that those interests would be better subserved by Mr. Morton resigning the honorable position he now occupies at Washington; and

Resolved, That a copy of these resolutions be sent to the Secretary of the State Grange with a request to obtain the publication of the same in the RURAL PRESS.

NELLIE G. BABCOCK, Secretary.

L. A. Gremore, master of Waterloo Grange, sends us the following:

"Waterloo Grange meets every alternate Saturday evening and has a membership of 107, a large proportion of whom are young people. The attendance is good—an average of about 30. Have held during the year 22 meetings. We have not as a grange visited any of our neighboring granges, but many of our members often drop in on our neighbors and many brothers and sisters from abroad often visit us. A few names have been taken from the roll through various causes, but generally our grange is in good condition.

"We find that the main thing to contend with is indifference when some of the work is expected of the members. Many would rather sit still and be amused. Our members are careful to obey the rules of the order, and have a very good list of working officers. We held an open meeting to cele-

brate Children's Day, by having an ice-cream festival, the literary exercises consisting of vocal and instrumental music and recitations. We are often favored with the presence of Bro. Overhiser, who still takes an interest in the grange. The condition of the grange as regards the interest taken by the members and unity of feeling among them compares favorably with that of last year."

Brother E. C. Shoemaker, of Visalia, Worthy Steward of State Grange, informs us that they expect to have a big time the 11th of December, at the Farmer's Institute, and he is turning his attention toward organizing a new grange at that place. He says he is receiving very encouraging assistance from our local papers and other persons. He hopes to have a good number ready to join a new grange on December 12th.

Tulare Grange will celebrate in appropriate manner the birth of the order December 2d. This day should be celebrated from one end of this land to the other redolent with its principles.

S. Goodenough, lecturer of the State Grange, will address the Farmers' Institute that meets at Visalia on December 11th. His address will come in the evening. E. W. Davis, of Santa Rosa, has also written to E. C. Shoemaker saying that he will probably be present. He is overseer of the National Grange, and is at present visiting at Syracuse, New York, where the National Grange held its annual session last week. Mr. Davis is a prominent speaker, and will please those who hear him. The coming Institute will be a grand treat. Every farmer in the county should try to attend and profit thereby.

Pescadero Grange celebrated Pomona's Day Thursday, the 24th, and the Committee on Woman's Work were to make an effort to raise funds for the grange temple.

The annual proceedings of the late session of the California State Grange held at Petaluma were received at this office November 33d, and were all mailed the same day to all the officers of the California State Grange and to all the secretaries and masters of subordinate granges in the State. Copies will be mailed to members of the order who have not as yet received them if they will forward us postage, which is two cents per copy.

Grimes Grange reports that on Thursday, November 30th, their Grange will meet at 10 o'clock sharp. There will be work in the third and fourth degrees, after which a Thanksgiving dinner will be given by the sisters of the grange. Bear in mind that the latch-string is out to the California State Grange, and would be pleased to see any of the officers on that date.

Carpenteria Grange sends us their report for the three last quarters, also cash for same. They report that they have been somewhat demoralized for the past year, and have met but a few times, but thirteen of the old guard are going to renew the fight, and you will hear from us more regularly.

This office has received the proceedings of the nineteenth annual session of the Texas State Grange, held at Frankland, Texas, August 8th to 10th, 1893. Master, John B. Long; Secretary, A. W. Buchanan. Compliments of A. J. Rose, Salado, Texas.

The icy hand has plucked from our midst Mrs. Mary E. Davis, beloved wife of Geo. W. Davis, stepmother of E. W. and Wm. R. Davis. Sister Davis' illness was not known to many of her friends, to whom the report of her death was a great shock. The deceased was from the East, but has lived here for many years, and was a prominent member of Santa Rosa Grange, and has always been an active member in grange work. She was married to Bro. G. W. Davis in 1877, and at the time of her demise was about 52 years of age. The crowning glory of our deceased sister was her home life—unobtrusive, gentle and quiet, patient in suffering to the last. She was amiable and kind to all to that degree that "None knew her but to love her." She was a good wife, a good friend and neighbor, always ready for every good word or work that would benefit others.

This office acknowledges receipt of the Syracuse Daily Journal, containing daily proceedings of the National Grange, extracts of which have been taken and forwarded to the RURAL PRESS for publication. All communications to California State

Grange should be addressed to Don Mills, Santa Rosa, Cal.

From Tulare Grange.

To THE EDITOR:—The regular semi-monthly meeting of Tulare Grange was held on the afternoon of Saturday, November 18th.

Bro. Shoemaker, from Committee on Farmers' Institute, reported programme of Institute to be held in Visalia on Dec. 11th.

Resolutions of regret and sympathy on the death of Bro. Wm. Stewart, written by Bro. Premo, were read, approved by the grange and ordered spread upon the minutes.

Letters from Congressman W. W. Bowers and Senator Geo. O. Perkins acknowledging receipt of grange resolutions against abolishing or reducing duty on wool were read and ordered filed, both pledging themselves to oppose any reduction of the duty on wool. Senator Stephen M. White had also written, saying he had through his campaign advocated the importation of wool free of duty and would still have to do so in the United States Senate.

Resolutions on Inheritance and Income Tax read and discussed and passed. On motion, ordered copies be sent to our Senators and Representatives in Congress, to the Secretary of the State Grange for distribution among the subordinate granges of California, and to the congressional committee of the National Grange. Resolutions herein inclosed.

An oral address by Sister Ingham on Butter-making, a synopsis of which I send inclosed, was listened to with marked attention and elicited many favorable comments. [This will be printed next week—ED. RURAL.]

A resolution was adopted to celebrate the birthday of the National Grange at the regular meeting of the grange on Saturday, the 2d of December, by a social entertainment.

ACCIDENTAL.

Tulare, Nov. 27, 1893.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions, and financially able to carry out any obligations made by their firm.

West & Traux, Wholesale Druggists, Toledo, O. Wadding, Kinnan & Marvin, Wholesale Druggists, Toledo, Ohio.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75c per bottle. Sold by all Druggists. Testimonials free.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULER, Room 11, 508 Montgomery St., San Francisco (Pacific Mutual Life Insurance Building).

Deep Well Pumps.

The valves and working parts of the Fulton Pump can be removed, repaired and replaced without taking the pump out of the well.

Pumps fitted up for all depths of wells, ready to put in.

Send for illustrated circulars and price list to

A. T. Ames,
GALT, CAL.

Manufacturer of Pumps and Windmills.

DOUBLE Breech-Loader \$6.00
RIFLES \$2.00
WATCHES

BICYCLES \$15
All kinds cheaper than elsewhere. Before you buy, send stamp for catalogue to POWELL & CLEMENT CO. 166 Main St., Cincinnati, O.

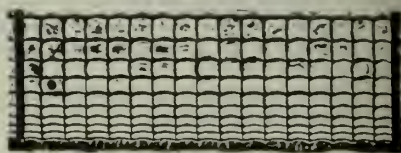
CALIFORNIA If you want to know about California and the Pacific States, send for the PACIFIC RURAL PRESS, the best illustrated and leading Farming and Horticultural Weekly of the Far West. Trial, 60c for 3 mos. Two sample copies, 10 cents. Established 1870. DEWEY PUBLISHING CO., 220 Market St., San Francisco.

Use **ST. JACOBS OIL**
FOR
PAINS
RHEUMATIC,
NEURALGIC,
SCIATIC,
And all the World Knows the CURE is SURE.

Horse Owners! Try GOMBAULT'S Caustic Balsam



A Safe Speedy and Positive Cure
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.



Gone to the Dogs.

The epitaph that might be written for thousands of departed sheep, applies equally as well to the shoddy fences that should have protected them. If you have had trouble of this kind, why not try the only reliable dog-proof farm fence on the market. Write for particulars.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

HATCH CHICKENS BY STEAM

With the Improved Excelsior Incubator.
Simple, Efficient, Self-Regulating. Thousands in successful operation. Guaranteed to hatch a larger percentage of fertile eggs at less cost than any other hatcher. Lowest priced first-class hatcher made.
Circulars free. Send 6c. for Illinois Catalogue. GEO. H. STAHL, Quincy, Ill.

World's Fair Highest Awards

Medal and Diploma on our INCUBATOR and BROODER Combined. "Old Reliable" Leads them all. If you are interested in Poultry, it will pay you to send 4 cents in stamps for our 72 page catalogue, giving valuable points on Poultry Culture. Address: Reliable Incubator and Brooder Co. Quincy, Ill.

AGENTS WANTED

FOR DR. JOHN HENRY BARROW'S Great History of the

WORLD'S PARLIAMENT OF RELIGIONS.

SELLS ON SIGHT. For territory and terms apply to THE KING PUBLISHING CO. 132 Market Street, San Francisco, Cal.

A SEAL SKIN COAT FREE.

Send 25 cents for particulars, including sample cake of SEAL'S SKIN SOAP, for Complexion and Toilet.

A. J. McKNIGHT.

1125 Mission St., San Francisco, Calif.

A LOT FOR \$1 A WEEK

A dollar a week for sixty weeks, buys a lot 25x125 feet east of Chicago Heights, the great manufacturing suburb of Chicago. Sixteen factories, streets paved, stone sidewalk, beautiful shade trees, schools, churches, etc. No doubt these lots will treble in value within one year. No such bargain was ever offered in Chicago Real Estate. These lots are now on the Belt Line where factories are now in successful operation, employing over 50,000 people. Business transacted for non-residents. Address, DeForest Land Co., Unity Building, Chicago.

HEALD'S BUSINESS COLLEGE.

24 POST STREET.....SAN FRANCISCO.
FOR SEVENTY-FIVE DOLLARS

This College instructs in Shortband, Type-Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR. E. P. HEALD, Pres. C. S. HALEY, Sec.

ACTUAL BUSINESS PRACTICE.

Established 1868
PACIFIC Business College,
320 POST ST.
SAN FRANCISCO.
Established 1868
LIFE SCHOLARSHIPS, \$75.

Bookkeeping, Penmanship, Shortband, Typewriting, English Branches, etc. Graduates aided in getting positions. Send for circulars. T. A. ROBINSON, Pres.

Placer County Oranges.

To THE EDITOR:—The credit must be given Placer county for shipping the first oranges this year, being shipped Oct. 31st by Mr. Cockaigne of Penryn, as noted in the Newcastle News of Nov. 3d. The Northern Citrus Belt will average several weeks in advance of the southern in giving ripe oranges. It will be remembered that Placer county made an exhibit at Los Angeles in December, 1887, of 30,000 oranges, before the southern country could show ripe oranges. These oranges were from a few trees in gardens; now Placer is shipping in considerable quantities the earliest, with Butte in the market. Mr. J. Parker Whitney, at Rocklin, has been marketing already from his 35-acre tract of oranges, four years planted from budded stock, and will market this year over 80,000 oranges. Mr. Whitney will plant largely again this year, and has fully 40,000 young orange trees in his nursery. RESIDENT.

The Farmer and the Squirrel.

The ground squirrel is a cunning little beast, with an appetite only equalled by his remarkable propensity to increase his kind. With sagacity and industrious habits, acquired by heredity and necessity, he has managed to build up a reputation that has made him a terror and an outlaw. While the farmer everywhere knows him, and is more or less familiar with his thievish and destructive characteristics, it is probable that comparatively few fully realize the immense amount of loss that he is capable of causing a district or State in the aggregate, say for one year, much less for a series of years.

It is with the view of conveying some approximate notion of the squirrel's great capacity as a destructive agent, while gratifying his inordinate appetite, that the following facts and figures are submitted:

Some practical and observant farmers have said that every squirrel killed was as good as one sack of wheat or its equivalent saved. Whether this be so or not, it is safe and extremely conservative to say that one squirrel or gopher will eat his own weight each month, and probably destroy as much more. Allowing his weight to average one and three-quarters pounds, he will eat and destroy about 40 pounds a year. Now, to give the agricultural districts of California the benefit of 100,000 of these pests actively at work through the greater part of the year, the figures for the aggregate consumption will be found to show up 4,000,000 pounds, a very respectable amount. While 2000 tons of food products lost each year is no small item for producers to consider, this estimate is so modest that those who have given the subject attention will be quite likely to multiply it several times.

These disagreeable facts constantly staring the producers in the face, it is not at all strange that many efforts should have been made to exterminate the evil as far as possible. While most attempts in this direction have proved failures, it is only fair to say that one plan has proved a notable success. This preparation is known far and wide as "Wake-see's Squirrel and Gopher Exterminator." It was the result of scientific and patient study and a full appreciation of the importance of the subject with which it had to deal, and as it has now been on the market for over 15 years, events have proven its complete success and fully justify the immense and yearly increasing sales.

It is estimated that in the 15 years past, more than 10,000 tons of squirrels and gophers have been destroyed by its use alone. Let the curious in figures go into this fact, and by the light of the above hints find out the amount of food it would have required to have made those tons of vermin contented. This preparation is put up in one-pound and five-pound cans, will keep any length of time and is not at all expensive. Directions accompany each can.

Worthless imitations of this valuable preparation are so numerous that the farmer should be extremely careful to obtain the genuine Wake-see Exterminator.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING NOV. 14, 1893.

- 03,860.—FRUIT-WASHER—D. E. Barton, Los Angeles, Cal.
- 03,403.—FRUIT BASKET—Thos. Cogswell, San Diego, Cal.
- 03,509.—HOISTING BUCKET—Thos. Cogswell, San Diego, Cal.
- 03,816.—LADDER—L. D. Craig, S. F.
- 03,819.—ICE-CUTTER—Leo Dalt, Seattle, Wash.
- 03,417.—PENCIL—A. M. Grubbs, Forest Grove, Or.
- 03,473.—GAME TIME CHECK—C. B. Hopkins, Spokane, Wash.
- 03,618.—GAS-ENGINE IGNITER—G. E. Hoyt, S. F.
- 03,477.—OIL-CAN LOCK—C. H. James, S. F.
- 03,834.—GAME—W. D. Pickens, Portland, Or.
- 03,779.—CAR COUPLING—F. A. Stevens, Sacramento, Cal.
- 03,464.—CALENDAR—H. L. Weed, Spokane, Wash.
- 03,792.—SEPARATOR—Wheeler & Jessup, Santa Barbara, Cal.
- 03,589.—EARTH CARRIER—J. J. Wishard, Watsonville, Cal.
- 22,911.—DESIGN FOR LAMP STOVE—J. F. Myers, S. F.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,

Surveying, Architecture, Drawing and Assaying,
728 MARKET ST., SAN FRANCISCO, CAL.
Open All Year.

A. VAN DER NAILLEN, President.
Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50.
ESTABLISHED 1884. Send for circular.

:- CALIFORNIA PRODUCTS. :-

P & B

ROOFING. BUILDING PAPER. ROOF PAINTS.

First Prizes at the World's Columbian Exposition, 1893.

PARAFFINE PAINT CO., - 116 Battery Street,
SAN FRANCISCO.

E. G. JUDAH, Agent, - 221 South Broadway,
LOS ANGELES.

640 ACRES.

ESTABLISHED 1884.

FANCHER CREEK NURSERY, FRESNO, CAL.

1,000,000 FRUIT TREES,
500,000 GRAPE VINES.

COMPRISING ALL THE LEADING VARIETIES.

FREE FROM PESTS AND GUARANTEED TO BE CALIFORNIA GROWN.

A Complete Assortment of Roses, Palms, Ornamental Trees and Shrubs.

SEND FOR DESCRIPTIVE CATALOGUE AND PRICE LIST.

GEO. C. ROEDING, Manager.

FOR THE SEASON OF 1893-94.

BUDDED ORANGE TREES, of the leading varieties, one and two-year buds; also a small lot of choice budded and seedling LEMON TREES. Sweet Seedling Oranges, 1 to 4 years old. Shade and Ornamental Plants. Prices to suit the times.

ORCHARD AND NURSERY.....THERMALITO, BUTTE COUNTY, CAL.

For prices and terms, address

OROVILLE CITRUS ASSOCIATION, OROVILLE, BUTTE COUNTY, CALIFORNIA

Correspondence Solicited.

GRANGERS' BUSINESS ASSOCIATION, GENERAL COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

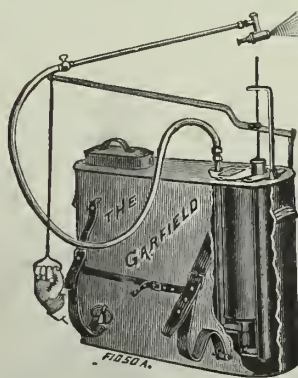
Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

T. R. BALLINGER, Grain Salesman.



SPRAYING PUMPS.

Ours always the best—We lead others follow—Our Double Empire Barrel Pump has brass cylinder, plunger and rod, brass valve seat, and brass spout. Our

CARFIELD KNAPSACK

is made of heavy sheet copper, concaved to fit the back, with metal valves, and furnished with the latest improved Vermorel Nozzle. The very best Knapsack Sprayer on the market. Our Little Gem pail pump is all brass with metal valves, heavy hose and the improved Vermorel Nozzle. Special prices to offset high transportation rates. Catalogue free.

FIELD FORCE PUMP CO.,

141 BRISTOL AVE., LOCKPORT, N. Y.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG.

DEWEY & CO.'S

Scientific Press



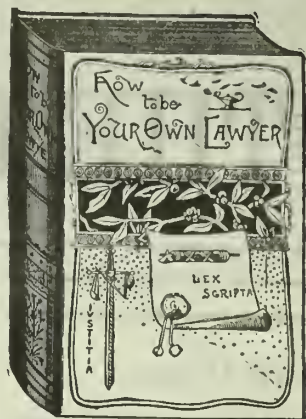
Patent Agency.

ESTABLISHED 1863.

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class Agency. We have able and trustworthy Associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 220 Market St. S. F.

\$1000 WORTH OF LAW

FOR \$1.50.



"How to Be Your Own Lawyer" is the title of a book of over 500 pages, adapted for use in every State and Territory in the Union, and is by far the best and most complete work of the kind ever published. It gives instruction on all the most important law points which a Farmer, Mechanic, Merchant or anybody else would want to know about, and if carefully studied and kept at hand for consultation when needed will save any man, in the course of an ordinary business career, hundreds, if not thousands of dollars. It is a lawyer whose retaining fee (the price of the book, \$1.50) has to be paid but once in a lifetime. Plain and concise directions are given and forms furnished for the transaction of all kinds of business, and the preparation of every description of legal document in common use. A copy of this valuable work, handsomely bound in extra cloth, with ink side-stamp, will be mailed to any address on receipt of \$1.50.

Address THE DEWEY PUBLISHING CO.,
220 Market St., San Francisco, Cal.

CANCER CURED

WITH SOOTHING BALMY OILS.

WE SUCCESSFULLY TREAT

Cancer, Tumor, Catarrh, Piles, Fistula,
Eczema and all Skin and Womb
Diseases.

CANCER of the nose, eye, lip, ear, neck, breast, stomach or womb; in fact, all diseased internal and external organs or tissues, successfully treated, without the knife or burning caustic plasters, but with soothing, balmy magnetic oils. Beware of imitations as there are those who hope to profit by advertising an oil cure for these diseases. We are the originators of this system, all others are frauds.

Correspondence solicited. Consultation free. Testimonials furnished. Address

DR. EUGENE BUELL,
Cancer Institute,

ROOM 67, SUPREME COURT BUILDING,
Cor. McAllister and Larkin Sts., San Francisco, Cal.

CANCER.

THE KOEHLER CANCER CURE CO.,
1428 Market St., San Francisco.

CANCER, Tumors or Malignant Growths removed without knife or caustic. A GUARANTEED CURE a specialty. Call or send for circular. Over 300 cancers preserved in alcohol in our office. Consultation free.

PHILIP KOEHLER, Manager.

C. H. EVANS & CO.,

(Successors to THOMSON & EVANS.)

110 and 112 Beale Street, S. F.
MACHINE WORKS,
Steam Pumps Steam Engines
And All Kinds of MACHINERY.



DEEP WELL
PUMPS

STOCK SCALES

4 TON \$45.

U.S. STANDARD. FULLY WARRANTED.

Delivered at your R. R. Station and ample time for building and testing allowed before acceptance.

OSGOOD & THOMPSON, Binghamton, N. Y.

PORTABLE PLATFORM SCALES,
TRUCKS, ETC.

Twenty-five per cent cheaper than any other on the market. Send for Catalogue.

C. H. LINDEMANN, Agent,

126 KEARNY STREET, SAN FRANCISCO.

Poultry and Stock Book

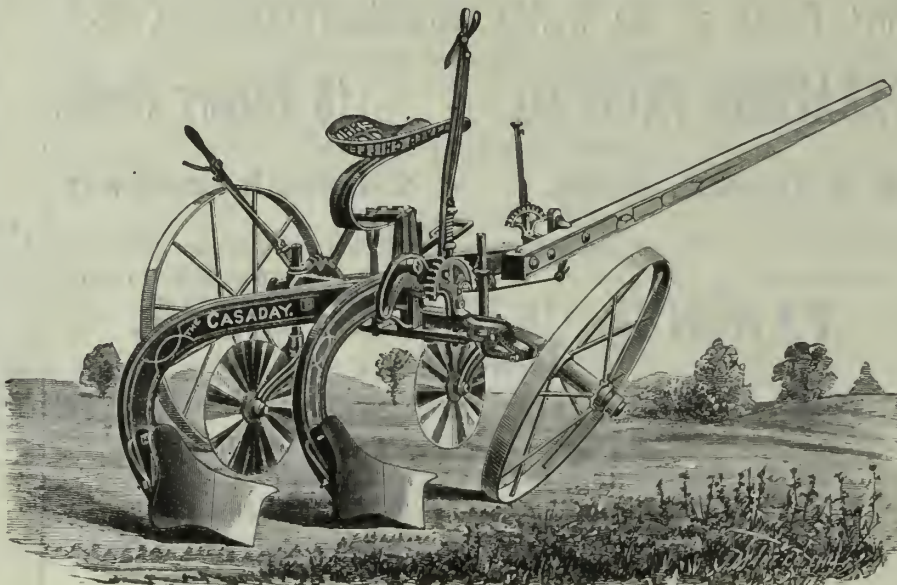
Niles's new manual and reference book on subjects connected with successful Poultry and Stock Raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated with handsome, life-like illustrations of the different varieties of Poultry and Live-Stock. Price, postpaid 50 cts. Address PACIFIC RURAL PRESS Office, San Francisco, Cal.

WONDERFULLY SUCCESSFUL AND
JUSTLY POPULAR.

THE CASADAY GANG PLOW.

MADE 10 AND 12 INCH.
CHILLED OR STEEL SHARES.

EQUALED BY NONE.
USED EVERYWHERE.



THEY ARE STRONG.
THEY ARE LIGHT DRAFT.

THEY ARE EASY TO HANDLE.
THEY ARE MADE OF
THE BEST MATERIAL.

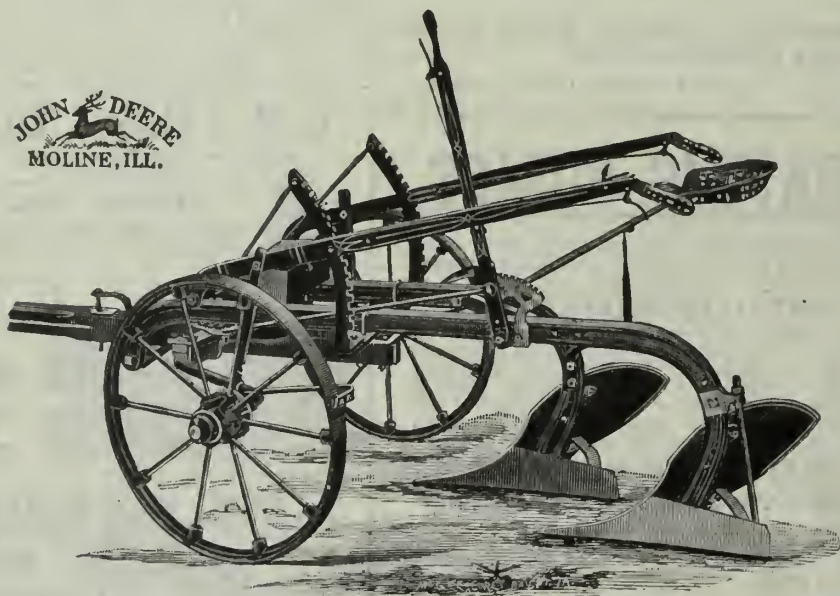
WE MAKE THE LARGEST AND BEST LINE OF CHILLED PLOWS, STEEL PLOWS, SIDEHILL PLOWS, SULKY AND GANG PLOWS EVER TURNED OUT FROM ANY FACTORY.

Before purchasing, call on our nearest Agent and inspect them, or send for Catalogue to

OLIVER CHILLED PLOW WORKS,
37 MARKET STREET, SAN FRANCISCO.

"FRISCO" GANG AND GILPIN SULKY.
Manufactured by Deere & Co., Moline, Ill.

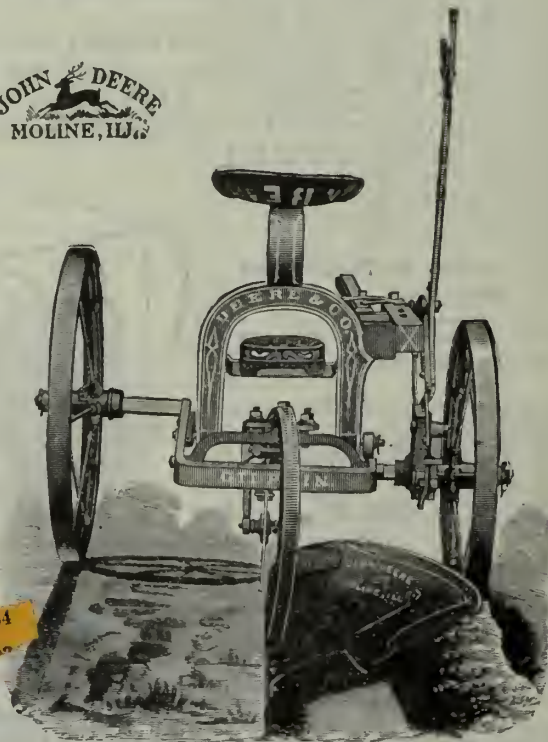
JOHN DEERE
MOLINE, ILL.



DEERE'S "FRISCO" GANG PLOW.
FOR EITHER LEVEL OR HILL LANDS.

This Plow is still fitted with the FAMOUS and ONLY GENUINE COLORADO BOTTOMS; the only bottom that has ever worked successfully in the adobe soil of California. This is the latest and most complete gang for Hillside work yet put on the market. The wheels are the land gauge and each wheel raises and lowers by a separate lever. All levers are within easy reach of the driver. We guarantee this gang to be the strongest one on the market to-day.

JOHN DEERE
MOLINE, ILL.



THE GILPIN SULKY PLOW.

This Plow is fitted with our celebrated G. P. Bottoms; has POWER LIFT, and is the only one of the sulky family which has successfully stood the test for years, having been on the market for 20 years, and has gained more and more "popularity" with each year that it has been in use.

AGENTS WANTED.

DEERE IMPLEMENT CO., 305 & 307 Market St., San Francisco.

PACIFIC RURAL PRESS

Vol. XLVI. No. 24.

SAN FRANCISCO, SATURDAY, DECEMBER 9, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market Street.

The Fruit-Exchange Project.

Arrangements for completing the organization of the California Fruit Exchange are progressing favorably. The proposition, as stated last week, was enthusiastically received by the Fruit-Growers' Convention at Los Angeles, and the growers of the southern counties, who are thoroughly organized, have appointed a strong committee of deciduous fruit-growers belonging to their local exchanges, to consider ways and means of working, in the sale of their dried fruits and nuts, through the State organization. The growers of these counties are showing great enterprise in perfecting their arrangements for marketing, and are creating machinery of their own, of which the State exchange can doubtless make great use to mutual advantage. The leading Fresno and Tulare raisin and prune growers also express great interest in the movement and will doubtless give it hearty support.

A mass convention, under the auspices of the State Horticultural Society, will be held in Pioneer Hall, in this city, on December 29th, to ratify and endorse the action of the Horticultural Society and the State Convention at Los Angeles, and choose directors for the year 1894. The Santa Clara County Fruit Exchange, at a meeting of its directors on last Saturday, by formal resolution, gave the movement its hearty endorsement, and other organized bodies throughout the State are expected to do the same.

For the mass convention on the 29th instant reduced fares have been obtained from the railroad companies, as there is every reason to expect a large and enthusiastic attendance. No fruit-grower who can possibly get here should miss it. The marketing of our fruits is the nut of the whole business, and as this meeting will be addressed by many who have had actual experience in selling fruits through co-operative associations, there will be such opportunities to learn just how to do it as cannot often occur.

The movement is in the hands of strong men, who know exactly what ought to be done, and are proceeding to do it in a straightforward business way, and they should, and doubtless will, have the hearty support of every intelligent fruit-grower.

WE hope the RURAL readers of the upper San Joaquin valley will not forget the Farmers' Institute at Visalia on Monday, December 11th, beginning at ten o'clock A. M. and holding throughout the day and evening. The programme has been published in previous issues of the RURAL, and it is rich and varied. There will be a full complement of local speakers and several well-known participants from other parts of the State. It promises to be one of the best institutes thus held, and should gather a large concourse of interested people.

M. H. SAVAGE, superintendent of the Indian Industrial Training School at Perris, California, writes us that he has 120 Indian boys and girls, ranging in ages from 8 to 18 years, for whom he would like to provide Christmas presents. Such object lessons in kindness and generosity would no doubt produce very desirable effects upon

Los Angeles Scenes.

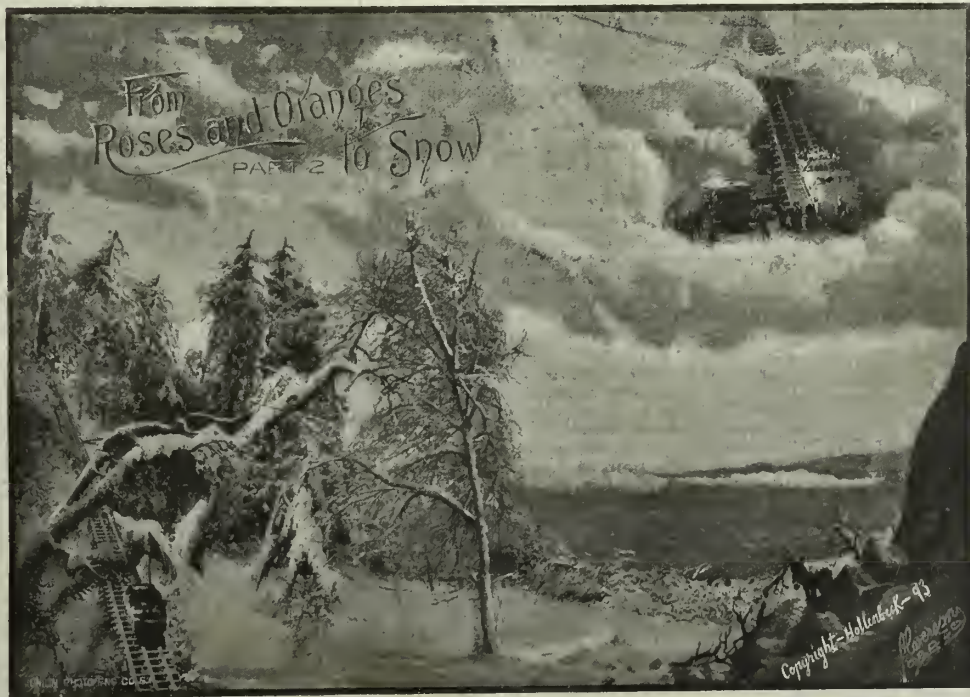
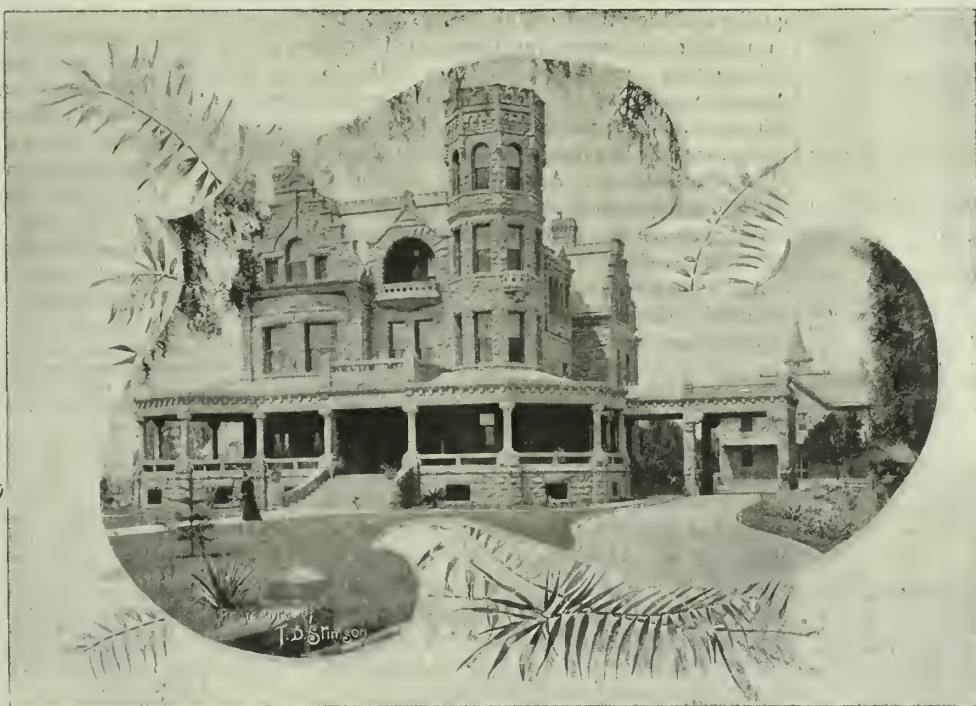
We take another glimpse, through the engravings on this page, at notable things in and near the southern metropolis. First we have the finest private residence in Los Angeles, that of Mr. T. D. Stimson, who recently brought much wealth and enterprise from Chicago, to aid in building up California interests. The residence is of reddish stone and is spacious, massive, and yet full of grace and beauty. It would be a notable house anywhere. It is situated in one of the finest residence districts of Los Angeles—a neighborhood of delightful park-like gardens and palatial homes.

The other engraving presents one of the most picturesque and intrinsically interesting scenes at the south. The foreground is the summit of Mt. Lowe, clad in its snow mantle, while far below the beautiful San Gabriel valley is spread out with a play of harmonizing colors throughout its vast area. It is a region of productive orchards, charming villa sites and thriving towns. By the electric cars and the great cable incline of the Mt. Lowe railway one can go in a brief time from the warmth of the valley to the snows which rest during the winter upon the summits of the Sierra Madre. It is to this flight that the artist alludes in his legend, "From Roses and Oranges to Snow," inscribed on the engraving. A glimpse is given of the point of transfer from the electric car to the cable incline and, below, the course of the latter among the wintry scenes of the higher altitudes. This is described as the most wonderful mountain railway line in the world. Our pictures are taken from "Vistas in Southern California," published by A. C. Bilicke & Co. of the Hollenbeck Hotel, a very creditable souvenir publication.

MR. ABBOT KINNEY, of whose excellent work in the interest of forestry is widely known, is getting together materials for a paper on "Eucalyptus in California," and wants help from the public. He would like to have the results of experiment everywhere; how the different kinds of eucalypti have done in the different soils and climates of California. Those who have done anything in particular in this line will do Mr. Kinney a favor and California

forestry a service, by writing out their experience and forwarding it direct to Abbot Kinney Esq., Lamanda Park, California. It is not necessary that the record of experience should be special or unique—if you have planted the eucalyptus successfully, just set down the facts and let Mr. Kinney have them.

TEXAS wool-growers are up in arms against the removal of the wool tariff.



SCENES AT THE SOUTH—THE STIMSON RESIDENCE AND THE MT. LOWE RAILWAY.

untutored minds of these young wards of the nation, and we hope some of our readers may be prompted to send fitting gifts. The school at Perris is operated under the auspices of the Department of the Interior but has only been ten months in operation and has not yet had time to develop a circle of friends, such as are so valuable to older schools. For this reason Mr. Savage makes this general appeal to a generous public. We hope it will not go unheeded.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 15 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half inch (1 square).....	1.00	2.50	5.50	22.00
One inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Registered at S. F. Post Office as second-class mail matter.

Our latest forms go to press Wednesday evening.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, December 9, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—Scenes at the South—The Stimson Residence and Mr. Lowe Railway, 389.	
EDITORIALS.—The Fruit Exchange Project; Los Angeles Scenes; Miscellaneous, 389. The Week; Ruinous Reductions Proposed; Farm Mortgages; Miscellaneous, 390. From an Independent Standpoint, 391.	
HORTICULTURE.—The Los Angeles Convention, 392-393-394.	
POULTRY YARD.—Feeding Fowls; How to Select Fowls for Future Results, 394.	
SHEEP AND WOOL.—Feeding and Shipping Sheep, 394.	
THE VETERINARIAN.—Removing a Malignant Wart, 394.	
THE VINEYARD.—A Sutter County Raisin Drier, 395.	
THE FIELD.—Summer Fallowing, 395.	
THE DAIRY.—Notes on Butter-Making, 395.	
THE HOME CIRCLE.—Miscellaneous, 396-397.	
PATRONS OF HUSBANDRY.—Editorial Observations; The National Grange, 398, 402. The Secretary's Column, 402.	
AGRICULTURAL NOTES, 399.	
MISCELLANEOUS.—Cost of Great Britain's Defenses; Artificial India Rubber; Life in Paris Water Mains, 400.	
MARKET REPORTS.—The Local Produce Market, 401.	

BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Agricultural Implements—Baker & Hamilton.....	399
Wagons and Carriages—California Wagon & Carriage Co.....	404
Squirrel Exterminator—Wakelee & Co.....	399
Land for Sale—John F. Bybee.....	401
Webster's Dictionary—G. & C. Merriam, Springfield, Mass.....	397
Spray Pumps—F. G. Worden.....	402
Prune Trees—N. B. Hawley, Milwaukee, Or.....	403
Situation Wanted—P. O. Box 1333, Fresno, Cal.....	401
Nursery Stock—California Nursery Co., Niles, Cal.....	403
Nursery Stock—Fancher Creek Nursery, Fresno, Cal.....	403

See Advertising Columns.

The Week.

The public mind is so occupied with great affairs that weather and crop talk seems very commonplace. It might be a question whether the reassembling of Congress and the startling "reforms" urged by the President for this country attract as much attention as another set of "reforms" which Mr. Cleveland has hermetically sealed up and exported to Hawaii. The foolishness we have at home is bad enough, but people seem more inclined to wonder what will be the foolishness abroad than to seriously consider that which is at home. Really things are getting pretty well mixed up, and if it only rains once in a while and blows the rest of the time our people will be inclined to forsake small things and give their whole time to affairs. It is an inspiring thought, and whether we shall have anything to eat next summer is a groveling consideration. The times bid fair to make statesmen of us all, and when we get to that estate we can draft policies and invent principles without a trammel. It is indeed an age worth living in.

Ruinous Reductions Proposed.

Now is the time for every Californian and for every American who cares aught for the success of home products and the prosperity of our own people as producers to exercise every atom of force he possesses to avert the ruinous strokes aimed at local industries by the proposed tariff of the Ways and Means Committee of the House of Representatives. Some of the menaces of that ill-starred document have been long mooted and their evil effects have been in a certain sense discounted, but there are others which were not foreseen, and the announcement of them comes upon our people with poignancy and with crushing weight. It is true that we have feared the removal or the reduction of duty from some of our fruit products which are struggling into prominence, but we could hardly believe that the claims made in their behalf would have no weight with the constituted guardians of the country's prosperity. We were aware that the courses of our industries were to be marked out by a lot of politicians, loaded to the eyebrows with sophistry and conceit, and willing to imperil a people's welfare in their ambitious pursuit of power, but we held to the hope that even such men could be moved by appeal and argument. We were not ready to concede that a creed of fallacies could make

men so blind to the American interest, and to their own success as well, for it is as plain as sunlight that those who take to this sword of destruction to home interests shall themselves perish by it just as soon as the American people has another opportunity to exercise its sovereign prerogative.

But we have naught to do at this time with the general issue. We have, all of us, to do our utmost at once to stay the hands of Congress from the destruction of the leading interests of California and her sister States. The preliminary "statement" of what the Ways and Means Committee proposes that Congress shall enact in the form of a tariff reduces the duty on raisins from 2½ to 1½ cents; on prunes from 2 cents to 1; while figs, on which there was formerly a protective duty of 2½ cents, are placed on the free list.

This is the proposition which calls for the most energetic protest on the part of our people. These products are the output of new American industries which have been built up at the cost of indescribable effort and sacrifice. We have only just learned how to successfully put the goods upon the market, and they have but just achieved a victory over the foreign goods which for a century have drawn out American gold to enrich the Mediterranean region. We have drawn from all parts of the country devoted and skillful people to invest time and money in the effort to give this country home-grown fruit products of the highest quality and the fullest cleanliness. They have succeeded in making an output which shows by its quality and its volume that such industries are entitled to live upon American soil and to adequately compensate American labor, while their products, superior in wholesomeness and purity, are sold at prices which open to them the doors of all American homes. And now our precious Government would destroy them in its attempt to float a fallacy, and would open the way to flood the country with the poorest products of the south of Europe and Asia Minor.

And what great interests built up at such cost are now menaced. Under the present protection all these industries have grown steadily, until this year it is estimated that the product of figs amounted to \$750,000, and of prunes and raisins to from \$7,000,000 to \$8,000,000. The production of prunes this year is set by M. Ehrman & Co. of this city at 60,000,000 pounds; raisins, 65,000,000 pounds; figs, 1,500,000 pounds. And these are, of course, only the exponent of the value involved in the orchards planted and cared for for years in order that this product should come. They are only a suggestion of the capital invested in curing and packing houses, storehouses, and in all the paraphernalia of transportation and trade. Is it any wonder that there is now a general uprising of those whose homes and property are placed in imminent hazard by these trifling tariff-tinkers.

We are glad to see that other elements of our population than the fruit producers are rising to the urgency of this matter. It is fitting that every organized body of Californians should declare itself, and that every individual who has acquaintance or influence in Congress should employ it to avert this impending disaster. The Associated Wholesale Grocers of California, recognizing the widespread distress that would follow the passage of the proposed bill, have begun the attack by unanimously adopting the following resolutions:

WHEREAS, The Committee on Ways and Means in Congress, in its report of the revision of the tariff, has reduced the duties on foreign raisins and prunes one cent a pound; and, whereas, such a reduction will cause irreparable loss and widespread ruin to thousands engaged in the raisin and prune industries of California, as, owing to the peculiar geographical position of our State—being very distant from Eastern trade centers—and due also to the lateness of our season as compared with that of foreign countries, the employment of the more expensive mode of transportation by rail is absolutely necessary in order to bring our products to market in good season, thus rendering the cheaper modes of ocean carriage impracticable; and, whereas, the provisions of the new bill will render competition with the product of the underpaid labor of foreigners, as well as with the cheaper modes of transportation, impossible; be it

Resolved, That this association take immediate steps toward counteracting the action of the Ways and Means Committee, by exerting every possible effort to agitate the subject, not only among the producers of this State, but also among all classes of its citizens; and, be it further

Resolved, That this subject be brought to the attention of our representatives in Congress, with a view of obtaining their hearty co-operation in the matter.

These resolutions were presented to the San Francisco Board of Trade on Friday last and met with unanimous approval. Some members even believed the resolutions were not strong enough, and the attorney of the board was instructed to prepare another set. After being adopted the resolutions will be forwarded as a memorial to Congress.

The time now is for continuing this work. Congress is in session. It will be political policy probably to advance the evil work with the utmost speed. Let the friends of the prosperity of all those regions which produce these fruits see to it that no point is lost through inattention or inaction. Popular protest has won signal victories over legislative conceits in the past and popular protest may yet avail in this case.

Farm Mortgages.

A mortgage at best is an unsightly covering for a handsome reality. Even if it be cut low in the neck and high in the skirt as a fashionable bathing suit, still it clouds beauty and impedes movement.

We are aware that, industrially, a mortgage may be a beneficent institution ministering to progress and success and enabling people to achieve results which otherwise would be altogether unattainable, and yet even in such service the happiest moment in the life of a mortgage is its death. To pervert scripture we would enjoin him who girdeth on a mortgage boast not as he that taketh it off. The conquest of a mortgage is one of the proudest victories of a man's industrial life. In the case of a farmer, a cancelled mortgage is the handsomest thing he can nail on his barn door as an exponent of his industrial prowess.

And we are sincerely glad to know that there might be more cancelled mortgages nailed to barn doors than current gossip would allow. It has been mooted for years that American farms were so covered with mortgages that even the sunshine could hardly warm the soil and that nearly all the farmers had their mouths full of sealing wax and their legs bound with red tape. This report has not done us any good at home or abroad. It has had a tendency to diminish the rating of agricultural security and has lowered the popular estimate of agricultural pursuits. It is very fortunate that the census of 1890 undertook to collect statistics of the mortgage indebtedness of the American farmers and thus substitute some definite truth for the exaggerated notions which have inspired discussion and conversation. It is highly gratifying too that it can be shown that our farms are not as heavily blanketed as common report has for years alleged.

Mr. Herbert Myrick, who has made several notable studies of agricultural economics, especially one upon agricultural co-operation, has just prepared for the *American Agriculturist* an analysis of the mortgage returns of the Census Office, and announces these glad tidings:

Three-quarters of all the farms in the United States are owned free of incumbrance. Only one-fourth of the total number of farms in the United States are mortgaged; or, to express it more specifically, out of every hundred American farms more than 70 are fully paid for and less than 30 are mortgaged.

The average mortgage represents only one-third the value of the farm upon which it is secured.

The total amount of farm mortgages in the whole country is hardly one-tenth the total value of all our farms.

In 1880 nearly one-fifth of the mortgage indebtedness rested on farms, but in 1890 farm mortgages represented only one-seventh of the country's total indebtedness on real estate.

Out of every hundred families on American farms in 1890, 47 owned their farms free of mortgage, 20 owned but with incumbrance and 32 hired the farms they lived on and worked.

Of those who cultivated their own farms, 70 per cent owned without incumbrance and only 30 per cent had mortgages. Of the farms occupied by tenants, less than 10 per cent were incumbered.

Four-fifths of the amount of debt on farms and homes was incurred for the commendable purpose of buying and improving the property, and a like proportion of the numbers of farms and homes were mortgaged for the same purpose.

The total real-estate mortgage debt that existed in the United States in 1890 is estimated at two and a half billions of dollars, equally divided between lots and acre tracts. In 1890 the total amount of such incumbrance had more than doubled, but only 34 per cent of it was on acres and 66 per cent on urban property.

These facts should quiet the current report that our farms are mortgaged for more than they are worth, and the hateful deduction that the American farmer is a shiftless fellow and the slave of the hanker and private capitalist. The knowledge of the facts should also give the farmers more courage among themselves and more confidence in each other. They are a forehanded, independent class, and they should know it and act upon it. They are vastly freer than the urban and suburban real-estate owner, and yet every one knows that there is more dark mortgage talk in a country blacksmith shop in one afternoon than there is in a city club room in a year. This should stop forthwith. If farmers will stop crying down themselves and each other, there will be more rural courage and wider respect for ruralists and rural affairs. The downfall of this old farm-mortgage bugbear should serve to lead in this new course of behavior.

THE Santa Fe railway has announced that it will give a weekly refrigerator car service between Los Angeles and Chicago, Kansas City and Denver by passenger and that shippers will be allowed to ship any amount of any kind of fruit or vegetables they may desire, and can have their shipments put in the car at any point on the southern California road, and unloaded at the terminals named, or any intermediate point. This looks like handling less than carload lots in such traffic and if rates are favorable it will be of great advantage to producers.

T. B. HULL of Yuba City sends us an excellent specimen of Japanese persimmon free from astringency, though firm to eat as one would an apple. Most persimmons have to get to the condition of spoon victuals before they let go of the pucker, but this is quite different. The fruit, though of good size, is not as large as some. Like "taters in Maumee, though small, you can eat them skins and all."

From an Independent Standpoint.

Since our last publication Congress has come together in regular session and the Annual Message of the President has been given to the public. The Message is very long—filling eleven ordinary newspaper columns—and for the greater part treats of foreign diplomatic relations wholly void of significance or interest to the average citizen. The case of Hawaii, however, is quite another sort; and here we must confess distinct disappointment. We had hoped that Mr. Cleveland would give a full and explicit statement of the facts of the case as he understands them, with a statement of his instructions to the new Minister, concerning which there has been so much mystery and speculation; and upon this basis, ask Congress to express its will. This would have been the proper course; it would have been respectful to Congress and to the country and it would have disarmed unfriendly criticism. But Mr. Cleveland has done something very different. He accepts without question the conclusions of Commissioner Blount that the revolution at Honolulu was accomplished with the connivance of the then American Minister and by the force of American arms; and assumes it to be the duty of the American Government "to restore as far as practicable the status existing at the time of our forcible intervention." That is, he thinks we ought to put down the young republic and reseat Queen Liliuokalani upon the Hawaiian throne. Then follows:

With a view of accomplishing this result within the constitutional limits of Executive power, and recognizing all our obligations and responsibilities growing out of any changed conditions brought about by our unjustifiable interference, our present Minister at Honolulu has received appropriate instructions to the end. Thus far no information of the accomplishment of any definite results has been received from him. Additional advices are soon expected. When received they will be promptly sent to Congress, together with all other information at hand, accompanied by a special Executive message, fully detailing the acts necessary to a complete understanding of the case and presenting a history of all the material events leading up to the present situation.

And this is all. It is more than disappointing; it is exasperating. Congress is not informed as to the President's idea of what is included "within the constitutional limits," nor is it given more than a hint as to what Minister Willis has been ordered to do. It must rest content with the information that he has been "appropriately instructed," and with the assurance that when the President's plans are carried out all the facts will be reported. In other words, Mr. Cleveland has his own theory about Hawaii and his own plans for settling the matters now in question; and he proposes to ignore Congress and the people, and to bull the job through in spite of all protests and in the face of all decent considerations. It remains to be seen what Congress and the people will do about it. In our judgment, there has been nothing more arbitrary since the days of Jackson, and nothing so outrageous to every American principle within the present generation. It is a complete and unwarranted usurpation of power which belongs to the legislative branch of the Government.

There is disappointment, too, in those paragraphs of the Message devoted to the National finances. When the Silver Repeal bill was before Congress, two months ago, Mr. Cleveland wrote a letter to a citizen of Georgia, in which he spoke positively in favor of a complete reorganization of our financial system on a sound basis when repeal of the Sherman law should be accomplished. This was accepted as a pledge of Executive support of a comprehensive system to be based upon the bimetallic principle. In fulfillment of this pledge it was expected that in his Message Mr. Cleveland would suggest some plan or, at the least, in general terms support the idea of currency reform upon broad lines. But he does nothing of the kind. Referring to repeal, he says that it has "made an entire change in the complexion of our currency affairs," adding that he does not doubt that the "ultimate result of this action will be most salutary and far-reaching." Since "in the nature of things it is not possible to know what conditions will be brought about by the change," he is convinced that "a reasonable delay in dealing with this subject will increase the probability of wise action." In other words, he evades his promise by postponement; he recommends that the whole matter of the finances be thrown over to some indefinite future time.

A further suggestion under the same head is that the President be given authority to invite other nations to a monetary conference at any time when there should be a fair prospect of accomplishing an international agreement on the subject of coinage. He further "earnestly suggests" that the Executive department be given clearer authority to issue bonds in its discretion.

In the matter of the tariff, Mr. Cleveland is on familiar ground. He wants the protective idea eliminated from the tariff laws, though he suggests that changes affecting "conditions which have grown up among us" call in

fairness and justice for "discriminating care." The present stagnation in manufacture he attributes to the fact that raw materials are too high—a condition which it is hoped to correct by "a measure which has been prepared by the appropriate Congress Committee embodying tariff reform on the lines herein suggested." This measure, he declares, "is the result of much patriotic and unselfish work, and I believe it deals with its subject as consistently and as thoroughly as the existing conditions permit."

The significance of these tariff recommendations hangs upon the measure now ready for presentation to Congress, and which will be known as the Wilson bill. It has been made up during the past three months by the Democratic members of the Ways and Means Committee of the House, the Republican committeemen not having been invited to the committee sessions and having therefore no part in formulating the measure. It is based upon two general principles: First—"The adoption, wherever it seems practicable, of ad valorem instead of specified duties." Second—"The freeing from taxes of those great materials of industry that lie at the basis of production." Among its general features is absolute abrogation of tariff duty from lumber and coal; radical reduction in the iron and steel schedules; a cut of fifty per cent in the duty on flax, hemp and jute; and so all along the line, changes involving reduction in duty from twenty to fifty per cent. Coming down to matters in which California is specially interested, it puts wool on the free list; it reduces the tariff on champagne from \$8 to \$7 on the dozen, leaving still wines subject to the present tax; grapes are changed from 60 cents per barrel to 25 per cent ad valorem; plums and prunes are cut from 2 cents to 1 cent per pound; figs are added to the free list; oranges, lemons, limes and olive oil are practically unchanged; raisins are cut from 2½ cents to 1½ cents per pound; zante currants remain on the free list; the sugar bounty is repealed, to be taken off in eight annual instalments; the duty on brandy is cut from \$2.50 to \$1.60 per gallon. It is estimated that these cuts will take about \$60,000,000 from the receipts of the Government, and, to make up this loss, radical changes are proposed in the internal revenue laws. Among other things suggested is a tax on corporate and possibly on private incomes in excess of \$5000 per year, and possibly a tax on the domestic wine product. This feature of the bill is, however, not yet complete.

We make no secret of our objection to this whole project. Carried into effect, it would, in our judgment, plunge the country into the deepest distress. In California it would destroy our prune orchards and our vineyards, wipe out our flocks of sheep, and make poverty universal. We regret that the proposition to do all this has been made. We have hoped that the stress of the times and the lesson of the late elections would make Mr. Cleveland and his associates call a halt; but since tariff revolution is still urged there is nothing for the people to do but to fight it. In our judgment the people of the United States will not stand free trade for the producer and protection for the manufacturer; nor will they stand a screwing up on the revenue taxes, which are in reality taxes upon the industry of our own people. We do not believe that this revolutionary measure will become a law; but if it should be forced through Congress and enforced upon the country, it will only remain a law until the people have the chance to elect a new Congress.

It is pleasant to turn from these matters in which we hold the President to be grievously wrong to other points in the Message with which we are in sympathy. The President is in favor of careful scrutiny of the pension list with the idea of limiting its benefits to those who are really deserving of aid from the Government. He is in favor of limiting naval construction to the completion of ships now under way until times get better. He wants the advantages of the postal money-order system of the postal-delivery system extended. He wants laws for the sale of Indian lands that will make such scrambles as that which recently occurred on the Cherokee Strip impossible in future. He commends the work of the Civil Service Commission and wants better provision made for it. He wants the Nicaraguan Canal when built to be wholly under American ownership and control. He wants to enforce economy in the Government and—but we had better give his own words on this subject:

Economy in public expenditures is a duty that cannot be neglected by those entrusted with the control of money drawn from the people for public uses. It must be confessed that our apparently endless resources, the familiarity of our people with immense accumulations of wealth, the growing sentiment among them that the expenditure of money should be in some manner to their immediate and personal advantage, the indirect and almost stealthy manner in which a large part of our taxes are exacted, and a degenerated sense of official accountability, have led to growing extravagance in Government appropriations. At this time, when a depleted public Treasury confronts us, and many of our people are engaged in a hard struggle for the necessities of life, and when enforced economy is pressing

upon the great mass of our countrymen, I desire to urge with all the earnestness at my command that Congressional legislation be so limited by strict economy as to exhibit an appreciation of the condition of the Treasury and sympathy with the strained circumstances of our fellow-citizens.

In these several recommendations the President is clearly right, and it is a pity that he does not apply the same principles of good sense to the tariff, the Hawaiian matter and to the national finances.

To return to the tariff proposition: The one-sidedness of the measure finds a marked illustration in the matter of wool. Wool is put on the free list but woolen goods are still subject to duty. The manufacturer is to get his materials cheaper and when it comes to the sale of his product, is to be protected from foreign competition by a stiff tariff as heretofore. The woolen manufacturer, not the consumer of woolen goods, is to gain what the producer of wool loses. The very farmer who must sell his wool on the free-trade basis, must still pay the protection price for his coat. Of course there is no justice in this; it cannot be defended upon any principle either practical or abstract. The only possible justification for making wool free would be to make woolen goods cheaper to the people; and since this is no part of the new proposition, the measure stands condemned by its own inconsistency and partiality, as class legislation.

In the making of this bill a grievous wrong has been done. Those members of the Ways and Means Committee not identified with the party in power have not been invited to attend the meetings of the committee, and have had no part in formulating the bill now put forth. It is a star-chamber product, created in contempt of the advice and in defiance of the rights of the minority. In this connection a strong point was made on Monday by ex-Speaker Reed (Republican member of the Ways and Means Committee) in the remark that it was a strange procedure for the President to announce to Congress what its Ways and Means Committee would report, when that committee had not yet so much as held a meeting. "Am I and my Protection associates on the committee to be utterly ignored?" he asked. "Must we find out from the President what a committee of which we are members is to report? Has it come to the pass that those who represent the minority are to be wholly eliminated from the business of legislation?" The significance of these words should not be lost on the American people.

Van Alen, the New York "willie-boy" who gave \$50,000 to the Democratic campaign fund last year, and who in return was appointed to the Italian mission, has had the decency to decline. Mr. Cleveland urged him to take the place in spite of the universal disgust at the appointment, but Mr. Van Alen will not be moved. Thus ends a most disgraceful incident. It is no answer to the criticism of Mr. Cleveland in this matter to say that Mr. Harrison did just as badly in the appointment of Wanamaker to the Cabinet in return for raising \$300,000 for the Republican fund of 1888. That the Wanamaker appointment was an indecency and a prostitution of Presidential patronage did not make it right to appoint Van Alen upon similar terms. It is no justification of a bad act that there is a distinguished precedent for it.

American Prosperity.

These census publications give data for determining the actual recorded debts, public and private, of the people of the United States, and enable a satisfactory comparison with the financial standing of other prosperous countries. From an Eastern exchange we take these paragraphs:

The total indebtedness on all real estate in the United States is only about \$92 per capita. Add to this the per capita amount represented by the public debts of the United States (\$14.63), of States and Territories (\$3.56), and of counties (\$2.27)—a total of \$20.40—and it appears that the total public debt and all real estate mortgages in the United States amount to only \$112 per capita.

In other words, in June, 1890, the sum of \$112 from each man, woman and child in the United States would have paid all the mortgages in the country and also all the national, State and county debts. In France, the national debt alone exceeds \$116 per capita, England's national debt is nearly \$90 a head, while the public debts in the older Australian colonies are \$300 for each inhabitant. There are good reasons for believing also that mortgages in England, France, Germany and Australia vastly exceed the American average of \$92 per capita.

Thus it appears that in 1890 not only were the farmers as a class the most forehanded of all realty-owners, but the citizens of the United States as a whole were above the debt clouds of other nations. Where we shall be at when the present four years of sophistry and sentimentality are over remains to be seen.

DUE ATTENTION should be given to the citrus fair which will be held at Porterville from December 26th to 30th. The district from which exhibitors will be drawn comprises the counties of Tulare, Kings, Fresno and Kern. The proceeds will be used to maintain an exhibit at the Midwinter Fair.

THE LOS ANGELES CONVENTION.

Horticulture and American Labor.—This was the chief topic of Mr. Kinney in his address of welcome given at the opening hour of the convention. After a few words of greeting on behalf of the fruit-growers of the southern part of the State, Mr. Kinney remarked that California as a whole gloried in the reputation won for her by the horticulturist. It is he who has advertised our soil and climate, and sent the noble army of fruits as missionaries to tell the world of California. Great as this work has been and important as are the interests of horticulture, we expect to see the work greater and the interests more important. No pent up Utica confines our aims. Already we have invaded European countries and I think that nothing less should satisfy us than such a superiority of quality as will command the highest markets of the world. California contains within short distances wide ranges of adaptability to various fruits, by soil, altitude, temperature and humidity. From the sea coast to the summit of the Sierras we find conditions favorable to every fruit of the temperate and semi-tropic region and even to some of the tropical ones. But we have hardly yet settled the limits of the best product of our fruits that we can most readily attain that evenness and excellence of quality that will command the confidence and tribute of the world's market. The relations of fruit-growers with their labor is a matter of importance to them and concerns the community still more. There has been a tendency among us to adopt the maxim that, "as the wages to the laborer is low, so is the cost of production low;" and another, "that the finest grades of prepared fruits demand the lowest price to the individual laborer for their economic production." If these maxims be true, the interests of the employer and of the laborer are irreconcilable. Under such principles it will be to the interest of the employer to push down the individual wage to the barest needs of subsistence and still eternally grind him lower. A little consideration would make the whole republic stand aghast at the prospect of our future under the application of such principles. The principle that as the individual wage is low the cost of the product is low holds no hope for humanity. The industrial history of the world does not establish this principle, but tends rather to the contrary. While wages have been advancing the cost of product has been diminishing. Let us then adopt a policy of promise. Let us say that "The wage cost of product will correspond with the intelligent application of honest effort." Under such a principle the interests of the employer and of the laborer may be united for the betterment of both. With this principle the interest of the employer will be for the elevation of his laborer rather than for his degradation. We will, with this, connect cheapness with competency, and realize that a high-priced laborer, if intelligent and honest, will be the less cost producer. With this principle we can with reason ask our schools and universities to turn some of their energies to the preparation of our young people for intelligent work in our fruit industries. We can hold forth to them the hope of good pay for good service.

Varieties of Citrus Fruits.—Upon this topic Mr. J. E. Cutter, of Riverside, gave an interesting paper. The Washington Navel he declared to be the early king of the Orange tribe. Every other Navel orange he believed to be inferior to it, though he had noted one other at least both productive and excellent. He occasionally heard it claimed that by some recent process of crossing an improved Navel orange had been evolved, but he had never tested any of them which could fairly claim to be the equal of the regular strain. Continuing, Mr. Cutter said:

"While the Navel is the best variety of its season, both orchardists and marketmen know the need of other kinds. Variety is wanted during the time when it is staple, and other sorts must supplement it. Later they must meet the full demand when the Navel's season is past. For the first of these two requirements the St. Michael and the Blood oranges are doubtless the best we have, and they also are the best immediate successors to it. They have been raised in but limited quantity, but growing favor is shown to both by dealers and planters. Both possess excellent shipping qualities, and both keep well at a time when many varieties have softened too much for the best carriage. Both are productive, exceedingly so, and the Ruby Blood probably leads all varieties in disposition to early and heavy bearing. In structural characteristics the St. Michael is easily the most elegant of oranges.

"Following these is the Tardif (French adjective *tardif*, meaning late), doubtless identical with 'Valencia Late.' This is, par excellence, the late orange. It is good from May 1st to December—not only good, but better within those limits than any competitor. Its structural characteristics give it the best shipping qualities of any orange, while its crisp, high, sub-acid flavor—sprightly as a good soda—satisfies the craving of summer. It has a pale rind, while the flesh is of unusually deep, rich color. It is very productive and the tree is a very excellent, strong grower, with but slight thorns.

"The foregoing cover the season and make the best list that will do so. There is, however, a long list of excellent varieties, of which some will contend strongly for place among the indispensable few. Prominent among these is the old established Mediterranean Sweet, which has always been profitable; but the Blood, St. Michael and Tardif are all better fruit and better shippers, and the St. Michael and Tardif are better trees."

Turning to the large class of oranges of what he would term the secondary class, Mr. Cutter named the Joppa as one that comes with good credentials. In the Tangerine class the Dancy and the Mandarin are standard. The best fruit of this kind which had come to his notice was raised by Mr. Abbott Kinney and had by him been named the "Kinneloa."

Referring to the Pomelo (grapefruit), Mr. Cutter said there was much inquiry and little definite knowledge. The Florida product found much favor in the Eastern market. The "Triumph" has probably been most planted in California. Florida has recently reported a seedless variety, and a small tree of this variety is now in his (Cutter's) orchard, but it has not yet fruited.

Of lemons, Mr. Cutter declared that of the several lemons no one had as yet been pronounced best by general consent. Since California promises to become the leading lemon producer, it became very important that the matter

of pre-eminence should not long remain undetermined. We quote:

"The Villa Franca battles with the Lisbon for growing favor on full, even terms. As an early and heavy bearer, it probably excels all competitors. It carries few and light thorns. In the severe frosts through which it has passed in Florida, it won the repute of being more hardy than other varieties. This seems to be sustained by experience here in December, 1893. Its fruit is judged with the best, both in our own State and abroad.

"One principle must guide us in this inquiry—to wit, that no lemon which is bitter of rind, whether little or much so, can be accepted. The so-called 'Sweet Rind,' the Bonnie Brae and others that may have gained some attention, but will not stand this test, must be discarded. Shipping and keeping qualities are also imperatively demanded, so that Bonnie Brae also fails from its weak, loose and insufficient rind.

"Of the established varieties, the otherwise excellent but weak-growing Eureka is yielding ground, especially in the interior valleys, where its thin foliage fails to shield the fruit properly from the hot sun.

"'Sicily' is a very indefinite term which has been used alike as a name for some of the best and for some of a very worthless sort. The planter needs always to inquire 'What Sicily?'

"Genoa is unmistakably a fine fruit, resembling Eureka, but the tree grows stronger and is of better habit. It has been but little planted.

"The Eureka's long-time rival, the mighty Lisbon, still flourishes as the great contestant of all the new introductions. Its fruit is strictly high-grade and cures to the best keeping condition. It is very productive, but against this must be set the fact that it is late in coming into bearing. Its foliage is of light color, but growth is of the heaviest. We may add that when Mother Earth was bidden to bring forth thorns, the Lisbon was no doubt there."

Mr. Cutter then referred to a late-comer in the lemon field—the Royal Messina. This variety Mr. Cutter clearly believed to be the lemon of supreme excellence and in support of the claim presented an analysis of the fruit made at the Experiment Station at the State University and heretofore printed in the *RURAL*. This analysis, Mr. Cutter pointed out, "shows the easy and extraordinary superiority of the Royal Messina. It shows two and one-fifth times as much sugar as the Lisbon together with decidedly greater strength of acid." It is a good keeper, the tree is nearly free from thorns and is of strong growth and of fine dark foliage. The tree was introduced only four years ago and as yet there are but few in bearing. Thirty acres were this season planted in one grove at Riverside.

Replying to an inquiry, Mr. Cutter said that the Royal Messina was usually seedless. Mr. Boyd of Riverside asked Mr. Cutter if in his reference to the Blood orange he meant the Malta Blood or the Ruby Blood; and asked which he thought the better fruit, intimating his own preference for the Malta. Mr. Cutter replied that he deemed the Ruby the better of the two, though he said that fair samples of the Ruby are not easily found in California, owing to the fact that the trees are still young.

Later in the session a citizen of Riverside, whose name escaped the reporters, entered a formal protest against the claims presented by Mr. Cutter for the Royal Messina lemon. It was in effect a simple denial of Mr. Cutter's claims, no evidence being submitted in support of the protest.

Nationalization of Railroads.—Among those who came early, remained through the whole session and took a full share in the deliberations was Mr. Edward Berwick of Monterey. He came for a special purpose, and, after his habit, stuck to it and succeeded not only in interesting and instructing, but in amusing the convention. Mr. Berwick's specialty was nationalization of railroads. On this subject he read an essay early in the session, and all the way through he brought up the question, supporting it admirably with facts, figures, arguments and illustrations. In introducing his formal paper on the subject of Transportation, Mr. Berwick said: "You can sum up the present transportation system in five short words: 'All the traffic will bear.' You know what that means. All the producer will bear; and this frequently amounts to all the trees will bear." Continuing, he said:

"It means that rates are based, not on any computation of the cost of transportation, but are classed under an arbitrary elaborate schedule, which shall shear the producer as close to the skin as possible. Here is how the ascending scale is graduated for running a 10-ton car a distance of 125 miles:

"Hogs, \$25; cattle, \$32; wheat, \$32.50; hay, \$40; apples, \$48. Then stove wood, say rough oak is \$2.75 per cord, and ten cords make a carload; while peeled oak is \$3.15 per cord, and eight cords make a carload. In one instance under my notice lately apples were sent to a point east of the Rockies for \$1 per hundred, while pears were \$1.25 per hundred. Some articles even appear twice on the schedule at different rates. Millet as bird feed is some 25c per hundred lower than as seed.

"Such a system can never become very satisfactory to the horticulturist. 'You fatten the ox and I'll eat the beef' is certainly a division of labor; it can hardly be called an equitable division.

"But such is the system that has obtained, and will obtain, so long as private ownership of railroads is tolerated and human nature remains human nature. As I said the founders of the S. P. R. R. are almost all dead, but their heirs or their heirs' heirs are with us, and are here to stay. Their system also stays with them, and will stay so long as the people permit it.

Proceeding upon this idea—the nationalization of railroads—Mr. Berwick made a strong and effective argument. Again we quote:

"Had our statesmen been wise and foreseen that the railroad was to be the highroad of the future, they would have made the building and control of railroads at least as much a matter of Governmental care as are common highways, and there would be now no need of any apparently revolutionary policy.

"But is there aught revolutionary in the nationalizing of railroads? I claim there is nothing.

"It has ever been one of the first functions of good government to provide means of inter-communication among its citizens. The Government of old Rome is remembered to-day by the monumental excellence of its roads and viaducts.

"If old Rome could furnish its citizens with roads of then unparalleled durability and utility, surely vigorous young America can provide its citizens with the very best class of roads known to this 19th century!

"Some will shake the United States Constitution at me and tell me the nationalization of roads is unconstitutional. I boldly deny any such assertion. But, should every lawyer in America dissent from my view, I would then claim that 'man is more than constitutions.'"

These quotations only suggest the main lines of Mr. Berwick's address. His propositions were elaborately argued and supported by figures showing the ability of

the American people to nationalize the railroads and thereby promote the public welfare. Concluding, he said:

"Once more, friends, know what you want! Don't let your party leaders fool you into hostile camps wrangling and snarling over the dry bones of dead issues or the tweedledum and tweedledee of tariff niceties. Truth is one! Choose for your leaders men of convictions and men with the courage of their convictions. Your present railroad system antagonizes and insults republican institutions; it aggravates class distinctions, debauches politics, defies the law. You claim to be the sovereign people. Prove your claim! Be once more sovereign! Issue your unanimous sovereign mandate, shake off your shackles, and be once more free Americans worthy of your sires!"

This paper clearly made a hit; and it was, off and on, a topic of discussion during the whole session. Two days after reading, a resolution endorsing Mr. Berwick's views was presented, and there was a hot debate on it. Mr. Berwick maintained that since transportation was the paramount question with the fruit-grower this was the most practical question that could be dealt with—this remark being a retort to Mr. Maslin, who had denounced the nationalization resolution as impracticable. The talk took up the better part of a whole evening session and finally by a majority of only one vote the resolution was tabled. It was clearly evident that the sentiment of the crowd was favorable to the proposition of nationalization of railroads but it was felt by many that to put forth the resolution as the sentiment of the fruit-growers would do no good and that it might do harm.

The incident was interesting and notable as an illustration of the growing favor of the project for railroad nationalization. Mr. Berwick clearly had the favor of the convention and will probably make his resolution go through next time. At the end he declared himself entirely satisfied, since his purpose was simply to get the fruit-growers to thinking and discussing the subject.

Citrus Growers' Organization.—Last week we remarked briefly upon the address of Mr. T. H. B. Chamblin of Riverside on the subject of organization. We regret exceedingly that it is not possible to print the address in full, since it was delivered offhand. Mr. Chamblin said that his time for some weeks had been taken up in the project of organizing the orange-growers of the southern part of the State upon lines looking to the marketing of their own fruit. The people of that section, he said, had, after the labor of planting and maturing their orchards at great cost, been guilty of the supreme folly of turning their product over to those whose interests were antagonistic to their own to sell according to their own pleasure. We have, he said, reached the point where we must find new methods; and what is true of southern California is perhaps equally true of the State in general. He then recounted the plan upon which the orange-growers are now organizing. Its purpose is to give each grower the full market price and a just proportion of the early sales. To this end, they proposed to work through local associations. The management of the association is to remain under the supervision of the growers. It is our idea, he said, if the plan succeeds, to enlarge the scheme to include the other fruits of southern California. We realize that we have a condition where it is essential for the growers to take matters into their own hands. Mr. Chamblin spoke with especial severity of the commission interest. We have, he said, cases where shippers have loaded a dozen or more cars with our finest fruits and for which they have not received a single nickel. We have cases where our fruit sold at Chicago in the morning on grower's account for 65 cents per box and in the afternoon the same fruit sold on merchant's account for \$1.75 per box. We have other cases of sales in the morning on owner's account at 40 cents and later sales on the same day at \$1.25 on merchant's account. We have no reason to complain at the price paid by the consumer, but the leak between the producer and the consumer must be stopped. We don't make war on the men who have handled our products but against their methods. We are now making arrangements by which we hope for a better condition of things. Later, Mr. Chamblin said that California was to be the great fruit-producing State of the country. In what I shall now say I have reference to southern California, but you may apply it as you see fit. Southern California is built upon the citrus interest. It is the base of all values, including city lots, brick blocks, bank stocks and the whole range of industrial interests. How long can the present state of affairs continue without affecting the present status of values. I say that unless our system of marketing be corrected within twelve months all property values in southern California will be cut squarely in two. The situation affects every man. Mr. Chamblin said in conclusion that he was firm in the faith that the business talent that had built up southern California would find a way to solve the problem. Co-operation was the only hope of sellers. He believed it possible to establish agencies for the sale of California fruits in the general markets in the interests of the producer. The day of leaving our sales to a body of men whose interests were antagonistic with our own, was past. In its modern application to trade, he said, it is not true that competition is a natural and wholesome law. As business is now organized competition means to tear down and to destroy, while co-operation means to build up. He was glad that there was a proposition for co-operation in the matter of marketing dried fruits. The principles and the interests involved were identical.

SUGGESTIONS ON QUARANTINE.

A Masterly Presentation on the Subject of Protection Against Pests, by the State Entomologist.

One of the very notable papers of the Convention was by Prof. Alexander Crow on the subject above named. It contains so much that is very important, that, in spite of its length, we make room for it in its entirety, as follows:

When the discovery of gold in California was heralded to the world and the fortune-hunting pioneers were attracted to this coast in the hope of finding a short if not easy road to competence, there were many among them who left with regret the fruits of the old homestead, and some of these packed among their treasures seeds, pits and plants of the choicest varieties of the fruits common in their New England or Southern homes. These found their way to California, some across

the plains, more across the isthmus. Preceding them, and the pioneers among the fruits of the Pacific coast, were those introduced by the Mission Fathers. These all found their way into our State after a long journey by sea and land, and whatever pests they may have been originally infested with had succumbed to the long journey. This formed a natural quarantine against outside pests, and our early orchards were, so far as I have any authentic knowledge, absolutely free from all pests and diseases.

For many years the importation of trees and plants was expensive and hazardous, and but few and small lots were introduced.

The profits of fruit-growing in pioneer times were very large, and this, in conjunction with the rapid growth, healthy appearance and early fruiting of the trees, induced several enterprising individuals to engage in the nursery business; healthy home grown stock was produced to meet the demand, and for many years our fruits and orchards were free from destructive insects and fungous growths. Orchards were not numerous then and were far apart, so that if a tree, or even an orchard, had been infested there was little danger of its infesting others.

With the advent of the railroad it was discovered that in California fruit-growing was very profitable, and that the fruits grown here were superior to those produced elsewhere in the Union, and a natural impetus was given to this industry, which has steadily increased with expanding markets and more rapid, cheaper and more extended facilities for transportation. A natural desire to obtain the best and the greatest number of varieties, on the part of the grower, led to competition among nurserymen to get what their customers demanded or what would be acceptable to them. With rapid transportation the shipment of trees and plants from long distances has been made possible, and for years our State has been flooded with trees from every quarter of the globe, which were admitted without question, and with them came numberless pests and diseases which have annoyed our orchardists, entailed endless trouble and expense upon them, and very materially reduced their profits.

The planting of whole sections and whole counties contiguous to each other with orchards has facilitated the spread of these pests, which now make easy transit from one orchard to another, from one county to another, until but a small portion of the State is free from their depredations, and the best methods of combating them is one of the most serious questions which we have to consider to-day. The destruction wrought by them soon forced itself upon the attention of our fruit-growers, and the outgrowth of this was the organization of the State Board of Horticulture, with its Quarantine Officer, County Horticultural Commissioners and Local Inspectors. The duties of these officers are twofold, preventive and curative, having in view the stoppage of the introduction of new pests and the destruction of those which have already gained a foothold.

There is an old saying to the effect that "an ounce of prevention is worth a pound of cure," and it has proved so in this case; for, while we have expended enormous sums of money and endless labor in our contest with these tiny enemies, we have succeeded only in preventing their too rapid increase, and hardly that, and are far from exterminating them with all our labors aided by all known artificial remedies; whereas our preventive labors have been so effective that I believe but one new pest has found its way into our State since the passage and enforcement of our quarantine laws.

To you who know by hard experience what it means to have your orchards infested by destructive pests, who have seen your years of patient labor and waiting and investment in danger of being destroyed when the harvest should be ready, who have struggled incessantly year after year to get even a portion of your reward, while the rest is devoured by your millions or billions of insect foes that invade root, trunk, limb, branch, twig, leaf and fruit, I need not enlarge upon the necessity of the strictest quarantine laws. There are yet numerous insect enemies and fungous diseases that we have not got and do not want. The peach yellows, which has devastated such large tracts in the peach regions of the East, reducing to a profitless waste what was once a remunerative country, has never yet obtained a footing in the peach orchards of our State. The plum curculio, which has rendered plum and cherry growing a total failure in many parts of the East, has never yet made his devastating presence known in our prune and plum and cherry orchards, and if he ever does we may as well go out of that branch of horticulture.

We are now importing fruit, trees, shrubs, plants and seeds from the East, from Europe, Australia, China, Japan, the South Sea Islands, South and Central America, and nearly all other countries; hardly a vessel arrives in our ports but brings some of these, and most of them are infested with some pest. On them are found scales, the eggs and pupæ of leaf-eating and boring beetles and moths and various other forms of insect and fungous life, in most cases unaccompanied by the natural enemies which serve to keep them in check in the country of their origin.

It will be readily appreciated here that eternal vigilance is the price of success in the fruit industry, and if we would reap that just reward for which we labor, we must take effective measures to keep out those destructive agencies which we have not yet got, and stamp out by the best means those which we have.

This brings me directly to the question under consideration: "The best means to secure effective quarantine against the introduction into the State of foreign tree pests and diseases." Under the Act organizing the State Board of Horticulture, it was required to make regulations for the purpose of preventing the spread of contagious diseases among fruit and fruit trees, and for the prevention, treatment, cure and extirpation of fruit pests and diseases. In furtherance of this object the Board has formulated a set of regulations, the first one of which provides that "All consignees, agents or other persons shall, within twenty-four hours, notify the Local Inspector or Quarantine Guardian of the arrival of any trees, plants, huds, seeds, pits or scions at the first point of debarkation in the State of California."

To a violation of this regulation no penalty is attached, and it is therefore ineffective, and the only method of discovering importations of this character lies in the vigilance of the Local Inspectors.

Following the example of California, the Government of the Cape of Good Hope has passed a quarantine law giving the Governor power to provide by proclamation for protection against the importation and spread of pests, and providing a penalty for its contravention in a fine not exceeding five hundred pounds—twenty-five hundred dollars—with the alternative of imprisonment at hard labor not to exceed two years. It will be seen from this that the Cape Colony Government is fully alive to the necessity for stringent means to prevent the introduction of the enemies of the orchardist and vineyardist. I do not know whether our Legislature could delegate such powers to the Board of Horticulture, but there should be some measures by which the neglect or refusal on the part of importers or consignees of trees and plants to notify the Local Inspector of the district into which they are imported of their arrival, could be accompanied by a penalty. This would prove a most effective remedy against the surreptitious introduction of infested stock and greatly lighten the labors of our Local Inspectors.

California was the first to recognize the necessity of protection against the introduction of insect enemies of the orchardist, and this necessity was forced upon us by the vast importance of the fruit industry, overshadowing any other industry in the State. Following our lead, the Cape Colony Government passed the law to which I have referred above, and the Governor, in pursuance of the powers vested in him thereunder, has formulated the following regulations, which bear date of March 8, 1893, and which are here reproduced showing the stringency of the quarantine regulations of Cape Colony and as containing some features which it would be well to copy in our own State:

IMPORT REGULATIONS.

I. The importation into this Colony from places beyond the boundaries thereof of all grapevines or cuttings, or portions of grapevines, is absolutely prohibited, with the exception of vines and portions thereof imported by the Government of this Colony under such precautionary measures as it may decide to be necessary.

II. All trees and plants other than vines, and all tubers, roots and bulbs, or any other portions thereof, may be introduced into this

Colony from places beyond the boundaries thereof, provided each such consignment of trees, plants other than vines, tubers, roots or bulbs, be accompanied by a sworn declaration from the consignor certifying (1) that the articles proposed to be imported contain no vines or cuttings, or portions of vines; (2) that the said articles were grown at a distance of not less than 50 yards from any vines or roots of vines; (3) that no phylloxera exists or has existed in the soil or in the neighborhood in which the said articles were grown; and (4) that the said articles are perfectly free from the pest known as Phylloxera Vastatrix.

III. All packages, cases, pots, or coverings whatsoever, containing trees, plants, tubers, roots or bulbs, shall, before landing, undergo a strict examination by a competent officer appointed for that purpose, to determine the absence of any vines, or portions of vines, from the consignment, and, as far as possible, the absence of noxious insects and plant diseases hitherto unknown in this Colony. It shall be the duty of the consignee to open all such packages, cases, pots or coverings, for the purpose of the examination aforesaid, and to afford every facility to the Examining Officer during his examination.

IV. On the Examining Officer being satisfied as to the absence of the Phylloxera Vastatrix and of plant diseases hitherto unknown in this Colony, and, as to the sufficiency of the declaration in Section II above mentioned, he shall give a certificate to that effect to the consignee; and without such certificate no such articles shall be landed.

V. All trees, plants, tubers, roots or bulbs which shall be found to be infested with the Phylloxera Vastatrix, or any plant disease hitherto unknown in this Colony shall be immediately destroyed.

VI. The Government does not hold itself liable for any loss or damage that may occur from the destruction of articles or from any process that may be considered necessary to discover the existence or otherwise of the Phylloxera Vastatrix or any plant disease hitherto unknown in this Colony.

VII. The foregoing Import Regulations may, on application to the Secretary of Lands, Mines and Agriculture, be relaxed so far as regards all trees and plants (other than grapevines) and tubers, roots and bulbs destined for any area now proclaimed or that may hereafter be proclaimed to be an area infested with the Phylloxera Vastatrix: Provided that all such trees, plants, tubers, roots or bulbs shall with due dispatch be conveyed direct from the port of their destination in the infested area, and provided that they are free from any disease hitherto unknown in this Colony.

Another great assistance in the preventing of the introduction of foreign pests would be the erection of fumigating houses at the different railroad depots, or at least at such of them as receive shipments of fruit, trees and fruit packages. Here all infested stock could be treated at small comparative cost and at much less labor than the same process now involves. In these houses should be provided all the necessary appliances for both fumigating and dipping, with facilities for retaining the infested stock until the local inspector is assured that it is clean from dangerous pests.

These measures with the quarantine legislation we now have would, if rigorously enforced, effectively prevent the importation of new plagues.

There is another point upon which I wish to touch in this connection. Some of our counties have passed quarantine ordinances designed for the protection of the counties in which they have been adopted. So far as these are supplemental to our State law, they are good, but as the State law covers the necessary ground, the inspector should operate under its provisions. No mistake can be made in this, for it has been passed upon in all its hearings by the courts and declared constitutional. One of the severest tests of this law was in the trial of the so-called "Tahiti case," in which it was sought to destroy a large shipment of orange trees from Tahiti, infested with the mite scale, a pest not existing in California, and which, burrowing under the bark of the trees, it was not possible to reach either by dipping or fumigation. This case was brought in the name of the people and under the code to have the trees declared a nuisance and destroyed as such. After a hard-fought contest, in which the defendant importers were supported by the ablest counsel, Judge McKinley rendered a decision in favor of plaintiff, supporting its claims, and passing upon the validity of our quarantine law. I regret that the length of this opinion precludes my reproduction of it at length, but I quote some of the points of greatest importance to us who are interested in the protection of our great industry.

Among other things the Court declared:

"Every judge is bound to know the history and the leading traits which enter into the history of the country where he presides. This we have held before, and it is also an admitted doctrine of the common law." (Conger vs. Weaver, 6 Cal., 543.)

The Court, therefore, takes judicial notice of the history, development and character of the industries of California; of the fact that the production of fruits is one of the leading occupations in this State, and that a large portion of the people are dependent upon it. It takes judicial notice of the fact that a large portion of the land in this and adjoining counties is devoted to the cultivation of citrus fruits, and that the annual production and shipment of oranges is very great, and that the spread of any insects injurious to citrus trees must necessarily result in serious injury to that business and in great loss and destruction to property.

That orchards and trees infested by scale or insect pests injurious to vegetation, and which will easily spread to other places, must be a nuisance *prima facie*, seems too clear to require discussion, and would not receive it at the hands of this court but for the fact that this is the first case of this kind.

It appears to me that this case belongs to that class in which, if the allegations of the complaint are true, a damage will be inferred, and it is not necessary to wait until it is actually done. It is similar in that respect to the cases in which diseased animals are taken to public places when there is danger of infection, to the cases of the storing of explosives, and to the cases of condemnation of dangerous buildings and places likely to be injurious to the health of the community—in all of which the abatement of the nuisance rests merely upon the reasonable apprehension of danger. The fact that the trees are at San Pedro does not prevent their being considered an existing nuisance, as the evidence shows that the larvae of the scale may be carried by birds, insects and the winds to distant portions of the county and State.

The defense claims that the trees should be separated and only those upon which the scale are found be destroyed. There is no doubt that the position of the defendants is correct in abating a nuisance no more properly should be destroyed than in absolutely necessary for that purpose. But in this case the situation of these trees is such that there is no certainty that all are not infested, and it is such separation can be made it should be done by defendants.

From the evidence of the experts and in the absence of any suggestion of a method by which the trees can be disinfected the Court must conclude that it cannot be done without the destruction of the trees. It therefore follows that the allegations of the complaint are sustained by the evidence. The Court is of the opinion that the statute of March 10, 1891 is constitutional and that even in the absence of such a statute the trees in question are a nuisance under the Code, and that plaintiff is entitled to the relief demanded in the complaint. Let findings and judgment be submitted in accordance with this opinion.

It would be well if we could secure the passage of a Federal quarantine law, and this measure is one that our fruit-growers should labor for. We have general quarantine laws against infectious diseases, laws to prevent the landing of criminals, paupers or other undesirable classes; we have a protective tariff to prevent the competition of foreign fruits with our own, but nothing to prevent the introduction of the greatest evil of all—destructive insects, pests and diseases.

It is the little things in life which do the most damage; we can conquer the lion in our path, but the gnats overcome us, and so it is with the evils I have alluded to. Paupers and criminals whom we exclude would die out in a generation or two, contagious diseases would become eradicated, but these insignificant pests, many of them microscopic in size, once introduced are with us forever; they increase with alarming rapidity and spread over the land with every breeze that blows, are carried by the birds and flying insects from section to section, and the ponderous power of man is futile against their depredations.

What the exact extent of these depredations is cannot be told, but it extends into the millions of dollars. Wisdom requires then that, both in State and Nation, we should take every precautionary measure possible to prevent the introduction of new troubles, to add to those which we already hear at such tremendous cost. I would therefore urge that our Congressmen be requested to use their efforts in framing and passing a general quarantine law which, with our State laws and county ordinances, should effectually bar the entrance of new pests, and leave us to work out the problem of getting rid of those we already have.

THE PERKINS PROCESS.

Profs. Hilgard and Smith Declare It To Be Chemically Sound—Quasi-Approval by Railroad Men.

It will be remembered that at the October meeting of the State Horticultural Society at San Jose, Mr. A. T. Perkins outlined a new process for preserving fruits in storage and in transit. His remarks at the meeting were printed in full in the RURAL of the following week. A committee was appointed to examine the matter and to report to the Convention at Los Angeles. The report is as follows:

The committee appointed at the late meeting of the State Horticultural Society at San Jose, for the purpose of considering and reporting upon the process of preserving fruit in storage and in transportation, invented by Rev. A. T. Perkins, have thought it best to form two sub-committees, each to report upon the subject matters with which they are specially familiar. The first portion of this report therefore refers more particularly to the general and scientific aspects of the question, while the second relates to the application of the Perkins process to railroad transportation.

REPORT OF PROFESSORS HILGARD AND SMITH, ACTING AS A SUB-COMMITTEE.

The process embraces two main points, to wit:

First. The longer preservation of the fruit by the effect of a slow current of air having a minimum temperature of 55 to a maximum of 65 degrees Fahr., passing continuously over it.

Second. The maintenance of this temperature at all times in the hot desert as well as in cold winters by appropriate means, not involving the use of ice, the refrigeration being accomplished by the expansion of compressed air.

The committee have not had the opportunity of witnessing the process in operation, and as regards the results must rely upon the statements of Dr. Perkins (the correctness of which they have no reason to doubt) and the testimony of one of their number, Prof. Smith. The efficacy of a current of reasonably dry air in promoting the conservation of fruit so as to insure its arrival in good condition even after a considerably longer transit than now commonly occurs seems thus to be placed beyond doubt. Fruit thus conserved has the additional advantage that upon arrival at destination it will not, under the influence of moist air, become covered with condensed moisture, as inevitably happens when it has during transportation been maintained at a low temperature by refrigeration with ice. That such bedewing of the fruit is highly injurious to its keeping quality is well known. The Perkins process apparently obviates this difficulty and leaves the fruit to arrive and remain perfectly dry. It is but reasonable to suppose that its life will thus be materially lengthened while in the hands of the dealer and consumer—an advantage which it is difficult to overestimate, especially if, as is claimed, fruit to be thus treated may be more fully matured at the time of shipment.

As regards the second point, viz., the maintenance of the air current at the uniform temperature of say 55 to 60 degrees without the aid of ice, even in the hot desert air, there is no question that it can be accomplished by the means claimed, viz., the compression of air by means of a pump. Then, after giving it time to cool down to the outside temperature—say 120 degrees at most—allowing it to expand under proper conditions, reducing its temperature, and therefore that of the air current to 55 degrees or less. The proposition is theoretically sound, and it seems possible to make it practically feasible, with perhaps only a slight addition to the weight of an ordinary car in the way of reservoirs and minor appliances, the exact arrangement, size and form of which must be determined by experience. As regards the maintenance of the same temperature in winter, there can be no difficulty about making the same appliances answer the purpose of heating by the addition of a steam coil or otherwise.

We are therefore of the opinion that this invention deserves the most earnest consideration on the part of fruit-growers, transportation companies and all interested in the fruit industry, since it appears to offer a simple and (as compared with the ice-refrigerating process) inexpensive solution of the problem both of cheaper transportation and of better conservation of fresh fruit for the Eastern and perhaps the European markets.

E. W. HILGARD, Chairman,

University of Cal.

EMORY E. SMITH,

Stanford University, per E. W. H.

The report of the other sub-committee is as follows:

"The two sides of this proposition are Theory and Practice:

"Theoretically, it would appear from the foregoing report of Professors Hilgard and Smith that there is no reasonable doubt as to the correctness of Rev. A. T. Perkins' invention, in its relation to the preserving of fruit by an even low temperature and constant circulation of dry air.

"Practically, obstacles may appear in its proposed application, which can only be removed by a series of thorough experiments. The theory, however, is of sufficient importance to be worthy of demonstration to determine its practicability.

R. GRAY, G. T. M., S. P. Co.

W. A. BISSELL.

After having these reports and a further explanation of the process by Mr. Perkins, the following resolution, introduced by Mr. Maslin, was adopted by unanimous vote:

Resolved, That we have heard with great interest the explanation of the system devised by Dr. Perkins for the transportation of fruit so as to secure its delivery without impairment of flavor, freshness, and appearance, and hereby express our appreciation of the merit of the system, and that this convention earnestly request the several overland railroad companies to examine the system and to adjust their service and cars, to facilitate the experiment, believing that system may prove an official means of securing a better market for our fruits.

TRANSPORTATION.

Demand for Quicker Time for Fruit Shipments—Ventilated Cars Recommended—Formal Demand for Cheaper Rates.

While the subject of transportation was constantly before the convention in one form or another, it was in most instances connected with other matters and will therefore be treated under other heads. The sentiment of the convention on this subject, after being digested by the Transportation Committee and boiled down into resolution form, is contained in the following report of the Committee on Transportation:

First—After due deliberation, we find that improved service and quick time are absolutely essential for the successful marketing of California's fruit crop.

As the railway companies have already signified their intention of

giving fruit-growers quicker time for the season of 1894, viz., from Sacramento to Chicago 116 to 120 hours, we ask that proportionately good time be given from all points in this State to all points in the Eastern States.

Second—We earnestly believe that by remodeling our ventilated fruit cars to conform as nearly as practicable to the general style of refrigerator cars, and discontinuing the use of ice, the question of rapid transit would be greatly facilitated. In remodeling these cars, we would suggest that the latest and most approved system of ventilation be introduced. Your committee believes that a very large percentage of our fruits for Eastern shipment can be safely and successfully transported in such ventilated fruit cars without ice, saving growers the cost of refrigerator service on at least three-fourths of overland shipments. In this connection we ask that the weight of refrigerator carloads be reduced from the present minimum of 24,000 pounds to 20,000 pounds. We ask for this reduction in weight as we find it impossible to load 24,000 pounds of many varieties of fruit into a car and properly refrigerate the same.

The above report, supplemented by the following, was adopted by the convention:

Resolved, That the railroad companies, in simple justice to the orange-growers of California, should reduce the rate on oranges from 87½ cents to 50 cents per box to Chicago and common points.

We earnestly recommend a uniform reduction of the present freight rates on fresh fruits, knowing that a lower rate would greatly assist in a wider distribution of our fruit products. We respectfully urge that the transportation companies take prompt action, with a view of insuring quicker time and better service for the movement of the fruit crop of 1894.

We further ask that such special service be performed by the railway companies at a minimum rate of freight not in excess of the present rate of \$1.25 per 100 pounds to Chicago and common points.

H. P. STABLER, Yuba City,
C. W. REED, Sacramento,
I. H. THOMAS, Visalia,
N. W. BLANCHARD, Santa Paula,
A. SCOTT CHAPMAN, San Gabriel,
Transportation Committee.

POULTRY YARD.

Feeding Fowls.

TO THE EDITOR:—It is an old saying that fowls should have hard grain at night to nourish them through the night and soft food at dawn to assimilate quickly and warm them up. Warm mush is good on cold mornings for children and chickens.

Our fowls huddle on one foot in the warmest corner these mornings until mush made of apple, potato parings and other swill, well boiled, seasoned with onion, salt and red pepper, and stirred thick with middlings, is brought to them. They do not like this well enough to eat too much, but it is warming and takes the place of green food. There is no dumphiness after it, but when their gate is opened at nine they feel too well to walk; they scoot over the fields with wings outstretched and toes barely touching the ground, play tag, sample the water from every ditch, faucet and pail, inspect all possible deposits of refuse, also the dining and kitchen tables if the doors are open.

When eggs are 40 cents a dozen our Plymouth Rocks do not lay as many eggs as we wish they would; still they lay every day.

Starting somewhat as "Cochin-Leghorn" did, we are studying how he increased from 25 fowls to a stock worth \$2000 in 1½ years—say 4000 fowls, if common stock.

We feed wheat at night so bountifully that some is left for morning, so that the hens are not ravenously hungry, and change from swill mush to cracked corn when they tire of the former. We mix the mush with the contents of the soup kettle once a week or oftener in cold weather.

You gave directions for making kerosene emulsion for chicken houses. It seems as if a carbolic emulsion would be better as less inflammable. Please give a recipe for it. Wrights. A. SKINNER.

[You do not need an emulsion of carbolic acid. It is soluble in water. The kerosene preparation is preferable.—ED. PRESS.]

How to Select Fowls for Future Results.

So far as the breed is concerned, every one has a preference. Each poultryman should be guided by circumstances as well as taste in making his choice, taking into consideration the special branches of poultry work which he proposes to follow. Much of his success in any branch of the business depends on the wisdom of the selection.

A writer for the *American Cultivator* very pertinently writes that there is, however, no variety of fowls in which every specimen is exactly equal to every other one, and this inequality extends to points of usefulness as well as external appearance. Just as carefully as the fancier selects his fowls with reference to the points of excellence recommended by the adopted standard of his breed, so the practical poultryman should select each individual of his flock for the coming year with reference to the special qualities or characteristics that are most desirable in his branch of the business. He must give at the same time due regard to the other distinguishing features of the breed which may be of secondary importance in themselves, but important still, in that they indicate close conformity of the individual possessing them to various qualities of his race.

Hens that proved to be good layers as pullets may be expected to continue to be profitable under favorable circumstances, and their laying qualities should commend them to favor as breeders for next year as much as any characteristics they may possess.

However, hens that are now just beginning to moult are not nearly as desirable for winter laying as those which moult early, because very few of them, if any, will finish moulting till very cold weather, and they will not be apt to begin laying till spring. Early moulting is desirable in a breeding bird as well as in a laying fowl. A tendency to moult early may be transmitted to the offspring as well as any other quality.

Early pullets are always preferable to late ones for winter laying, other things being equal; but for this reason the oft-repeated cry against late chicks need not be applied to all cases. In the case of breeds that mature rapidly, late

chicks are often a valuable acquisition, and not always among those that should go to market. If they are old enough to endure the cold weather they begin to lay early in spring. Being as late as June or July, hatching does not prevent them from developing into perfectly well-matured fowls. They as often make winners of the highest honors at the next fall and winter shows as those hatched earlier.

But the slow-growing breeds do not get matured enough to stand cold weather well. Therefore, to get perfect development, they must be hatched out early. If late, they should be sent to market as soon as they will answer for that purpose.

SHEEP AND WOOL.

Feeding and Shipping Sheep.

The following paper, read by F. H. Greene of Columbia county, Wis., at the annual meeting of the South Dakota Wool-Growers' Association, has some interesting suggestions for sheepmen everywhere:

Undoubtedly you have all noticed that when breeding for fine wool in a flock of sheep for years, it takes some time to make a marked change by the use of Down or other mutton breeds. But it takes a good deal longer to breed from the minds of some sheepmen the idea that there is anything else but a heavy fleece of wool, filled with grease and dirt, that will bring a profit to the flockmaster. But with the present and future outlook for wool that is given us by the administration now in power, it ought to be enough to change the minds of the most sanguine. Sheep business, like most all others, has changed. He who would make a profit out of the flock must turn his attention to something else besides the exterior covering of the sheep. By this I don't wish to convey the idea that we must lose our interest entirely in the growing of a good fleece of wool, for it is the summing up of the littles of the farm that gives us a profitable business. I can hardly agree with Mr. McKerrow of Wisconsin (or may be with some of your fancy mutton breeders here) that a sheep without any wool would be the most profitable, notwithstanding the experiments, either, of the Ontario Agricultural College, which was to the effect "that it costs more to grow a pound of wool than is did the same value in mutton." This might have been proven by a low price of wool and a high price of mutton; but reverse the prices, and then what do we have? A business built upon a solid foundation, though the profits are small, is considered to be the most wise. It is my experience that after I have sold a sheep, and to that amount I add the price of a fleece of wool (though it may be small), it gives me a respectable sum, and is more likely to show a net profit than when expenses are to be deducted from just the price of the sheep. I have noticed, too, that a sheep with a good fleece on sells better in market for mutton, as the value of the pelt adds to the value of the sheep. So this is a point that we may well consider when selecting or raising sheep for the mutton market.

CONSUMPTION OF MUTTON.

The consumption of mutton is increasing very rapidly. A Mr. Kelly, of the "Chicago Live Stock Commission Company," told me last winter that it was only a short time ago that a few hundred sheep would supply the Chicago market, and now it takes about 10,000 per day. From the 1st of April to the 9th of May, 1893, the receipts were 344,755, and at this rate for the entire year it would take 3,102,795 for the Chicago market alone. Allowing this rate of increase to have been 200 per cent for the last ten years, and supposing it to be the same for the next ten, it will then take the enormous sum of 62,055,900 to supply this market for one year. What this rapid increase in demand for mutton is due to is hard to tell; but I believe it to be because American people have lately found out that, aside from its being very delicious, it is one of the most healthful of meats, and if you will notice, when at a first-class restaurant, the orders for a mutton chop are as often given, or oftener, than for other meats. With these views upon the matter, we think we have shown you that there is a healthy increasing demand for mutton, and I am glad to say that the supplying of this market can well receive the attention of all sheepmen, and that, during the depressed condition of the wool market, there is a gleam of light that begins to brighten on our way and leads us on in one of the grandest industries of the United States. And it again brings to mind the immense opportunities that are now open to young men to branch out in the sheep business, and, besides securing to themselves a snug little income, will save to the State thousands of dollars that now yearly goes up in smoke by the burning of the delicious grasses that cover our hills and valleys of South Dakota.

AS TO SELECTION.

In selecting sheep to feed, I say select because if we would sell to the top of the market, we must have smooth, well-formed sheep of medium grade and hefty and each lot should look as near alike as possible. But remember, in saying this, I do not pretend that there are no others that will make good mutton. There is no flock, I care not how good it is, but that wants to be sorted every fall, and every sheep that is inferior—such as ewes with broken udders, old ewes, small lambs and ewes whose families we know for generations have had no material qualities—should be driven to the fattening pen. The prevailing idea that the reason mutton was not in demand a few years ago was because we did not have all good mutton is all a hoax. Did you ever see any inferior cattle or hogs going to market? If so, do you think it split the market for good beef and pork? If a certain quality of mutton will do for an up-town market, it may go to a suburban market. If we should only sell the best end of our flocks for mutton, I am afraid that there are a great many poor people who would never get the taste of a sheep. And as regards us sheepmen, the skeletons of our profits in the business would lay bleaching in the sun on our Dakota prairies. Let every

farmer have a few sheep and let every farmer feed a few sheep. The waste on the wheat farmers of South Dakota, if checked, would in a short time be sufficient to buy and control all railroads running within the State.

UTILIZING WASTE PRODUCT.

When a farmer draws his wheat to market he don't object to giving the buyer from one to two pounds on each bushel of good sheep feed. And if the buyer understands his man pretty well he don't object to taking from three to four pounds. The same feed, if kept and fed out on the farm, would save freight and make mutton that would give the farmer a profit on his wheat-raising that he otherwise loses. And, besides, our wheat fields in the fall of the year ought to be gleaned and cleaned of wheat by a flock of sheep. Men who practice this tell me that their little flocks keep fat until snow comes and covers up the feed. And even in the past season they held their own without feeding until Christmas. How is it that Armour (the great packer of Chicago) can pay freight on cattle to Chicago, butcher them, and sell for less than the home butcher who pays no freight either way. It is simply because of the difference of the plan on which the business is run—not a thing goes to waste, every particle of the creature that goes over through the viaduct to packing town comes back in some kind of a product of value, where with home butchers a portion goes to waste. Some of our Dakota farmers are home butchers, slaughtering the profits of their business.

FEEDING.

During the past year we fed 1400 sheep on feed that the Dakota farmers give away, but we had to pay the miller and railroad from \$6 to \$8 per ton, and even then we had a faint idea that we made some money. With 180 to 240 pounds of screenings, with a small quantity of choice hay, we can fatten a good thrifty sheep. Some feeders put them on full feed at once, but take about three weeks in getting them where we let them have all they want, and even then some lambs will scour repeatedly and result in the loss of a few. Generally the loss in fattening on corn is two per cent, but our experience with screenings is hardly one per cent. We always keep plenty of salt and good fresh water at easy access when feeding. A quantity of wood ashes and a small portion of sulphur should be mixed with the salt. Our self-feeder is built with a bottom or trough 18 inches wide, stands one foot from the ground and is filled from a V-shaped hopper above, which is 1½ feet wide at top and 4 inches wide at bottom, inside measurement. The hopper will hold from four to six bags of feed, and with a cover on it to keep out the storm we can move it to any place we like. In fair weather we prefer to have it out of doors in the yard. Sheep need good shelter from winds and storms, but we must be careful to give them plenty of ventilation, as a close and too warm stable will take them off their feed. It must be an object to get them to eat all they can. And for this reason you must avoid their being frightened by the too sudden approach of strangers or being run around the yard by the dog. A great many feeders claim that sheep fed for mutton need no shelter. But my experience is that it is cheaper to put a little money in lumber than to buy so much more feed; besides it looks more humane. It would be needless to say this if you will but notice how quick sheep will leave their feed and go hungry to obtain shelter from the piercing northwest winds of winter. From 60 to 80 days is considered time enough on full feed to finish a good healthy sheep for the market.

SHIPPING.

When your sheep are ready to ship, gauge the number of sheep by size of car and time of year of shipping, and if no gates are provided it is well to make temporary partitions in each car to avoid piling up. For a ride of 24 hours or less, I would recommend that sheep be not too well filled, but for a ride of more than that time and where sheep have to be reloaded it is better to give them a fill on the start. Ship to a responsible firm and one who makes a specialty of handling sheep.

THE VETERINARIAN.

Removing a Malignant Wart.

TO THE EDITOR:—I have a horse that has a large bleeding wart on his hind pastern between the hoof and the point, which I have tried everything I know of to remove, but as soon as I quit doctoring it seems to grow faster than ever, and I can't tell how large it would get if I let it grow. I have been doctoring it for about six months. It seems to be of an itchy nature, for he bites at it until it bleeds. I first cut it off with a silk cord and it came back in a few days larger than ever. I again cut it off with "cord" and burned it with caustic every other day for over two months. Whenever I quit burning it the wart would begin to grow. I tried turpentine and all kinds of grease. Have been using nitric acid and thought it was going to take it away. I used it as long as I thought it safe and quit, but in a few days it commenced to grow again and it is now worse than ever. Will you kindly tell me what to do. A. B. COMSTOCK.

ANSWER BY C. J. CREELY, V. S., OF SAN FRANCISCO.

This is a malignant warty growth, and if you are too far from a veterinary surgeon you can undertake the operation. It is very simple. You can remove it on a level with the skin by the silk thread, etc., but it will grow almost as quick as you remove it. First wash thoroughly. Put two tablespoonfuls of carbolic acid in a bucket of warm water, use castile soap, dry with a soft towel, then clip the hair around the growth one-half inch around. Take a sharp knife and cut one-quarter of an inch above the growth boldly through the skin and dissect it out clean. Cut healthy tissue in preference to leaving the smallest particle of diseased tissue, for the smallest part left will cause it to grow again. Don't be afraid of bleeding, as this can be easily stopped by applying the tincture of the chloride of iron, using cotton and tight bandage. No matter how

large the artery this will stop it, and there is no other complication of operation after bleeding is stopped. Powder on iodoform on absorbent cotton over wound and bandage. Wash with carbolic water and soap and dress with iodoform once daily. The growth won't return. There is not the least danger from the operation. "Happy Medium Healing Lotion" is better than iodoform, if you can get it handy.

THE VINEYARD.

A Sutter County Raisin Drier.

It is too late to build driers this year, but the knowledge of a new plant finished this fall by J. B. Wilkie of Yuba City may be useful when our readers are planning for next season's operations. The *Sutter County Farmer* has the following:

The new raisin drier at the vineyard of J. B. Wilkie, near town, has been completed, and last Monday was given a trial and proved to be a success. Heretofore, with but few exceptions, our fruit-growers depended wholly on favorable weather to dry their fruits and grapes, and if the crop was early enough and the rains held off, but little was lost, but in case of an early fall many tons of fruit, and especially raisins, were ruined on the trays. As this industry increased it became evident that a drier was necessary to meet these conditions, and after considerable study and observation, Mr. Wilkie this fall erected a large one on the most improved plans.

The main building is 44x124 feet, built up about three feet from the ground. The drying department consists of two long rooms, one above the other, each being 108 feet long, 20 feet wide and 7 feet high. On the floor of each are four tracks and here the loaded trucks can be rolled in. The capacity of these two rooms is 6000 loaded trays of grapes, each tray being 2x3 feet and weighing 25 pounds. Some large trays are also used. The rooms are double planked on all sides. At the north end is the furnace or heating room, 20x16 feet, containing the furnace, 3x6 feet, from which leads the horizontal heaters, the lower one being 11 feet long, 32 inches in diameter, connecting with another 16 feet long which connects with the smokestack. In the partition between the lower drying room and the furnace room is a 7-foot Jackson fan one foot in width which, being run at a very high rate of speed, forces the hot air down the full length of the lower room and up into the upper room, returning direct to the furnace room by doorways overhead. The draft from the fan is terrific and can be felt in any part of the two rooms. The temperature near the heaters is kept at 130 degrees, which is tempered as it goes through the drier.

There are at present from 60 to 70 tons of partly dried grapes in the two rooms. It is estimated that grapes direct from the vines can be cured in six or seven days, while those partly dried can be finished in one or two days. The heat in the drier can be regulated by means of sliding doors in various parts of the building. The system of handling the grapes and raisins is excellent. Movable tracks, of which Mr. Wilkie has over 4000 feet, are laid in different parts of the grounds, which contain four acres, and when wishing to put the grapes into the drier, 30 trays are loaded on each truck, which is rolled direct to the dry-

ing rooms, the trays remaining on the trucks. About 43 trucks are now in use there.

When dried, the raisins on the lower floor are trucked out again and rolled to a building north of the drier and transferred by means of a turntable direct to the grader and stemmer. On the upper floor an elevated runway connects the two buildings and the raisins are thus carried by a similar system.

This building is 62x84 and contains a large grader, prune dipper, raisin grader and stemmer, besides the bleachers, scales, and different departments to be used for sweat-rooms, packing, etc. In the center is a large engine and boiler, which furnishes power for all the machinery and steam for the dipper. Mr. Wilkie has also a gasoline engine, which he uses when he does not wish to fire up his steam engine. At each side of both buildings are sheds to be used for storing trays and wood. The plant is extensive and complete in every detail and will add much toward the success of the raisin industry, if the plan is adopted in this section.

THE FIELD.

Summer Fallowing.

TO THE EDITOR:—In your issue of November 18th, under the head of "Cereal Crops," I note Mr. M. Premo's article on summer fallowing. It is to the point and is well worthy of recognition, and I can fully appreciate its apparent worth from an experiment I made a few years ago in raising beans. I had been getting light crops, less than I felt I ought, so I omitted planting one season and kept the soil in good cultivation. The next season I planted beans again and I was rewarded by twice as many as any previous year. Trees were growing on the land at the time and showed a great growth.

This present year I summer fallowed the land again, plowed it eight inches deep, and during the spring months it received a thorough cultivation. During the summer I chiseled it several times, followed immediately with a spike harrow, and in the supposed driest months of September and October, even up to our first rain, moisture was found anywhere on the land by just removing the top earth; and just alongside of this land, where nothing was raised, nor any cultivation was done, it was like a stone. The trees on this land have made a most wonderful growth and all owing to these summer fallowings. The land is a sandy loam.

If our large farmers would adopt this mode of farming I think results would be greater and more remunerative than trying to farm more than they are able to in a proper manner, as many do. I emphatically agree with Mr. Premo that there is "no implement in use that will take the place of the plow." I plow my orchards annually and I meet with good results therefrom. It is the most economical method. I know of orchards that have not been plowed for years, only just scratched with chisels, and I question if four horses could draw a plow eight inches deep through them. Such tillage is not practicable. N. B. SMITH.

[We trust the reader will not fail to notice how thoroughly Mr. Smith cultivated his summer fallow. A lazy man's fallow is like the rest of his possessions—hardly worth having.—ED]

THE DAIRY.

Notes on Butter-Making.

At a recent meeting of Tulare Grange, Mrs. Bertha Ingham gave suggestions from her experience in making butter as follows:

I consider the first essential to good butter-making is cleanliness and attention, and not good cows as many suggest, for milk and butter from the finest of Jerseys can be spoiled by improper handling and negligence.

I consider 36 hours long enough for milk to set in the pans for the cream to raise. I find the cream comes better in deep pans than in shallow ones. I consider three days long enough to collect cream before churning; longer collecting than this, the cream is apt to get bitter, although in a colder climate perhaps it might be collected longer.

Cream should ripen in the churn or other receptacle, and should be stirred once or twice a day, as convenient. I put a generous handful of salt in the cream the second day of collecting to prevent fermentation and hasten the process of churning.

The temperature in the milk room should not be less than 65 degrees nor more than 70 degrees, but if it does go to 80 degrees for a short time, if the general temperature is between the first two figures no harm will have been done to the butter. I like the crank or dash churn better than the barrel churn. The barrel churn brings the butter in too much of a bulk; the dash or crank churn brings it more in granules. I do not work my butter too much. I work it by pressure, not by drawing. I find this the best way to preserve the grain of the butter. On second working I put in a tablespoon of white sugar to a roll of butter.

I find sweet milk much the best to wash the butter in. I put in of the best dairy salt about one ounce to the pound.

I find broad pans are very much more liable to catch bad taints and flavors than deep pans or cans when the milk is set for the cream to rise. I consider a very important point in making good butter is to preserve the grain, and stirring the cream frequently prevents a scum that would otherwise mold, the stirring being very essential in a warm climate.

I find water will not wash out the white spots as well as fresh milk. I find a good way to get the surplus water out of butter is to lay a sponge or cloth on it to absorb the water.

There is no more important point in making good butter than cleanliness. Let the milk room and all utensils used be clean and sweet smelling all the time; with any neglect on this point good butter cannot be made.

In winter, with short pasture, dairy cows for best results should have two quarts of bran and sufficient hay per day. In vegetables the mangel wurzel beet and large white carrot with alfalfa hay make good feed. In this connection the reports of College of Agriculture work give valuable analysis and suggestions concerning the nutritive value of different feeding stuffs. Bulletin No. 100 by M. E. Jaffa, published in the *RURAL PRESS* of Feb. 18, 1893, is especially important. Copies of these publications can be had by application to Prof. Hilgard at Berkeley.

Your Grocer Has It.

Ask For It.

The **BEST** POULTRY JOURNAL. Teaches How to Make Money with A Few Hens. Sent on Trial Six Months for **ONLY 25 CENTS.** It is well worth \$1.00. Send stamps. Sample free. Is the name of it. Mention this ad. FARM-POULTRY I. S. Johnson & Co., Boston, Mass.

A LOT FOR \$1 A WEEK

A dollar a week for sixty weeks, buys a lot 25x125 feet east of Chicago Heights, the great manufacturing suburb of Chicago. Sixteen factories, streets paved, stone sidewalk, beautiful shade trees, schools, churches, etc. No doubt these lots will treble in value within one year. No such bargain was ever offered in Chicago Real Estate. These lots are now on the Belt Line where factories are now in successful operation, employing over 50,000 people. Business transacted for non-residents. Address, DeForrest Land Co., Unity Building, Chicago.



ONLY 25 YEARS OLD AND A GIANT!

THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.

GRANGERS' BUSINESS ASSOCIATION, GENERAL COMMISSION HOUSE.

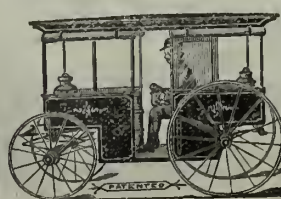
OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.
Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

T. R. BALLINGER, Grain Salesman.



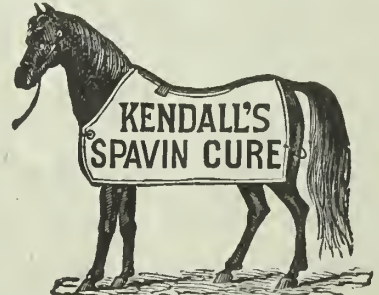
MILK MEN

Who ride in those famous

"LOW-DOWN" WAGONS

are protected from the storm. They never have lame backs. They never slip or fall getting in and out. Their milk is not churned. **THEY LIVE LONG AND THEY PROSPER.** You can get full particulars by writing the

PARSONS "LOW-DOWN" WAGON CO., Earlville, N. Y.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STAR, LANE CO., OREGON, Feb. 8th, 1892.

DR. B. J. KENDALL CO.,

Dear Sirs:—I have used your KENDALL'S SPAVIN CURE for the last twelve years never being without it but a few weeks in that time and I have made several wonderful cures with it. I cured a curb of long standing. Then I had a four year old colt badly spavined; tried every thing without any benefit, so I tried your liniment, and in a few weeks he was well and his shoulder filled up all right, and the other, a four year old that had a Thoroughpin and Blood Spavin on the same joint, and to-day no one can tell which leg it was on. These statements can be proven, if necessary; the four year olds are now seven and can be seen any day at Cottage Grove, Or. S. Z. PAXTON.

—Price \$1.00 per bottle.—

DR. B. J. KENDALL CO.,

Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

AGENTS WANTED

FOR DR. JOHN HENRY BARROW'S Great History of the

WORLD'S PARLIAMENT OF RELIGIONS.

SELLS ON SIGHT. For territory and terms apply to

THE KING PUBLISHING CO.

132 Market Street, San Francisco, Cal.

CALIFORNIA If you want to know about California and the Pacific States, send for the **PACIFIC RURAL PRESS**, the best illustrated and leading Farming and Horticultural Weekly of the Far West. Trial, 50c for 3 mos. Two sample copies, 10 cents. Established 1870. DEWEY PUBLISHING CO., 220 Market St., San Francisco.

THE HOME CIRCLE.

A Plain Opinion

I ain't so much stuck on the wimmin
That's always talkin' of "art;"
To me they ain't near as enchantin'
As them that isn't so smart.

It's tiresome talkin' of science
When all of your thoughts is on "b'z;"
And what do you care about comets
When you're thinkin' of how corn has riz?

There's wimmin that knows every language
That's livin' besides them that's dead,
But I'm sorter inclined to conjecter,
Do they also know how to make bread?

And them that can thrum the pianny,
And trill away up on high C,
I wonder what sort of a dinner
They'd manage for you and for me?

Then there's them that has "aspirations"
And is "mettled" and awful "high strung;"
I tell you them kind I'm afraid of,
For they're gen'rally critters of tongue!

These things is all well in their places,
And there's them that would rather their wives
Knowned about evolution and Darwin
Than how to set bees in their hives!

But for me, well, when I'm a-choosin'
My partner for runnin' life's race,
I'm goin' to fight shy o' the wise ones
And get one that's just commonplace!

—Susie M. Best.

Sabina Wilkins.



SABINA had finished her morning duties, had dressed the butter, swept the back porch and turned the broom up in the corner, as neat housekeepers do, had gathered flowers and seeds and eggs, and now seated herself by the window to crochet.

But the fingers moved laggardly. She was clean sickened out of fancy work, of nursing the sick, sitting up with other people's children, going to funerals and to church picnics to see young people in love enjoying themselves. She was tired, too, of being asked why she didn't get married. She had been literally joked to death on the subject.

But to look in the little room where Miss Sabina sat one would think she might be tolerably happy. Old Puss purred kindly at her feet, ready to follow every step. On the mantel stood vases of gay flowers, and between them an old clock, ticking and striking the hours softly, out of respect, it may be supposed, to the sensitiveness of Miss Sabina, who fain would linger awhile longer at the rosy gate to the temple of time. On the table lay the family Bible, in which, however, was recorded one date that saddened Miss Sabina—her age. Near by hung a birdcage whose occupant, with head askew, perceived his owner's melancholy, and forthwith began to sing.

Between the windows stood an old-fashioned bureau, whose mirror kept Miss Sabina informed of all the changes in her face, which she prayed Father Time to touch gently, as it might yet be her fortune.

Feeling lonelier than ever before in her life, she looked about her, sat for some moments in deep meditation, and then exclaimed:

"Is this all there is in the world for me?"

Here was the key to her discontent. Miss Sabina was right pretty, hadn't a sharp tongue nor a long neck, and was well off. Now, why did she have to live alone? God's original plan must certainly have included her happiness. Why not? What could Providence possibly have against her? She had never harmed anybody and never talked spitefully of men—a remarkable thing in a single woman of forty. When Miss Sabina contemplated the shrews, the redheads, the feminine scarecrows, that were flourishing like green bay trees with husbands, and with children to spare, she just settled it that there was a hitch somewhere—something out of gear in the world's marriage machinery—and it never occurred to her that it is always darkest before day.

As Miss Sabina sat musing on life and its inequalities, she heard the sharp whistle of a train which passed right in front of her house. Something must have happened. The whistle did not usually sound so far from the station. Looking out, Miss Sabina saw the train at a standstill, men running back on the track and passengers looking excitedly from the car windows. Seizing her sunbonnet, she dashed down the yard to find out what had happened. Four men were approaching, bearing gently a gentleman who had been hurt. Attempting to walk from one car to another, he had made a misstep, lost his balance and fallen. The result was a badly mutilated foot. Miss Sabina's house being the nearest one in

sight, he was taken to it, a surgeon summoned from town, and the train moved on.

Amputation was at once pronounced necessary, and David Ware would not preach the next Sunday in the city to which he had accepted a call. He lay moaning on a cot in Miss Sabina's neat little parlor. She never had anything to touch her feelings quite so much in her life as his sufferings and his big brown eyes, which she caught sight of now and then through the door. David Ware's foot was taken off and a trained nurse employed to attend him. Miss Sabina had nothing to do in the case but to furnish fresh flowers and dainty edibles to David. She was relieved of much embarrassment when she heard that it was a minister under her roof. People wouldn't be so apt to joke about a man being in a house that never had such a thing before.

As David in his pain saw the little woman moving through the hall and heard her giving orders for his comfort, he thought of the cloud with silver lining about which he had so often preached. A realistic vision was passing before him. The third day that he lay in the little parlor the nurse left him while he was sleeping and engaged Miss Sabina in conversation on the porch. It was now she learned that David was an unmarried man. After that the flowers were arranged with greater care, the chicken was broiled more daintily, and the biscuit took on a more delicate brown. Woman's wiles often hide under just such covers.

David, when he was not sleeping, spent most of his time watching the door. Sabina, when she was not cooking or making bouquets, spent most of her time gilding stealthily by the door, for of course she was too modest and proper to enter it except occasionally with neighbors who called upon the unfortunate minister.

Mrs. Tabitha Topp, a neighbor and a great believer in the law of compensation, made Sabina blush herself nearly to death by saying: "Well, Sabina, the Lord took the minister's foot, but he'll be sure to give him something in place of it. You've been good enough to let him have the little parlor you don't even open for most folks, and may be you'll get your pay in some manner you're not expecting." Sabina pretended not to be thinking about pay, but she was already thinking about possibilities.

Well, there's no situation in life but changes sooner or later. David Ware, minister, could not be forever in that little parlor being waited on, and Sabina Wilkins could not go on forever broiling chickens and arranging sweet flowers for a strange man.

David was at last able to limp out to the porch, where he caught Miss Sabina sitting under the vines. The nurse was down in the village; Rex was asleep on the doormat. Sabina blushed like a girl of 18 and was afraid to sit with the minister for fear a neighbor might come and catch her. She was afraid to get up and leave for fear she would be losing an opportunity, and a woman at 40 can't afford to be reckless.

David rocked; Sabina rocked. Then he said: "Pleasant evening, Miss Wilkins."

"Yes, very," she answered.

David rocked; Sabina rocked. Then he said: "Sweet little home for you here, Miss Wilkins. Suppose you never get lonely, do you?"

"Yes, very," she answered him. It announced to him that here was a tender, loving woman robbed by some broken law of the love and sympathy to which she was entitled. Modest and refined as David was, he was suddenly moved to an outburst of admiration that filled the very air about Sabina with music and light and fragrance. "Miss Sabina," he said, "I think you're the sweetest woman I ever saw. Why don't you get married?"

Poor little Sabina felt for her salts bottle. She had never been attacked that way about marrying. And she never dreamed that love and courtship could be condensed or reduced to one sentence. Recovering herself, after a prolonged quiver of joyous surprise, she came back at David facetiously: "Mr. Ware, I think you are the nicest man I ever saw. Why don't you get married?"

"Because I can't find a woman with my name in her hand, Miss Sabina."

"Oh, my! What do you mean, Mr. Ware?"

"Don't you know, Miss Sabina, some palmistry philosophers claim that every woman's hand has a man's initial in it?"

"Do tell!" gasped Sabina, with eyes aflame and palms instantly upturned, while blushes chased with burning hope over her cheeks and throat. "Would you mind my looking at your hand, Miss Sabina?" David asked, construing favorably her excitement. Sabina extended her hand. David examined it closely, looked up into her eyes, then spelled slowly, "W-a-r-e! There it is!" Sabina gasped, held her salts bottle to her

nose, having jerked her hand from him with a coquettish way that said, "Take it again." "You musn't fly in the face of Providence, Sabina. Beware!" A pun and proposal in one word. Seeing that Sabina was unspeakably happy, David continued: "Only as my wife, Sabina, can I repay your kindness. You and I are a pair of scissors, divided and lonely. Come, let us unite and after this 'cut the fabric of life, together.'"

Sabina's head dropped, Rex barked, and the minister and maiden kissed.—Cincinnati Post.

Her First Baby.

A woman got into a suburban car the other afternoon. She was carrying a sweet-faced baby which was not more than six months old.

The car was detained at the corner where the woman got on, and she shifted round nervously in her seat for a moment and then began to toss the baby about. Here is a true description of what she did with that child while the car was going 250 yards:

Held it upright on one knee for 30 seconds; then shifted it to the other knee.

Pulled it up against her and hugged it twice.

Tossed it on her left shoulder and then shifted it to her right.

Held it up to the window and then stood it up on her lap.

Made a cradle out of her arms and jumped it up and down six times.

Placed it on her left knee; then put it on her right knee.

Laid it on its stomach in her lap.

Hugged it to her bosom and patted it seven times.

Held it up to the window again, then pulled it over to her left shoulder, shifted it to her right shoulder, and wound up by dumping it into her lap.

Tossed it into the air a dozen times and hugged it four or five times.

Laid it on its back in her lap and then turned it so as to lay on its stomach.

Patted it for a minute and hummed "Hush-a-bye, Baby," although the child wasn't making a sound.

Put it on her knee and joggled her knee up and down, stood it in front of her, holding it out at arm's length, and then hugged it ecstatically three times.

Held it up to the window for the third time, and then, when the conductor came after her fare, laid it in a lump on the seat beside her.

Patted it some more, joggled it some more, tossed it some more, and flopped it down on its stomach again.

Held it out at arm's length and gazed at it rapturously. Talked gibberish to it and hugged it some more.

And all this while the car was going 250 yards.

But then it was—her first!

A Frugal Queen.

When Alfonso XII of Spain died, Queen Christina took her ministers' breath away by refusing to accept the \$200,000 a year she was entitled to as regent and widow of the late monarch.

Without a moment's hesitation she began her regency with this act of unselfishness. She told her ministers that she thought Spain was not in a position to pay both King and regent. No regent or relict of a sovereign ever had been refused this pension, and Queen Christina's step caused a sensation.

Her Majesty undertook to carry on the ceremonial of the Bourbon Court with the annual stipend allotted to her three children by the Cortes. Little King Alfonso gets \$1,400,000 a year, the Princess of Asturias \$100,000 and the Infanta Maria \$50,000.

The Queen administers the salaries of her children herself. She and her children live and dress simply, comparatively speaking, but they are expected to pay at least ten times more than any one else for what they buy, and they are often obliged to pay for things which are simply forced upon them.

To give a couple of instances: Within a short time the Queen has had to pay \$100,000 for a portrait of her son, which is such a bad likeness that she can never hang it. Then she was expected to pay \$500 for a little painting in which a talented Spanish artist had only cast on canvas a few flowers in a wine glass.

How to Lie in Sleeping Cars.

A curious diversity of opinion prevails among travelers about the best way to lie in a sleeping-car berth. Some people prefer to have their feet foremost, as those members would be more liable to suffer in a head-on collision than the passenger's cranium; and it is asserted that several railway officials, prominent in their line of business, insist on riding thus at night. On the other hand, especially in summer, ventilation with or without wire screens is highly desirable, and if one lies with his head toward the rear of the train he is liable to get too much draught, and possibly some smoke and dust in his face, whereas in the other position he escapes this annoyance and risk. A recent contributor to the *Railroad Gazette* calls attention to another element in this question. Every boy who has had experience in both diving and jumping from banks and bridges into water, he says, feels an unpleasant sensation in his stomach while doing the latter, but not the former. So, too, some delicately organized folks are made uncomfortable, even to the verge of seasickness, in an elevator going down rapidly, but do not mind ascent at the same rate of speed. Something parallel to this, the writer referred to thinks, prevails when one lies prostrate in an express train whose velocity is undergoing more or less change, and it is suggested that on this account, if on no other, it is better to ride head foremost. Porters sometimes ask how a passenger prefers to have his berth made up, but even without that precaution they can be persuaded to do what the traveler wishes in this respect, if in no other.

Where the Women Propose.

In the Ukraine, Russia, the woman does all the courting. When she falls in love with a man, she goes to his house and informs him of the state of her feelings. If he reciprocates, all is well, and the formal marriage is duly arranged.

If, however, he is unwilling, she remains there hoping to coax him to a better mind. The poor fellow cannot treat her with the least discourtesy, nor has he the consolation of being able to turn her out, as her friends in such a case would feel bound to avenge the insult.

His remedy, therefore, if determined not to marry her, is to leave his home and stay away as long as she is in it. On the Isthmus of Darlen either sex can do the courting with the natural result that almost every one gets married. A similar practice to that in the Ukraine exists among the Zuni tribe of Indians.

The woman does all the courting, and also controls the situation after marriage. To her belong all children, and decent inheritance is also on her side. The same custom prevails among the Nigres, a tribe in Cabul, and the Nairs of Malabar. Among the Garo race of Assam, in north East India, it is not only the privilege, but even the duty of the girl there to speak first, any infringement of this rule being summarily and severely punished.

Promiscuous Kissing.

Much nowadays is being said against promiscuous kissing. All well-informed persons know how readily disease germs may thus be transmitted. It is an animal-like practice anyway, for all dogs lick each other, which is their way of kissing. In behalf of purity we would insist that all mammas refuse to allow their little girls to be caressed by men, it matters not how nice they may seem to be, as it will steal away from your little daughter her innate modesty and when

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder
ABSOLUTELY PURE

she grows up to womanhood she may have a morbid desire to be thus fondled by men. Mothers, you cannot be too careful of that precious girl child, but "a hint to the wise is sufficient."

Alleged Fun.

The nurse was told to give the twins a bath. Later, hearing the children laughing in bed, she said: "What are you children laughing about?" "Oh, nothing," replied Edna, "only you gave Edith two baths and haven't given me any."

Wife—An phwy do yez be takin' thlm pills when yez are well again?

Husband—Faith, would ye be afther havin' me let a dollar's worth of pills go to waste?

Boston Woman—Oh, I do so love the fields on our New England farms!

New York Girl—Why?

Boston Woman—Because they are so cultivated, you know.

Little Boy—The preacher said there is no marryin' in Heaven.

Little Girl—Of course not. There wouldn't be enough men to go 'round.

A Confederate guard in South Carolina during the war was questioned as to his knowledge of his duties. "You know your duty here, do you, sentinel?"

"Yes, sir."

"Well, now, suppose they should open on you with shells and musketry, what would you do?"

"Form a line, sir."

"What! One man form a line?"

"Yes, sir; form a bee line for camp, sir."

Little Edith had the habit of eating out the soft part of her bread and tucking the crust under the edge of her plate. Her mother had frequently reproved Edith for this reprehensible practice, but it appeared to have no lasting effect. The other evening Edith was detected at her old trick. Said her mother: "Edith, how often have I told you about leaving your crusts? There may come a day when you'll be glad to get them." "Yes, mamma," replied Edith, with a demure, whimsical countenance; "that's what I'm saving 'em for."

After a short season in the blacksmith's hands many a wagon wheel knows what it is to have that tired feeling.

"Your husband is so magnetic a man," said the visitor. "I know it," responded the wife. "I found a steel hairpin sticking to his coat collar the other day."

Bluffkins was sitting in the club-room not many evenings since, when Blake entered and took a seat near the fire.

"I say, Bluffkins, Blake began, "who is that new party Webb tells me arrived at your house yesterday?"

"Birthday party," replied Bluffkins, disconsolately.

"Don't talk nonsense," said Blake, savagely.

Bluffkins looked up in surprise. "I'm not talking nonsense, old man. Never was more serious in all my life. It's the stern truth; it weighs ten pounds, and it's a boy."

Remedial Use of Apples.

Chemically the apple is composed of vegetable fiber, albumen, sugar chlorophyll, malic acid, gallic acid, lime, and much water, says the *Practitioner*. Furthermore, the German analysts say that the apple contains a larger percentage of phosphorus than any other fruit or vegetable. The phosphorus is admirably adapted for renewing the essential nervous matter—lecithin—of the brain and spinal cord. It is, perhaps, for the same reason, rudely understood, that old Scandinavian traditions represent the apple as the food of the gods, who, when they felt themselves to be growing feeble and infirm, resorted to this fruit, renewing their powers of mind and body. Also, the acids of the apple are of singular use for men of sedentary habits, whose livers are sluggish in action, those acids serving to eliminate from the body noxious matters, which, if retained, would make the brain heavy and dull, or bring about jaundice or skin eruptions and other allied troubles. Some such experience must have led to the custom of taking apple sauce with roast pork, rich goose, and like dishes. The malic acid of ripe apples, either raw or cooked, will neutralize any excess of chalky matter engendered by eating too much meat. It is also the fact that such ripe fruits as the apple, the pear, and the plum, when taken ripe and without sugar, diminish acidity in the stomach, rather than provoke it. Their vegetable sauces and juices are converted into alkaline carbonates, which tend to counteract acidity.

The Little Girl with a Company Face.

Once on a time, in a far-away place, Lived a queer little girl with a company face. And no one outside of her family knew Of her every-day face, or supposed she had two. The change she could make with wondrous celerity, For practice had lent her surprising dexterity, But at last it chanced, on an unlucky day (Or lucky, perhaps, I would much better say), To her dismal dismay and complete consternation, She failed to effect the desired transformation! And a caller, her teacher, Miss Agatha Mason, Surprised her with half of her company face on, And half of her every-day face peeping out, Showing one grimy tear-track and half of a pout, Contrasting amazingly with the sweet smile That shone on her "company" side all the while. The caller no sooner had hurried away than up to her room the girl flew in dismay; And after a night spent in solemn reflection On the folly of features that can't bear inspection, She came down to breakfast and walked to her place, Calm, sweet and serene, with her company face. Thenceforward she wore it, day out and day in, Till you really might think 'twould be worn very thin; But, strange to relate, it grew more bright and gay, And her relatives think 'twas a red-letter day When the greatly astonished Miss Agatha Mason Surprised her with half of her company face on.

—November St. Nicholas.

Round Shoulders Cured.

A woman physician recommended to the *Boston Herald* the following simple exercises, requiring little time and no apparatus, for the cure of all except very severe cases of round shoulders, when braces are also sometimes a necessity: "1. Raise arms before you shoulder high, extend arms side-wise, throw head back, straighten head, move arms forward, lower arms, repeat ten times. 2. Stand erect, raise arms before, rise on tip toes, then throw arms as far backward as possible, sink again on heels and drop arms to side, repeat ten times. 3. Raise arms with elbow bent shoulder high, bringing palms together in front of face, then with elbows still bent swing both arms vigorously backward as far as possible even with the shoulders, palms looking forward. This should be repeated several times, but as the position is somewhat fatiguing, rest or change of exercise may be made between the movements."

Another simple movement designed to bring about a correct position of the shoulder blades consists of holding a cane or wand in both hands, throwing the head back and carrying the stick from "above the head back and down the hips."

As the clothing, if too tight or unyielding about or over the shoulders, may help to produce round shoulders, both the under and outside waist should be comfortable, and bands over the shoulder of garments made of elastic.

Delicious Pickles.

Pick only very small cucumbers. Wash carefully and soak about twenty-four hours in medium strong brine. Remove to clear cold water, in which dissolve a piece of alum the size of a walnut to each two quarts of cucumbers. Let stand a few hours, then very slowly bring to lukewarm temperature. Change to clear water again, adding alum as before. Repeat this till no salt is apparent. Drain thoroughly and place in wide-mouthed bottles or jars. Heat cider vinegar—acid vinegar soon dies—in which put a small handful each of whole allspice and cloves to each gallon, and a very few tiny red or green peppers, if desired. When hot, not boiling, pour over the cucumbers till the bottles are full. Let stand till next day. Pour vinegar off and heat again for two successive days; cork bottles or cover well, and in a few days it will be ready for use.

TUMBLER CAKE.—Two eggs, one tumbler of brown sugar, one-half tumbler of milk, one-half tumbler of molasses, one-half tumbler of butter, one teaspoonful cream tartar and one-half teaspoonful of soda, one tumbler of stoned raisins, one teaspoonful of cinnamon, clove, little salt, two and one-half tumblers of flour. Bake in a deep tin about one hour and a half.

LADY CAKE.—Two cups of fine white sugar, one cup of butter beaten to a cream; add one cup of milk and three cups of flour in which three teaspoonfuls of baking powder have been sifted, flavor with almond and then add the well beaten whites of the eggs. Bake 40 minutes.

MRS. M. H. OBER,

Phelan Block, 816 Market, S. F. Branch, 1236 San Pablo Avenue, Oakland.

All qualities Ypsanti Union Suits for ladies and children. Headquarters for the Coast. JAROS Hygienic Union Underwear.

Sample pieces and Catalogue sent free.

TIGHTS.

Knee and ankle, open and closed seat, \$1.25 up. All qualities. Fine Black Hosiery for ladies and children.

Sponge Silk for underwear. Cleopatra and Delsarte Girdles. R. F. Sensible Waists for ladies and children.

MRS. MILLER'S PUBLICATIONS. Book on mother and babe, a few hints for expectant mothers. Send for circular. Also Physical Beauty. Treats on the care of the body. Monthly Magazine, \$1 a year.

Physical Culture by Mabel Jenness, 50 cents.

Only authorized agent for EQUIPOISE WAIST and JENNESS MILLER GOODS.



CHOPPERS ATTENTION!

ASK FOR THIS AXE. USE NO OTHER.

Wood-choppers, try the Kelly Perfect Axe.

It will cut more wood than any other axe.

The scoop in the blade keeps it from sticking in the wood, and makes it cut deeper than any other axe. Ask your dealer for it. Send us his name if he don't keep it. It is the Anti-Trunk Axe.

Kelly Axe Mfg. Co. LOUISVILLE, KY.

WE GUARANTEE

That one tablespoonful of

GOMBAULT'S CAUSTIC BALSAM

will produce more actual results than a whole bottle of any liniment, or any cure mixture ever made. It is therefore the cheapest (as well as safest and best) external applicant known for man or beast.


THE LAWRENCE WILLIAMS CO., CLEVELAND, OHIO.

DIAMONDS!

GENUINE AND FIRST QUALITY.

Warranted Pure White and Perfect, and of Extreme Brilliancy.

This diagram shows the approximate sizes of the stones

													
$\frac{1}{16}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{5}{8}$	$\frac{1}{2}$	1 K			
1.16 carat....	\$4 00			carat....	\$8 00			carat....	\$15 00				
carat.....	25 00			carat....	35 00			carat....	50 00				
carat.....	70 00			carat....	90 00			carat....	110 00				

PATRONS OF HUSBANDRY.

Editorial Observations.

The regular letter of Secretary Mills with the synopsis of proceedings at Syracuse take up all our available space this week, hence several letters must lie over till another issue. We regret that it must be so, but there seems no way to help it.

Of course, the reports in the *Syracuse Journal*, from which the accompanying synopsis is made up, are only partial, since much that is done cannot be printed in any paper circulating among the public at large. For the "inside" of the session we shall have to wait until the return of Messrs. Roache, Walton and Davis. Even then it will not be possible to make the matter public. The return of these gentlemen is uncertain. Mr. Roache is reported to be sick and unable to travel; Mr. Walton is going to devote December to business in the Eastern cities, and we have no information of Mr. Davis' plans. Mrs. Roache will, of course, remain with her husband.

While in attendance upon the State Fruit-Growers' Convention at Los Angeles last week, we are led to reflect upon the fact that the grange is doing little toward identifying itself with the fruit interest. Only at Yuba City, San Jose and Watsonville have the fruit-growers been brought to active support of the grange, and it is a notable fact that, all things considered, the three granges named are the most active and prosperous in the whole State. Now, fruit-growing is making prodigious strides, and the grange ought to be the training ground of those engaged in it. These are facts which the official manager of the order would do well to bear in mind.

The National Grange.

We give below in brief a synopsis of the proceedings of the National Grange, which met in its 27th annual session at Syracuse, N. Y., on the 15th of November. The reports from which we make compilation were printed from day to day in the *Syracuse Journal*, made by a member of the order, and sent out by authority of the National Grange. The assembly hall was what is locally called "The Alhambra," of which the reporter said in writing of the opening session:

"In the hands of the decorator the big hall has undergone a wonderful transformation. Bunting and flags are to be seen everywhere. The farmers display only their national colors. Everything is strictly American. The stage is decorated with grain, plants and farming implements, and presents a very handsome appearance. On the floor, directly in front of the stage, is built a pyramid, which is covered with various products of the soil. Steward Alva E. Page of Missouri exhibits on a small table near the stage a very good collection of apples and corn, and Lecturer Mortimer Whitehead of New Jersey displays some handsome pears. On banners on the side walls are to be seen such mottoes as these: 'For God, For Home and Native Land,' 'Equal Rights to Both Sexes,' 'The Farmer Feeds Us All.'"

Grand Master Brigham presided at the opening, all the leading officers being present, as were all the voting members save alone Mr. and Mrs. Hiram Hawkins of Alabama.

The Master's Annual Address:—After a few words of greeting, Mr. Brigham spoke of the condition of the order. The year, he said, had not added greatly to the numerical strength of the grange, though in some districts there had been distinct gains. However, the lesson was being well learned that the conservative course of the grange was the farmers' wisest policy and this was giving strength to the order everywhere. The best way to increase membership, he thought, was through the work of the Organizer exerted in a house-to-house canvass. In this way much better results are attained than through the efforts of the Lecturer, though this has its distinct value in the way of maintaining interest. The Organizer should not, after putting a new grange on its feet, leave it to shift for itself, but should visit it again and again to instruct, encourage, etc. These suggestions, Mr. Brigham declared, are based upon information received from men who never fail to organize

when they make the attempt. The farmer, the Master declared, has come through the hard times better than any other great class. His work may be hard and his profits small, but he is never without shelter or bread. Referring to the strictures of Secretary Morton upon the grange, Mr. Brigham spoke with utmost severity and contempt, denouncing Morton as a corporation lobbyist, out of touch and out of sympathy with the agricultural class. Organization among farmers he regarded as the thing only secondary to industry, and to it he looked for the best results both for the material and moral welfare of the agricultural class. To propositions for union of agricultural orders, the Master devoted a large part of his address, but came to nothing, since the grange could not accept some things which other bodies regarded as essential. He would gladly welcome all farmers into the grange, but would make no effort to win them wholesale from other orders. An arrangement made with the Alliance of Texas, by which Alliance members could come into the grange without fee, would, he thought, largely promote the grange in that State. The grange, he thought, should not take ground on economic questions, since members had different views. The minority cannot be forced to sink personal views and opinions, and accept those entertained by a majority, and all efforts in that direction are subversive of the interests of our order. Mr. Brigham noted with satisfaction the educational advancement of the year, especially in its relation to the farmer. We quote: "Isolation, distrust, superstition, prejudice and ignorance are giving place to social enjoyment and culture, confidence, well-grounded faith, liberality, charity and intelligence. Henceforth the farmer will be consulted, and his opinion will be received with respect and be duly considered. He is no longer the 'meat' of self-appointed political bosses, but a man who feels the pulsation of power heretofore neutralized and wasted. The public official or political party that hereafter ignores or discriminates against agriculture and the farmer will meet with prompt rebuke." The address closed with an expression of personal thanks to the membership of the order at large for the confidence and support.

OTHER REPORTS.—Mr. E. W. Davis of California, Overseer of the National Grange, opened his report with a statement that in the grange the term overseer did not imply autocratic or arbitrary power, but designated one who was simply a workman like his fellows. He then spoke in severe terms of Secretary Morton, saying that it was not by such expressions as those recently made concerning the grange that he had climbed to his high place. He noted the steady advance of rural life and interests, and commended the good work done by the grange.

Report of the Executive Committee.—This report showed the National Grange fund on hand to be \$52,429.83, an increase of \$1,547.10 over last year. These funds are loaned on the best securities. During the year Grand Lecturer Whitehead drew for per diem expenses and for editorial work \$1191.97. The grand master drew for lecture work \$300. These, with some minor charges, still left in hand \$36.26 of the fund of \$1500 appropriated last year for lecture work. Of the \$1000 provided for the World's Fair headquarters, \$720.63 was expended and the surplus was turned into the general fund. The office was, so the committee declares, a great success. Over 4000 members of the order subscribed their names upon its register. It was a matter of common remark at the fair that the grange headquarters was the most homelike place on the grounds. Referring to the grange press the committee says: "We would especially acknowledge the valuable service of the grange press throughout the United States, and it is only to be regretted that these papers are not more liberally supported, as very often it is the only channel through which our organization can be fully and impartially heard. What our order needs to give it power and influence are papers that will give their undivided support and recognition of the order as being the best of all farmers' organizations ever instituted; but such papers can only be maintained by the free and liberal support of the entire membership of the order." Referring to the relations of the order with the Government the committee says: "We feel that the American farmers, hundreds and thousands of whom gave their support to the President in his election, have a right in a respectful way to petition the President to establish more friendly relations between the agricultural organizations of our country and the farmers' department at Washington; and especially has the Order of the Patrons of Husbandry a right to claim more friendly consideration from the department of the

General Government which has been created solely through the efforts of the grange for the protection of the agricultural interests of our country, and we feel confident if this matter could, through the proper channels, be presented to the President in a respectful and friendly way, at least a respectful hearing, if not friendly consideration, would be given." This concludes the practical part of the report, what remains being general comment on the depression in agriculture and respectful mention of the dead of the year.

Report of the Lecturer.—This report by Mr. Whitehead was the most exhaustive and meaty official paper of the session. Mr. Whitehead stated that during the year he had officially visited nine States, and unofficially eight other States. In all these States he had lectured and done whatever he could do to encourage and promote grange work. He found many localities sadly depressed and poor, due, as he declared, largely to the "tyranny of monopolies." In the department of editorial work—that is, in writing and forwarding circulars, etc.—he had been crippled by the fact that the last National Grange only provided \$200 for all charges including postage. This he thought a great mistake as grange literature is the cheapest if not the most effective grange missionary. He thought there should be a larger appropriation for this work and that it ought to be made a large feature of National Grange policy. Under the head of editorial matters Mr. Whitehead called attention to the special schools of instruction now springing up all over the land and urged the sons and daughters of farmers to make use of them. "Our subordinate granges," he said "cannot be too strongly urged to encourage their younger members to take up these short courses which generally cover about 12 weeks in the winter season and cover practical instruction on soils, crops, fertilizers, breeds, breeding, feeding and management of live stock, dairying, veterinary science, horticulture, entomology and botany. Practice is given the students in milk testing, calculating and compounding feeding rations, laying out roads and drains, making and judging butter, judging different classes of live stock and diagnosing and treating their common diseases, budding, grafting, spraying, etc." One of the most notable movements of the time, Mr. Whitehead declared, was the study of political questions among farmers. He had never known a time when so large a number of farmers were students of subjects pertaining to their interests as producers, as men and as citizens. Mr. Whitehead made no direct reference to the late assault of Secretary Morton but he devoted a large share of his report to showing the interest that was taken in the order and the approval of it expressed by Presidents Hayes, Arthur, Garfield, Harrison and Cleveland, by the several former commissioners of agriculture, and by the late Secretary Rusk. Nothing in the way of direct arraignment of Secretary Morton could have been more effective. In conclusion, Mr. Whitehead said: "The pressing needs of the hour for our order is to live up fully and bravely to its past record; to embrace the ever present opportunity; strengthen the strong, cheer the weary and faint hearted, those 'pulling hard against the stream,' and let its 'light so shine before men that they may see its good works and glorify our Father which is in heaven.'"

THE ELECTION.—Perhaps the most interesting day of the session was election day, the 19th. The result was the re-election of Mr. Brigham as Grand Master over Leonard Rhone of Pennsylvania. The contest turned upon the financial question, the silver men voting for Rhone while the anti-silver men voted for Brigham. We regret that the reporter did not give the vote. Mr. E. W. Davis of California was re-elected overseer over Elmer D. Howe of Massachusetts. Hon. Alfred Messer of Vermont was elected to the office of Grand Lecturer, defeating Mortimer Whitehead. This was the surprise of the day. The other offices were filled as follows: Steward, M. B. Hunt, Maine; assistant steward, A. M. Belch, Rhode Island; chaplain, S. L. Wilson, Mississippi; secretary, Dr. John Trimble, Washington; treasurer, Mrs. F. E. McDowell, New York; gate-keeper, W. E. Harbaugh, Missouri; Ceres, Mrs. M. S. Rhone, Pennsylvania; Pomona, Mrs. Mary Reardon, Kansas; Flora, Mrs. A. L. Bull, Minnesota; lady assistant steward, Mrs. A. Horton, Michigan; executive committee, R. R. Hutchinson, Virginia; J. J. Woodman, Michigan.

Woman Suffrage.—On the fourth day of the session, the following resolution was proposed and carried: *Resolved*, That the National Grange is in favor of granting to women the same privileges at the ballot box as are granted to men.

This action is significant. All previous

sessions of the National Grange have declined to vote. Each time this question came up in the grange it was referred to the various State Granges. The resolution was adopted by a ratio of six to one.

Report of the Educational Committee.—The report of this committee is well summed up in a series of definite suggestions as follows:

We believe that the boys and girls reared upon our farms have just as bright minds and just as intelligent ideas as those of equal opportunities in other vocations.

We believe that the grange should continue its hearty support to our agricultural colleges and experiment stations, and insist upon their full and entire separation from classical institutions.

We believe that farmers should send their sons, and daughters too, to these same colleges, provided, of course, that their inclinations lead them in that direction, and supplement the knowledge there gained, by the training which the grange affords.

We believe that the grange, as it has done in the past, should continue to devote much of its time and energies to the discussion of questions agricultural, horticultural, economical, ethical and moral, and resist the temptation to cater, more than occasionally, to the taste for lighter entertainments, which so soon sap the vigor of the organization and destroy its relish for wholesome food.

To this end we heartily endorse the formation within the grange, of reading circles, after the Chautauqua plan, and commend for consideration the loan-library scheme of the New York University extension system.

In conclusion, let it be said of the grange, never did the faculties of any of its members die of lack of constant and healthy exercise.

Resolutions to Secretary Morton.—The following report was brought in by a special committee and adopted by unanimous vote. It will be noted with interest by RURAL readers that the first move was taken by a California grange:

Your Committee on Good of the Order, to whom was referred the resolutions of Enterprise Grange, California, and the resolution of Hope Grange, in the State of New York, in reference to the language used by J. Sterling Morton, Secretary of Agriculture, in his speech at Chicago at the meeting of the World's Congress, where he, in language unbecoming to a gentleman, much less a high official—no less than a member of the President's Cabinet—condemns and censures all farmers' organizations, and specifically mentioning the grange in the following language, to wit:

"That the most insidious and destructive foe to farmers is the professional farmer, the promoter of granges and alliances, who, for political purposes, farms the farmer; that he will not succeed better by forming granges and alliances, which generally seek to attend to some other business than farming."

Resolved, That so far as the grange is concerned, there is not one word of truth in what the Secretary has said about it, but on the contrary it is strictly non-partisan and tends by all its teachings and principles to educate and elevate the farmer to higher and nobler citizenship, and does in a thousand ways improve the farmer in his profession by teaching the most approved methods of agriculture and in the marketing of his products of the farm, and in wisely using the money received therefor in beautifying and making the home of the farmer and his family.

Resolved, That in giving utterance to this calumny, the fallacy of which the Secretary must have known, or could have known had he taken the pains to inform himself, he has proven himself unworthy of the high position he holds.

Resolved, That the President of the United States owes it to the farmers of America, the largest agricultural nation in the world, and the largest single interest in the United States, that they should have a Secretary of Agriculture in sympathy with this great interest. We believe it to be the imperative duty of the President to immediately take steps to secure a Secretary of Agriculture who shall be in accord with that interest.

Interviews with Pacific Coast Grangers.—The *Syracuse Journal* of the 15th inst. contained the following reports of interviews with Pacific Coast Grangers:

Among the delegates to the National Grange is ex-Judge R. P. Boise of Salem, Oregon. In conversation with a *Journal* reporter, the Judge said that Oregon boasted of 3000 members of the Grange. "We have been doing a great deal in the way of educating the people in matters pertaining to their interest. I am in favor of free coinage of silver and more money. The members of the Grange in our State are practically a unit in favor of free silver. They do not undertake to meddle in politics in a party sense at all. We are also in favor of regulating the railroads. The Legislature now limits the rate to four cents a mile, and the grangers want it made three cents. As far as the freight rates are concerned, the grangers want them reduced also. We are also in favor of a graded income tax, and in favor of the Government owning the telegraph. Our people are taking a great deal of interest in the Agricultural College at Corvallis, Oregon. It has a large attendance. At one time this college was in the possession of the Meth-

Continued on page 402.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

Honors are even between Butte and Los Angeles counties on the early orange question this year. Butte county shipped the first few boxes to the new market week before last, and last week a carload of early Navels were shipped from E. J. Baldwin's Santa Anita ranch, located in Los Angeles county. Mr. Baldwin's earlies are not representative of southern California as it is known to-day in orange-grower's parlance. His early Navels are grown on the high and protected sides of the San Gabriel mountains, which line his Santa Anita ranch for miles on the west. This land, like the choice nooks along the Sierra foothills, is perfectly adapted to orange culture.

To the influence of the successive citrus fairs of northern California the Oroville Register traces the planting of 4000 acres of orange and lemon orchards and 7000 acres in other orchards and in vineyard, making 12,000 acres in all devoted to horticulture in Butte county. If such results may be fairly credited to the citrus fairs, these expositions have certainly been worth far more than their cost. They have been more valuable as educators of our own people than as advertisements for the attention of outsiders.

Fresno.

The Reedley *Exponent* reports that Davies Brothers have just harvested and processed a 25-acre crop of sorghum cane. The cane in growing resembles Egyptian corn and is grown in hills and rows, but thicker on the ground than either Egyptian or Indian corn. The seed makes good feed, especially for poultry, and the fodder is good for stock. The cane is stripped of the blades and topped while standing. It is then cut and hauled to the cane-mill, where it is crushed and pressed by passing between three upright metal rollers. This mill is worked by horse power, using two horses. The juice from the cane is then passed to a tank over a furnace, where it is heated, and from there passes to the evaporator. It is made to pass on to the evaporator at one end, then slowly passes from side to side of the evaporator through corrugations until it reaches the other end, where it passes off into a receptacle in the form of syrup. The yield for the 25 acres will amount to about 7000 gallons, which retails at 70 cents per gallon.

The Fresno *Expositor* reports the shipment of a carload of oranges—the first full carload ever shipped from the county.

Humboldt.

Yreka *Watchman*: John Depuy, of this city, has been making a practice of planting one hill of potato balls every season, for the purpose of perfecting new varieties of potatoes. He has quite a number of new varieties in different stages of perfection—it requiring four or five years' careful selection and segregation to fully perfect and establish an individual variety. At present, of established new varieties, he has for sale the "Humboldt Pride," a red potato, the "Pacific Standard," a white potato, and the "Humboldt Daisy," also white. All three are remarkable fine grain, though they are large potatoes, and cook dry and mealy. He has dug this year potatoes propagated from the ball in 1891, only having two seasons since in which to develop, but which are showing qualities that are simply wonderful at this stage of development, and Mr. Depuy is encouraged to the belief that he has succeeded in propagating a new variety that will excel anything heretofore perfected in the potato family.

Kings.

Hanford *Journal*: A. D. Cridge has been making some experiments with Dudley gypsum on alkali land and reports that there is considerable encouragement derived from its use so far. He began to apply it last September and it is yet too soon to judge fully of its effects, but he expects to put out an acre of alfalfa and an acre of trees this winter, relying entirely upon the gypsum as a neutralizer and putting plenty of it on.

Los Angeles.

Los Angeles *Times*: An electrician of this city named Lundberg has discovered that a solution of water and sal ammoniac, or chloride of ammonia, is very effective in destroying the San Jose red and black scale bugs. The wash is very cheap, the cost being in fact almost nominal, and it is applied with an ordinary spraying pump. This, if it will accomplish what the inventor claims, is a most important discovery for our fruit-growers, and knocks out the expensive washes even better than the parasites.

Marin.

San Rafael *Tocsin*: There is a serious proposition on foot among California dairymen to start a school for instruction in the scientific departments of dairying, similar to some of the great institutions that have been so successful in the East. That such a school is needed here and that it would be an enormous advantage to the Pacific Coast is fully appreciated, and there is but little doubt that the enterprise will be successfully carried out before long. At present, the promoters have their eyes on San Rafael as a suitable site for the school and there is a strong probability that it will be established here.

Placer.

At a meeting of the Placer County Horticultural Society last week the system of letting fruit lands to Chinese was severely commented upon, and instances were given where such lands were let and had rapidly deteriorated in care and consequent production. At request of the meeting the president appointed a committee of three to present the names of eleven fruit-growers to take the subject into special

consideration, and Capt. McCann, H. E. Parker and J. F. Madden were appointed on the committee and were instructed to report at the next meeting.

Riverside.

Wm. Collier reports to the Riverside *Press* that, notwithstanding the low prices of grain and fruit in that vicinity, the farmers are making arrangements for an increased acreage, especially of grain, next season. While there he leased more than 600 acres of land to different parties, to be put in grain the coming season, and thousands of acres will be added to the grain area in those localities. There are also thousands more acres going into grain than ever before in the San Jacinto and Perris valleys, and the Alessandro tract is being divided up and let out in smaller tracts to parties.

Sacramento.

F. Guisto of Sacramento sent to the San Francisco market the first shipment of asparagus of the season. It found ready sale at 75 cents per pound.

San Bernardino.

Prof. Hilgard was at Chino last week inspecting the experiment station. The *Champion* reports him as saying that "too much irrigation is often practiced on many of our deciduous fruits, making them unfit for shipping and lacking in flavor. He has regularly examined apricots from over-irrigated sections and from the drier foothill sections, and find that the latter are always firmer, better shippers and of superior flavor."

Chino *Champion*: Last evening a trainload of 19 cars, containing 464 head of cattle, arrived here and was unloaded and the cattle placed at once in Mr. Gird's stock yards on Central avenue. These cattle are from Vail & Gates' Empire ranch in Arizona, and are brought here to be fattened on beet pulp.

Anaheim *Gazette*: The Chino beet-sugar factory earned a bonny for the past season of \$263,608. To earn this it produced over 15,000,000 pounds of sugar, which is said to be the largest production of one factory in a season ever known in this country. Surely this quarter of a million dollars was well bestowed. If the Democrats would only leave the sugar bounty alone there would be half a dozen beet-sugar factories like that of Chino in operation in southern California within a couple of years. It is expected that this year's output will be far surpassed by that of next year, as the factory will not only manufacture from an increased acreage of sugar beets to be planted by outside districts, but that the cultivation of the land will be greatly extended on the Chino ranch itself. It is expected that the output for the next campaign will reach 25,000,000 pounds at least.

San Diego.

Perris *New Era*: At his place six miles west of town, H. C. Steele is putting in a stone reservoir, with a holding capacity of 200,000 gallons. This will be utilized in watering a large orchard which Mr. Steele intends putting out. He has already made arrangements to put out 40 acres of olives.

Santa Barbara.

Santa Maria *Graphic*: R. E. Leeson of Indiana has purchased 183 acres of the 1000-acre tract on the Nipomo mesa at \$40 per acre, paying cash for the same. Mr. Leeson immediately let the contract to L. Wood for planting the entire piece to fruit trees and caring for the same for four years for \$8000. P. Fry, the live real estate agent, negotiated the sale. Mr. Fry informs us that he expects parties here soon to purchase 500 acres, which will be put to fruit.

Santa Clara.

The Los Gatos *Chronicle* reports that Amedee Delpech, who conducts the Charles McKiernon ranch near the summit, about ten miles from Los Gatos, crushed this season from a single acre of vineyard 2000 gallons of wine. Grapes yield usually 140 gallons of wine to the ton, and taking those figures for a basis, the grape yield was about 14 tons.

The Los Gatos *News*, summing up the work of the season, says that the year's production has been enormous, and that, notwithstanding the increase in the yield, the fruit has been handled with more satisfaction to all parties concerned than ever before. Up to the middle of November the total Eastern shipments from San Jose were as follows: Green fruits, 18,940,480 pounds; canned fruits, 8,325,165; dried fruits, 30,519,165, apportioned as follows: Prunes, 25,049,500; apricots, 3,335,065; peaches, 1,800,615; other dried fruits, 332,895. This gives a grand total shipment of all classes of fruit to Eastern markets of 57,984,810 pounds to November 12th. Final shipments will vastly increase these figures.

Santa Cruz.

Pajaronian: The strawberry season is practically over in this valley. From time to time a

few light shipments may be made next month, but the period of daily shipments is over for 1893. The frosts and the big storm closed out the strawberries. The shipping season has been unusually long. Prices have averaged low, and the yield was but fair.

Pajaronian: San Benito county produced a million bags of grain in 1893. The Pajaro valley will produce something less than a million bags of sugar this year, but the sugar will bring as much money as all of the San Benito grain. Coin talks this tight year.

Sonoma.

It has been determined by the citrus-fruit growers in the vicinity of Cloverdale to hold a citrus fair some time in February. Last year's fair did much to advertise the district, and it is hoped to make even a better display this year.

Between 800 and 900 bales of hops remain unsold in Sonoma county. A large proportion of the crop in Mendocino county is still in the hands of the growers, who have no inclination to sell for what the buyers offer.

Shasta.

The Redding *Democrat* says that 200 prune trees ten years old in the orchard of J. S. Edgington near Millville, yielded a crop of prunes that weighed 14,000 pounds, dried and cured. Monday he sold the prunes—part of them to the McCormick-Saltzer Co. of this place, and the remainder to J. F. Bedford in Anderson—for five cents a pound, bringing him \$700. The labor cost is estimated by Mr. Edgington, counting in his own time at fair wages, at \$200, thus leaving a net profit of \$500 on his 200 prune trees. These trees do not cover quite two acres. Mr. Edgington says he lost three tons of prunes from the crop on these trees by the early wet weather, and but for that misfortune he would have ten tons of dried prunes.

Sutter.

Sutter County *Farmer*: Sutter county is liable to blossom out as a tobacco-producer before many years. Recent experiments tried at Nicolaus show that the plant thrives well and produces good leaf. Jacob Vahle set out an acre to tobacco this last season, and raised, gathered and cured the leaves. The yield and quality were excellent, and cigars made from the same are pronounced good smokers. Mr. Vahle intends planting six acres more the coming year.

Tulare.

Register: Mr. G. W. Johnson has one acre of land in the western part of town, mostly in fruit of various kinds, and his experience leads him to believe that small farming can be made to pay. He puts in full time at his business six days in the week and such care as he can give his home place at odd hours. This, of course, indicates that it has received no especial nursing nor has production been pushed. Yet, from that single acre, with what has been sold, and dried fruit that remains to be sold, at present prices, the income figures out \$150, no account being kept of family consumption, which was not limited. Mr. Johnson believes that the production could easily be doubled with a little additional work.

Major C. J. Berry, horticultural commissioner for Tulare county, gives the following remedy for red spider: Dust dry sulphur on the leaves of the tree or plant, and, if the leaves are too dry to retain the sulphur, they should be wet by sprinkling. In large orchards I advised the use of a Gorbam seed-sower, on a wagon and one side closed driving against the wind, operating it at 3 A. M., when there is some dew on the plant leaves. This is a very efficient remedy, and, as this pest breeds in dry, hot weather on nearly all our forest and hedge trees, and is carried by the wind, our orchardists are forced to use it for their own protection. Our vineyards were affected with this pest this season, and, wherever sulphur was properly applied to the vine, the remedy was effectual.

T. B. Fuquay of Woodville, in drying raisin grapes, dips them in a hot solution of lye just as prunes are dipped. He had success with this plan.

The Midland Orchard Company will plant 5000 more prune trees in the spring, to be irrigated by their steam pump. Many of their last spring's trees have made a splendid growth.

J. N. Hoyt of Grangeville harvested 30 tons of raisins from his place and it cost him \$300, or \$10 per ton, to do the work. He states that for \$15 per ton he could have the grapes picked, dried and packed in the packing-house. The \$10 per ton included his own work.

PIANOS

A. L. BANCROFT & CO. 303 SUTTER ST., S. F.

KNABE, HAINES, BUSH & GERTS, and others. Cash or installments. Please call or correspond.

SAN FRANCISCO. BANCROFT

WAKELEE'S

THE BEST

—IS THE—

CHEAPEST.



Squirrel and Gopher Exterminator!

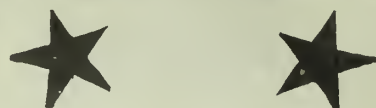
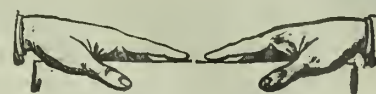
IN 1-LB. and 5-LB. CANS.

DON'T BUY

AN

INFERIOR ARTICLE

Because it is more profitable to some one else.



STAR PLOWS.



—MADE BY—

BENICIA AGRICULTURAL WORKS.

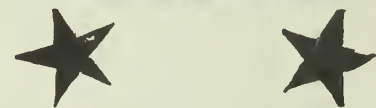
GOOD PLOWS AS LOW-PRICED AS
NO BETTER MADE ANY GOOD PLOWS
HUNDREDS ARE BETTER THAN
SOLD YEARLY MOST GOOD PLOWS

Workmanship and Material
GUARANTEED.

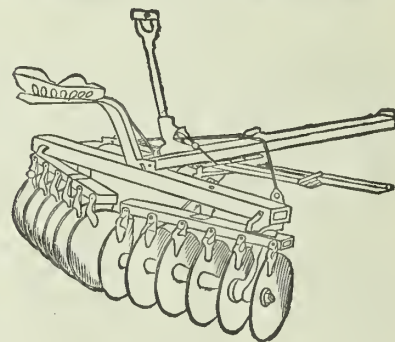
Your local dealer probably has them. If he hasn't and won't get them for you, write direct to us.

BAKER & HAMILTON

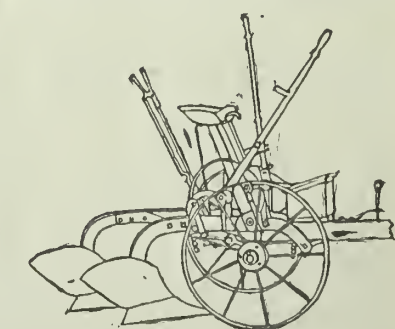
SAN FRANCISCO and SACRAMENTO.



CLIMAX DISC HARROWS.



EUREKA
GANG PLOWS.



The ONLY Gang Plow
That will work in all soils
And under all conditions
Without trouble and breakage.

Many styles and sizes.
Different bottoms
For different soils.

We Make them,
We Guarantee them.

Used on the largest farms in the state: Witness—the "Glenn Estate," Gov. Stanford's Ranch, Miller & Lux, Jno. Finnell, and many others.

BAKER & HAMILTON,
SAN FRANCISCO and SACRAMENTO.



Cost of Great Britain's Defenses.

The British empire spends as a rule upon defense from \$250,000,000 to \$280,000,000 a year, of which the military expenditure of India, with the indirect expenditure for the sake of India on mobile land forces at home, forms the largest item. Almost the whole of this vast sum is expended out of British loans or taxes under the control of the Parliament of the United Kingdom, and out of Indian taxes under the indirect control of the House of Commons through the Secretary of State, who is a member of the government of the day. The expenditure, although vast—although open to the reproach that it does not do more than maintain a fleet slightly superior to that of France, and an army of very small numbers—is a flea-bite as compared (in its ill effect upon the wealth of the nation) with the military expenditure of Italy, or, in a less degree, with that of other continental powers. The evidences of the overpressure of taxation in India itself, many as they are, are slight in comparison with those which are present in the case of Italy; and it may be assumed, therefore, that while the taxpayers of the United Kingdom and of India may make their voices heard in insisting upon better value for their money, the expenditure will not in itself be brought to an end by bankruptcy.—North American Review.

Artificial India Rubber.

Artificial india rubber from cotton-seed oil is one of the latest industrial products, and claimed to possess commercial adaptations of peculiar practical value, says the *Traesman*. The manufacture involves a process not yet given out to the public by the discoverer, who states that, while experimenting with the cotton-seed oil to produce a varnish for painting, he obtained a substance entirely foreign in its make up and properties to what was sought—not a varnish, but rubber. So simple is the process, as alleged, that it is not within the protection of a patent—the only safeguard being, therefore, in the secrecy of the process, by the use of which, it is asserted, only 15 per cent is required of the genuine rubber to produce an article which can in no way be distinguished from the ordinary crude india rubber, it is said, even by experts in the handling of the latter article. Arrangements have been made for its extensive manufacture and its application to the various purposes so long peculiar to the natural material.

Life in Paris Water Mains.

In a pamphlet issued, M. Arnould Locard discusses the peculiar fauna of the Paris water mains, which it appears are infested by numerous mollusks, which appear to thrive well in their environment. The largest of these mollusks are the *Dreissentia Arnouldi*, which attain sizes up to 1 1/2 inches and are comparatively more numerous in the water mains than in the River Seine. They fasten themselves firmly to the sides of the mains, and form a great obstruction to the passage of the water. So firmly do they adhere that very powerful scrapers are required to move them. As for remedy, M. Locard suggests that the mains should be laid dry for a few days, when the mollusks would die, and might then be removed, and the main thoroughly washed out before being again used for conveying potable water. To prevent their re-introduction, the water supply should invariably be filtered before passing into the mains.

—It is reported that southern California capitalists are considering a proposition to locate a beet-sugar factory at Stevens, on the Asphalto branch of the Southern Pacific line, north of Buena Vista lake reservoir.

—Enterprising citizens of Washington have tried the experiment of shipping apples and pears to China and Japan. In every instance so far the fruit has reached its destination in good condition.

—Oregon is shipping apples to Texas.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

West & Traux, Wholesale Druggists, Toledo, O. Waldring, Kinnear & Marvin, Wholesale Druggists, Toledo, Ohio.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75c per bottle. Sold by all Druggists. Testimonials free.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

L. F. EATON, Breeder of A. J. H. R. Jerseys. Choice young stock for sale to make room for others. Florin, Sacramento Co., Cal.

JERSEYS AND HOLSTEINS, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. William Niles & Co., Los Angeles, Cal. Breeders and Exporters. Established in 1876.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER SAGE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS—The best A. J. C. C. Registered Prize Herd is owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

WM. NILES & CO., Los Angeles, Cal., Breeders of nearly all varieties of Poultry, Dairy Cattle and Hogs.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

R. H. ORANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

SWINE.

E. J. PHILPOTT, Niles, Cal., Importer and breeder of Tecumseh and other choice strains of Registered Poland-China Hogs.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, new Prices.

BERKSHIRES & POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. William Niles & Co., Los Angeles, Cal. Established 1876.

MONROE MILLER, Eliso, Ventura County, Cal. Breeder of Registered Berkshire Hogs.

P. H. MURPHY, Perkins, Sao Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.

CHAS. A. STOWE, Stockton, Regist'd Berkshires.



In These Dull Times

You Can Largely Increase Your Income by buying an Incubator and engaging in the chicken business. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember, the best is the cheapest. PACIFIC INCUBATOR CO. 1317 Castro St., Oakland, Cal.

FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank.) Importer, Breeder, Exporter.

S. O. White Leghorn
S. C. Brown Leghorn
Barred Plymouth Rock
Black Minorcas,

Eggs, \$3 per 13. Send for circular.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.



—THE— HALSTED INCUBATOR COMPANY.

1312 Myrtle Street, Oakland, Cal. Send Stamp for Circular

LIGHTNING WELL MACHINERY WORKS.

All kinds of tools. Fortune for the driller by using our Adamantine process; can take a core. Perfected Economical Artesian Pumping Riser to work by Steam, Air, etc. Let us help you. THE AMERICAN WELL WORKS, Aurora, Ill.; Chicago, Ill.; Dallas, Tex.



The Educated Horse

picks out a 5/A horse blanket every time; he knows that it keeps him warmer and his master soon learns that it lasts longer and costs less than the other kinds. Made in 250 styles.

Ask your dealer for them.
WM. AYRES & SONS, Philadelphia.

Guano Fertilizer!

PLAIN AND NITROGENOUS SUPERPHOSPHATES.

GUANO FLOUR.

Complete and Special Fertilizers

FOR ALL KINDS OF

Fruit, Grain, Sugar Beets, Vegetables, Etc.

MANUFACTURED BY THE

MEXICAN PHOSPHATE & SULPHUR CO.

For circulars and other information address

H. M. NEWHALL & CO., Agents

209 & 311 SANSOME STREET, San Francisco.

HAYWARD'S SHEEP DIPS

Hayward's famous Paste and Liquid Dips received the Highest Award at the World's Columbian Exposition, also the Prize Medal at the California State Fair. Dips from all over the world were exhibited at Chicago and practical sheep men pronounced Hayward's the best and most effective medicine for the cure of scab and general benefit to wool.

CHRISTY & WISE,

General and Sole Agents for the Pacific Coast.

Office—Fifth and Townsend Streets, San Francisco.

Short-Horn BULLS

Calves, Yearlings and 2-year-olds

FOR SALE.

ROBERT ASHBURNER,

Baden Station, San Mateo County, Cal.

The cars of the S. F. and San Mateo Electric Road pass the place.

Commission Merchants.

ALLISON, GRAY & CO.,

501, 503, 505, 507 & 509 Front St., And 300 Washington Street, SAN FRANCISCO.

—GENERAL—

Commission - Merchants, GREEN and DRIED FRUITS, Poultry, Eggs, Game, Grain, Produce and Wool.

P. STEINHAGEN & CO.



404 & 406 DAVIS ST. S.F.

MOORE, FERGUSON & CO. WOOL, GRAIN, FLOUR

—AND—

General Commission Merchants, 310 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

LINDSAY & CRAIG,

Crocker Building, San Francisco

Mortgages Bought, Loans Negotiated.

If you desire to sell your farm send us particulars.

A. J. VAN DRAKE
203 FREMONT ST. - SAN FRANCISCO
PACIFIC COAST AGENT



Only Award of Gold Medal and Diploma at the World's Fair, Chicago.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular

E. FOUGERA & CO.,

30 North William Street, New York.

Sure Way to Make \$100.

Send 25 cents for particulars, including sample cake of SEAL'S SKIN SOAP for Complexion and Toilet.

A. J. McKNIGHT,

1125 Mission Street, San Francisco, Cal.

BACK FILES of the PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes) \$4. Inserted in Dewey's patent binder 50 cents additional per volume.

S. F. MARKET REPORT

Market Review.

WEDNESDAY MORNING, Dec. 6, 1893.

Although quotations are practically unchanged since our last report, there is distinctly a better tone to the local wheat market. Business is slow because sellers are unwilling to let go at quotations, and it is certain that an active movement would set prices up several points. The following quotations represent the market as it stands to-day: No. 1 Shipping, \$1.02½ to \$1.03½; choice to fancy, \$1.05; good to choice White Milling, \$1.06½ to \$1.07½. The speculative markets, it will be seen from the following tables, are looking a little better the past two days:

(Per cent.)	Dec.	Jan.	Feb.	Mar.	Apr.	May.
Thursday	5602½	5603½	5604½	5605½	5606½	5607½
Friday	5602½	5603½	5604½	5605½	5606½	5607½
Saturday	5602½	5603½	5604½	5605½	5606½	5607½
Sunday	5602½	5603½	5604½	5605½	5606½	5607½
Tuesday	5602½	5603½	5604½	5605½	5606½	5607½

To-day's cablegram is as follows:
LIVERPOOL, Dec. 6.—Wheat—Buyers hold off, hoping to obtain some concession. California spot lots, 56 6d; off coast, 2½ 3d; just shipped, 2½ 9d; nearly due, 2½ 3d; cargoes off coast, steady; on passage, quiet but steady; Mark Lane wheat, quiet; French country markets, firm.

Day	(Per bushel.)	Nov.	Dec.	May.
Thursday	67½	70	73½	73½
Friday	67½	70	73½	73½
Saturday	67½	70	73½	73½
Sunday	67½	70	73½	73½
Tuesday	67½	70	73½	73½

The following is to-day's telegram—per bushel:
NEW YORK, Dec. 6.—December, 68½; May, 74½.

Day	(Per bushel.)	Nov.	Dec.	May.
Thursday	62½	64	67½	67½
Friday	62½	64	67½	67½
Saturday	62½	64	67½	67½
Sunday	62½	64	67½	67½
Tuesday	62½	64	67½	67½

The following is to-day's telegram—per bushel:
CHICAGO, Dec. 6.—December, 63½; May, 69½.

Day	(Per bushel.)	Nov.	Dec.	May.
Thursday	62½	64	67½	67½
Friday	62½	64	67½	67½
Saturday	62½	64	67½	67½
Sunday	62½	64	67½	67½
Tuesday	62½	64	67½	67½

The following are to-day's recorded sales on Call:
Morning—Informal Session—May, 100 tons, \$1.20½.
December—600 tons, \$1.09 per cbl.
Regular Session—May, 900 tons, \$1.21½; 300, \$1.21½; 2000, \$1.21½.
December—200 tons, \$1.09; 100, \$1.09½; 200, \$1.09½ per cbl.
Afternoon Session—May, 800 tons, \$1.21½.
December, 1894—100 tons, \$1.27; 100, \$1.27½; 100, \$1.26½.
Spot, season's storage paid—100 tons, \$1.10.
January—Season's storage paid—300 tons, \$1.11½ per cbl.
December—100 tons, \$1.09½; 400, \$1.10 per cbl.

Barley.

Trade in barley is so slow that it can almost truly be said that there has been none during the past week. Buyers are evidently inclined not to open any new accounts this year if such action can be avoided. Even speculative operations have been quite small of late. We quote: Feed, 67½@70c per cbl. for fair to good quality, and 72c for choice bright; Brewing, 80@90c per cbl. The following figures represent the prices in Call Board in this city during the past week:

Day	(Per bushel.)	Nov.	Dec.	May.
Thursday	67½	70	73½	73½
Friday	67½	70	73½	73½
Saturday	67½	70	73½	73½
Sunday	67½	70	73½	73½
Tuesday	67½	70	73½	73½

The following are to-day's recorded sales on Call:
Regular Session—May, 100 tons, 85½c; 100, 84½c; 100, 85c per cbl.
Afternoon Session—May, 200 tons, 85½c; 100, 84½c; 100, 85c per cbl.

Dried Fruits.

Apricots are scarce and holders are demanding better prices. All other sorts are in full supply and the tone of the market is easier all round. The fact is, the Eastern markets are fully stocked up for the present, and since there is no necessity to buy, nothing is being done. This is especially true in the case of prunes, for which the market is weak, even at the figures given below. We quote as follows: Apples, 3½@4½c per lb. for quartered, 3½@4½c for sliced, and 7@8c for evaporated; Pears, 5@6c per lb. for bleached halves, and 4@5c for quarters; bleached Peaches, 5@7c; sundried Peaches, 4@5c; Apricots, Moorpark, 1½@1½c; do Royals, 1½@1½c for bleached and 6 to 7½c for sun-dried; Prunes, 4½ to 4¾c per lb. for the four sizes and 3 to 4c for ungraded; Plums, 4½ to 5c for pitted and 1½ to 2c for unpitted; Figs, 3 to 4c for pressed and 1½ to 2½c for unpressed; White Nectarines, 6 to 7c; Red Nectarines, 4 to 6c per lb.

RAISINS—Offerings continue liberal, though trade is dull. We quote as follows: London Layers, \$1@1.25; loose Muscates, in boxes, 75c@81c; clusters, \$1.50@1.75; loose Muscates, in sacks, 2½ to 3½c per lb. for three-crown, 2 to 2½c for two-crown; dried Grapes, 1½ to 2c per lb.

OATS—A very dull market exists, while the immediate outlook can hardly be considered as encouraging for the selling interest. Offerings are heavy, causing a soft feeling in values. Milling, \$1.12½@1.20; Surprise, \$1.20@1.30; fancy feed, \$1.17½@1.20; good to choice, \$1.10@1.15; common to fair, 97½c@1.07½; Black, 80c@1.17½; Red, 97½c@1.05; Gray, \$1@1.10 per cbl.

CORN—Very slow of sale. Quotable at 82½@85c per cbl. for large Yellow, 87½@92½c for small Yellow, and 90@92½c for White.

CRACKED CORN—Quotable at \$20.50@21.50 per ton.

CORNMEAL—Millers quote feed at \$20 to \$21 per ton; fine kinds for the table, in large and small packages, 2½@3½c per pound.

OILCAKE MEAL—Quotable at \$35 per ton from the mill.

CHOPPED FEED—Quotable at \$17.50@18.50 per ton.

SEEDS—We quote: Mustard, brown, \$2@2.25; Yellow, \$2.60@2.75; Canary, imported, \$4@4.25; do,

California, —; Hemp, 3¼c per lb; Rape, 1½@2¼; Timothy, 6½c per lb; Alfalfa, 8½@9c per lb; Flax, \$2.25@2.50 per cbl.

MIDDLINGS—Quotable at \$18@21 per ton.
MILLSTUFFS—We quote: Rye Flour, 3½c; Rye Meal, 3c; Graham Flour, 3c; Oatmeal, 4½c; Oat Groats, 5c; Cracked Wheat, 3½c; Buckwheat Flour, 5@5½c; Pearl Barley, 4@4½c per lb; Normal Nutrient, \$3 per case of 1 dozen cans; Breakfast Delight, \$3.25 per case of 2 dozen packages.

BRAN—Quotable at \$15.50@16.50 per ton.

HAY—Receipts are moderate only, while the demand is not urgent, so that prices keep stationary, with the prospect somewhat favorable to sellers. Wire-bound hay sells at \$1@1½ per ton less than rope-bound hay. Following are wholesale city prices for rope-bound Hay: Wheat, \$10 to \$14; Wheat and Oat, \$10@13; Wild Oat, \$10@12; Alfalfa, \$10@10.50; Clover, \$10@11; Barley, \$9@11; Compressed, \$11@13; Stock, \$7@8 per ton.

STRAW—Quotable at 50@55c per bale.

HOPS—Local trade keeps quiet. Quotable at 16@18½c per lb.

RYE—Light stocks cause firmer tone to prices. Quotable at 90@95c per cbl.

BUCKWHEAT—Quotable at \$1.45 per cbl.

GROUND BARLEY—Quotable at \$16@17 per ton.

POTATOES—No improvement in prices can be expected as long as receipts are as liberal as they are just at present. We quote: Garnet Chiles, 40@50c; Early Rose, 30@35c; River Burbanks, 30@40c; River Red, 45@55c; Salinas Burbanks, 60@80c per cbl.

ONIONS—Quotable at \$1@1.30 per cbl for good to choice.

DRIED PEAS—We quote: Green, \$1.60@1.65; Blackeye, \$1.60@1.75; Niles, \$1.50@1.60 per cbl.

BEANS—We quote: Bayos, \$1.70@1.80; Butter, \$1.75@1.85 for small and \$2@2.25 for large; Pink, \$1.30@1.60; Red, \$1.65@1.90; Lima, \$1.95@2.10; Pea, \$1.90@2; Small White, \$1.70@1.80; Large White, \$1.70@1.80 per cbl.

VEGETABLES—Asparagus makes fair exhibit, and dealers expect a greater or less supply all through the winter. Tomatoes sell at a wide range, the bulk of offerings being poor stock. Mushrooms are in good receipt. We quote: Asparagus, 30@50c per lb.; Mushrooms, 5c per lb. for common, and 12½@15c for good to choice; Marrowfat Squash, \$7@8 per ton; Green Peppers, 40@50c per box; Tomatoes, 15@65c per box; Turnips, 75c per cbl; Beets, 75c@81c per sack; Parsnips, \$1.25 per cbl; Carrots, 40@50c; Cabbage, 50@55c; Garlic, ¼@1c per lb; Cauliflower, 60@70c per dozen; Dry Peppers, 5@7c per lb; Dry Okra, 12½@15c per lb.

FRESH FRUIT—Inferior grades of apples are in heavy receipt, selling at about any figure that buyers will give. A really choice article is scarce and commands full figures. Strawberries are still seen but they are soft and sell slowly at irregular rates. There are fair offerings of Pears, though mostly poor stock. We quote: Apples, 60c@1 per box for good to choice, and 15@50c for common to fair; Lady Apples, \$1@1.50 per box; Pears, 25@50c per box for common and 75c@1.25 for choice; Persimmons, 40@75c per box; Cranberries, Eastern, \$5.50@6 per bbl; do Coos Bay, \$3.25@3.75 per box.

GRAPES—Sell at a range of 20@40c per box, as to quality.

CITRUS FRUIT—Orange consignments are coming to hand with greater freedom, nearly all growing sections being represented. We quote: Mandarin Oranges, \$1.25@1.50 per box; Florida Oranges, —@— per box; Calaveras Seedlings, \$2.25@2.50; Newcastle Navel, \$3.75@4; do, Seedlings, \$2.25@2.50; Fresno Seedlings, \$2.25@2.50; Riverside Navel, \$2.50@3; Riverside Seedlings, \$1.50@2; Vacaville Oranges, small boxes, 50@75c; Oroville Oranges, \$2.50@3 for Navel and \$1.50@3 for seedlings; Los Angeles Navel, \$2@2.50; Los Angeles Seedlings, \$1.25@1.50; Mexican Oranges, \$2.50@3 per box; Mexican Limes, \$3@3.50 per box; Lemons, Sicily, —@—; California Lemons, \$1@2 for common and \$2.50@3.25 for good to choice; Bananas, \$1.50@2.50 per bunch; Hawaiian Pineapples, \$2.50@3; Mexican Pineapples, \$3.50@4.50 per dozen.

NUTS—Some few unimportant changes in prices. We quote as follows: Chestnuts, 10@12½c per lb; Walnuts, 6½@7½c for hard shell, 8@8½c for soft shell and —@—c for paper shell; Chile Walnuts, 8@9c; California Almonds, 11@12c for soft shell, 5@6c for hard shell and 12½@13½c for paper shell; Peanuts, 4@4½c; Hickory Nuts, 5@6c; Filberts, 10@10½c; Pecan, 8@9c for rough and 11c for polished; Brazil Nuts, 10@11½c; Coconut, \$4@5 per 100.

HONEY—Offerings are liberal with prices easy. We quote: Comb, 10½@11c per lb for bright, and 8@10 for dark to light amber; light amber, extracted, 4½@5c; dark, 4½@4¾c; water white, extracted, 5@5½c per lb.

BEESWAX—Quotable at 22@23c per lb.

BUTTER—Stocks of select fresh quality are light and the market shows more firmness in consequence. Common grades are in good receipt, as also are solid packed and pickled descriptions. We quote: Creamery, 35@37½c; fancy dairy, 32@34c; good to choice, 27@31c; common grades, 18@24c per lb; pickled roll, 20@22c; firkin, 18@20c; Eastern ladle-packed, 17@18c per lb.

CHEESE—New is arriving more freely and prices show easier tone. Stocks of old are being steadily reduced. We quote: Choice to fancy new, 11½@13c; fair to good, 9@10½c; Eastern, ordinary to fine, 11@14c per lb.

EGGS—Many dealers claim that 40c per dozen is a full figure for choice ranch stock, but sales are verified at a higher rate, though custom at the advanced price is not general. California ranch, 35@40c; do, extra large size, 41 to 42c, store lots, 25@32½c; Eastern Eggs, 22@24 for ordinary and 25@27½c per dozen for good stock.

POULTRY—Continued arrivals of Eastern fowl keep down prices for domestic product. There is still some old stock of dressed turkeys on hand, which go below quoted figures. We quote: Live Turkeys—Gobblers, 14@16c per lb; Hens, 14@16c; dressed Turkeys, 14@17c; Roosters, \$4@4.50 for old and \$4@5 for young; Fryers, \$4@4.50; Broilers, \$3@4; Hens, \$5@6; Ducks, \$3.50@5; Geese, \$1.50@2 per pair; Pigeons, \$1@1.50 per doz.

PROVISIONS—We quote as follows: Eastern bams, 12½@13c per lb; California bams, 12c; Bacon, Eastern, extra light, 16½@17½c; medium,

11c; do, light, 12c; do, light, clear, 13c@13½c; light, medium, boneless, 12½c; Pork, extra prime, \$13@13.50; do, prime mess, \$14@15; do, mess, \$22@23; do, clear, \$21@21.50; do, extra clear, \$22 per bbl; Pigs' Feet, \$12.50 per bbl; Beef, mess, \$7.50@8; do, extra mess, \$8.50@9; do, family, \$9.50@10; extra do, \$11@11.50 per bbl; do, smoked, 10@10½c; Eastern lard, tierces, 8@8½c; do, primesteam, 11½c; Eastern pure, 10-lb pails, 11½c; 5-lb pails 11½c; 3-lb, 11½c; California, 10-lb tins, 10½c; do, 5-lb, 11c; do, kegs, 11½@12c; do, 20-lb buckets, 12½c; compound, 8c for tierces and 8½c for hf bbls.

WOOL—For good free fall Wools there is fairly active demand and stocks are rapidly clearing up. Prices keep steady at the old range. We quote spring:

California, year's fleece, 7@9c; do 6 to 8 months, 7@8c; do Foothill, 10@11c; do Northern, 12@13c; do extra Humboldt and Mendocino, 11@13c; Nevada, choice and light, 12@14c; do heavy, 8@10c; Oregon, Eastern, choice, 10@12c; do Eastern, poor, 7@9c; do Valley, 12@15c. We quote fall: Free Mountain, 6@7c; Northern defective, 5@7c; Southern and San Joaquin, 3@5c.

HIDES AND SKINS—Quotable as follows:

	Sound.	Culls.
Heavy Steers, 57 lbs up, ½ lb, 4½@5c	4	@c
Medium Steers, 48 to 56 lbs, 4	@c	3½@c
Light, 42 to 47 lbs, 3	@c	3@c
Cows, over 50 lbs, 3	@3½c	2½@c
Light Cows, 30 to 50 lbs, 3	@c	2@c
Stags, 17 to 30 lbs, 2½	@c	2@c
Kips, 17 to 30 lbs, 4	@c	3@c
Veal Skins, 10 to 17 lbs, 5	@c	4@c
Calf Skins, 5 to 10 lbs, 6	@c	5@c
Dry Hides, usual selection, 6½@7c; Dry Kips, 6@6½c; Calf Skins, 6@6½c; Cull Hides, Kip and Calf, 4c; Pelts, Shearling, 10@20c each; do, short, 25@35c each; do, medium, 40@50c each; do, long wool, 50@75c each; Deer Skins, summer, 25c; do, good medium, 15c; do, winter, 5c per lb; Goat Skins, 25@40c apiece for prime to perfect, 10@20c for damaged, and 5@10c each for Kids.		

TALLOW—We quote: Refined, 6c; rendered, 4½@5c; country Tallow, 4¼@4½c; Grease, 3@3½c per lb.

TANBARK—We quote: Ground, \$24 per ton.

WOOD—We quote: Redwood, \$5; Oak, rough, \$6.50; peeled Oak, \$7.75; Pine, \$6.50 per cord.

San Francisco Meat Market.

The only change is a slight decline in the price of Hogs. Following are the rates for whole carcasses from slaughterers to dealers:

BEEF—First quality, 5@5½c; second quality, 4½@5c; third quality, 3½@4c per lb.

CALVES—Quotable at 4@5c for large, and 6@7c per lb for small.

MUTTON—Quotable at 4½@5c per lb.

LAMB—Quotable at 6@7c per lb.

PORK—Live Hogs, on foot, grain fed, heavy and medium, 5½c; small Hogs, 5½@5¾c; stock Hogs, 5@5½c; dressed Hogs, 7½@8c per lb.

FRUIT-GROWERS want a pump for spraying trees and vines. The necessity for spraying is conceded by all. There are a good many different kinds of spraying machinery for sale, and while many have doubtless their good points, or they wouldn't be advertised, the \$15 spray pump for \$7, making three complete brass machines, and capable of spraying ten acres per day, is deemed by many worthy of general use. It is for sale by F. G. Worden, 2715 Mission Street, San Francisco, Cal., who will send an illustrated book on insect pests with each purchase.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands, A. SCHULLER, Room 11, 508 Montgomery St., San Francisco (Pacific Mutual Life Insurance Building).

SITUATION WANTED

As Superintendent of Fruit Ranch by an experienced man (married). Used to handle a large plant. References. Address P. O. Box 1333, Fresno, Cal.

Buy Land NOW, While Cheap!

I offer for sale the following:

\$9000—40 ACRES ADJOINING TOWN OF LOS Gatos, 20 minutes walk from station; 18 acres fruit; small house and barn; a charming place.

\$1400—80 ACRES, SANTA CRUZ MOUNTAINS, 5 miles from Alma; small house; 5 acres fruit; climate unexcelled; plenty of wood.

\$1000—100 ACRES, SAN LUIS OBISPO COUNTY; with good spring.

\$2500—35 ACRES, NEAR SONOMA; HOUSE AND barn; abundance of fruit and grape vines in bearing and a fine place for poultry; this is a good and very cheap property.

\$250 EACH—9 LOTS AT COLMA STATION, 25x 120.

JOHN F. BYXBEE,

22 Market Street.....San Francisco.

AGENTS \$50 to \$100—A WEEK.

Ladies or Gents. Best seller known. Needed at every house, place of business or farm the year round. "Home" Electric Motor runs all kinds of light machinery. Cheapest power on earth. Connected instantly to wash or sewing machine, corn sheller, pump, fan, lathe, jeweler's or dentist's machinery, etc. Clean, reliable, lasts a life-time. No experience needed. To show in operation means a sale. Guaranteed. Profit immense. Circulars free.

W. O. HARRISON & CO., Columbus, O.

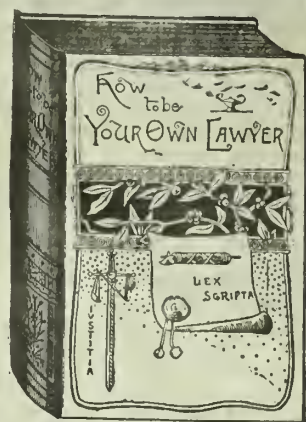
KEEPERS SEND FOR Sample copy of CLEANINGS IN BEE CULTURE.

A Handsomely Illustrated Magazine, and Catalog of BEE SUPPLIES FREE.

A. I. ROOT, Medina, O.

\$1000 WORTH OF LAW

FOR \$1.50.



"How to Be Your Own Lawyer" is the title of a book of over 600 pages, adapted for use in every State and Territory in the Union, and is by far the best and most complete work of the kind ever published. It gives instruction on all the most important legal points which a Farmer, Mechanic, Merchant or anybody else would want to know about, and if carefully studied and kept at hand for consultation when needed will save any man, in the course of an ordinary business career, hundreds, if not thousands of dollars. It is a lawyer whose retaining fee (the price of the book, \$1.50) has to be paid but once in a lifetime. Plain and concise directions are given and forms furnished for the transaction of all kinds of business, and the preparation of every description of legal document in common use. A copy of this valuable work, handsomely bound in extra cloth, with ink side-stamp, will be mailed to any address on receipt of \$1.50.

Address THE DEWEY PUBLISHING CO.,
220 Market St., San Francisco, Cal.

CANCER CURED

WITH SOOTHING BALMY OILS.

WE SUCCESSFULLY TREAT

Cancer, Tumor, Catarrh, Piles, Fistula, Eczema and all Skin and Womb Diseases.

CANCER of the nose, eye, lip, ear, neck, breast, stomach or womb; in fact, all diseased internal and external organs or tissues, successfully treated, without the knife or burning caustic plasters, but with soothing, balmy magnetic oils. Beware of imitations as there are those who hope to profit by advertising an oil cure for these diseases. We are the originators of this system, all others are frauds.

Correspondence solicited. Consultation free. Testimonials furnished. Address

DR. EUGENE BUELL,

Cancer Institute,
Room 57, SUPREME COURT BUILDING,
Cor. McAllister and Larkin Sts., San Francisco, Cal.

CANCER.

THE KOEHLER CANCER CURE CO.,

1428 Market St., San Francisco.

CANCER, Tumors or Malignant Growths removed without knife or caustic. A GUARANTEED CURE a specialty. Call or send for circular. Over 300 cures preserved in alcohol in our office. Consultation free.

PHILIP KOEHLER, Manager.

TREE WASH.

OLIVE DIP.

"Greenbank" Powdered Caustic

Soda and Pure Potash.

T. W. JACKSON & CO..

Sole Agents,
No. 5 Market Street, San Francisco, Cal.

CALIFORNIA FRUITS

AND HOW TO GROW THEM.

By Prof. Edward J. Wickson.

A practical, explicit and comprehensive book embodying the experience and methods of hundreds of successful growers, and constituting a trustworthy guide by which the inexperienced may successfully produce the fruits for which California is famous. 600 pages. Fully illustrated. Price \$3. Postpaid. Send for circular, DEWEY PUBLISHING CO. Publishers, 220 Market Street, San Francisco, Cal.

THIS BIT

combines the BEST QUALITIES of other patent bits and will easily control the most vicious horse at all times. It is the

COMMON SENSE BIT

because it can also be used as a mild bit. XC Sample mailed \$1.00. Nickel - - - 2.00.

RAC

The National Grange.

(Continued from page 398.)

odist church, and the farmers were not given much of a show, but now we have something to say about it." Speaking of the crops, the Judge said they were good in his State, but prices were low.

E. W. Davis of Santa Rosa, Cal., is overseer of the National Grange, and one of the hustlers of the order. "The general public should not get the idea that the grange is a political organization," said he to a *Journal* man. "We have more or less to do with politics, but are not partisan. We look out for the interests of the farmer. As retiring master of the California State Grange, I can say that the Grange in our State is in splendid condition, socially, financially and in every other way. There are 90 granges in the State." Mr. Davis said that California might be called a free-silver State. Speaking of the crops, he stated that the fruit crop had been exceedingly large and of excellent variety, but sales had been very poor on account of the dull times. The crop of cereals has been good, but the price desperately low. Most of the lumber mills shut down and also a great many of the mines.

NOTES.

The California representatives were Mr. and Mrs. A. P. Roache (voting members), Past Master E. W. Davis and Executive Committeeman B. F. Walton. The Oregon delegates were Judge and Mrs. Reuben P. Boise voting members.

Heretofore the pay of the grand lecturer has been \$3 per day and expenses while traveling. To this allowance a stated salary of \$400 per year was added.

California representatives on the standing committees were: Woman's Work, Mrs. M. L. Davis; Investment and Loan Associations, E. W. Davis; Digest, Mrs. E. Z. Roache; Constitution and By-laws, A. P. Roache; Co-operation, A. P. Roache.

One of the pleasant incidents of the session was the address of welcome given by Governor Flower. It was chiefly about New York and her greatness, and of interest to patrons in general, only for the fact that it brought out a neat reply from Worthy Master Brigham. Mr. Brigham expressed the earnest appreciation of the National Grange for the hearty welcome. He said that 27,000 granges have been established in this country. It was an educational organization. It was not controlled and directed by men who are journeymen farmers, by men "who desire to farm the farmers." They are men who are learning to think for themselves. Turning to the Governor, Mr. Brigham said that His Excellency could look out for more political cyclones in the future. The people have spoken, and would do so again. But the grange was not a partisan organization. The members, however, were determined that the men and women on the farms should have a hand in the management of the government.

A resolution was adopted recommending the nationalization of railroads. At several former sessions similar resolutions were voted down.

Before closing the usual complimentary resolutions were adopted.

Among the last hours of the session a resolution of confidence in Mortimer Whitehead was passed.

The place of meeting of the next National Grange was left to the National Executive Committee.

Secretary's Column.

This office has received but very few communications this week regarding grange work, consequently this column cannot show very much news.

Tulare reports progress, and no doubt we will have a new grange in that jurisdiction about the 12th of December.

Bro. Shoemaker expects to visit Selma Grange in the near future, and we expect to report his doings regarding grange work.

The annual election of officers of subordinate granges takes place this month, and we trust that each secretary will at once notify this office after they have held their election, so we may have a complete list of the new officers for 1894.

Worthy Master Roache is reported seriously ill. We have no further news regarding his whereabouts.

As soon as the worthy master arrives at home it is expected he will call a meeting of the Executive Committee to meet in San Francisco. Due notice will be given.

Bennett Valley Grange celebrated the anniversary of the order Friday, Dec. 1st, in an appropriate manner, with a full musical

and literary programme, which was well rendered and created merited applause. A sumptuous repast was prepared by the sisters, and all were invited to partake. The entertainment concluded with a social dance. This grange intends to have a musical and literary entertainment once a month for the benefit of the younger members and for mutual improvement. We hope to report their doings from time to time.

So far but few granges have reported concerning the circular letter mailed some time since regarding the Midwinter Fair. Those received have been duly mailed to the Executive Committee for their action.

Address all communications to State Grange to Don Mills, Santa Rosa.

A MAN'S SUCCESS IN LIFE.

MR. A. EBY, OF DETROIT, ATTRIBUTES IT TO A SINGULAR CAUSE.

HE WAS DYING OF TORTURE AND TOOK ADVICE.

A Story Almost Romantically Marvelous. (From the Detroit Free Press.)

He was a sturdy old gentleman. The fine lines of thought which furrowed his brow gave to his face that appearance which suggested the student who pores o'er the misty old tomes of antiquity, rather than the hard-working blacksmith that he is. But he possesses an intellectual face. He is that picture of health artists go into ecstasies about. It must have been such a subject as he that inspired the great Longfellow to give to the world the immortal "Village Blacksmith."

The gentleman referred to is Mr. Aaron Eby, of Detroit, born in Waterloo Co., Canada, 56 years ago. At the age of 22 he moved to Genesee Co., Mich., then to Livingston Co., then to Ionia, and next to Detroit, where he now runs a carriage factory at 7 and 9 Middle St. His story will interest every one.

"Five years ago," he said, "I had an attack of rheumatism, and I suffered tortures enough to kill any average man. It was due, I suppose, to the fact that I was exposed to much cold, heat and draughts in the workshop. I do not know of any place where a man is so liable to suffer the discomforts of a tropical summer and a frigid winter as in a blacksmith shop. If it were not for the fact that our trade hardens the constitution I believe that a smith would be very short-lived. That attack of rheumatism completely knocked me out."

"I worked, however, day in and day out, and circumstances many times compelled me to forget my torture. The pain settled in the small of my back. Great heavens, when I think of the sufferings that I endured it seems marvelous that I am now alive. When my constitution was about wrecked with these pangs of the torture it appeared as though the pain would cease for a time. But it would start up again with renewed energy. Cold or damp weather brought on an attack. A thunderstorm invariably prostrated me. I would be so bad sometimes that I could scarcely move. I could not stoop, I could not turn in the bed in which I was compelled to stop. I was helpless and most unfortunate. In this condition I had recourse to almost every patent medicine that I ever heard of. There was no relief. Then some one suggested that I try the hot-water cure. I did so, but it did not alter my condition. A kind friend induced me to take a course of electric baths, with the same result. Finally I had reached such a state that I had given up all hope of ever securing any relief. I was in bed with a fearful attack just before Christmas, and was suffering awful torture. My partner, Mr. Rumsey, called to see me, and he sympathized with my condition. 'Why don't you get a box of Dr. Williams' Pink Pills and be cured?' I laughed at his suggestion. 'Why,' I responded, 'I have tried almost every medicine and have found them all the same.' He informed me that he had used the pills in his own family with remarkable results. Well, here was a case that appealed to me. A drowning man never grasped at a straw with the hopes that I grasped Mr. Rumsey's advice. I sent immediately to A. A. Brown & Co.'s drug store, corner of Woodward and Congress Sts., and purchased a 50-cent box of the pills. I promptly tested the curative powers of the little pellets. The effects were simply marvelous. By the time I had used one-quarter of the box I was out of bed, and when I had taken all the pills I was able to be around. I purchased another box and continued taking them, and astonishing to relate I was able to be at work when I had scarcely half the second box. The rheumatism in my back and legs left me. I am now as strong and healthy as I ever was, and I attribute it all to Dr. Williams' Pink Pills. It may seem singular to you, but my story will bear out my assertion that a great part of my success in life is due to this marvelous medicine."

Dr. Williams' Pink Pills are not a patent medicine in the sense in which that term is usually understood, but are a scientific preparation successfully used in general practice for many years before being offered to the public

generally. They contain in a condensed form all the elements necessary to give new life and richness to the blood, and restore shattered nerves. They are an unfailing specific for such diseases as locomotor ataxia, partial paralysis, St. Vitus' dance, sciatica, neuralgia, rheumatism, nervous headache, the after effects of the grippe, palpitation of the heart, pale and sallow complexions, that tired feeling resulting from nervous prostration; all diseases depending upon vitiated humors in the blood, such as scrofula, chronic erysipelas, etc. They are also a specific for troubles peculiar to females, such as suppressions, irregularities, and all forms of weakness. They build up the blood and restore the glow of health to pale or sallow cheeks. In men they effect a radical cure in all cases arising from mental worry, overwork, or excesses of whatever nature.

These Pills are manufactured by the Dr. Williams' Medicine Company, Schenectady, N. Y., and Brockville, Ont., and are sold only in boxes bearing the firm's trade mark and wrapper, at 50 cents a box, or six boxes for \$2.50. Bear in mind that Dr. Williams' Pink Pills are never sold in bulk, or by the dozen or hundred, and any dealer who offers substitutes in this form is trying to defraud you and should be avoided. Dr. Williams' Pink Pills may be had of all druggists or direct by mail from Dr. Williams' Medicine Company from either address. The price at which these pills are sold makes a course of treatment inexpensive as compared with other remedies or medical treatment.

Worthy of Endorsement.

We invite the attention of our friends and patrons to the advertisement of John H. Drumgold, which appears in our columns. Mr. Drumgold is an expert manufacturing jeweler and diamond setter, carrying a superior stock of choice genuine diamonds and solid-gold jewelry. Possessing a personal acquaintance with Mr. Drumgold extending over a period of many years, we unhesitatingly endorse both himself and his goods as reliable in every respect, and recommend that all who desire genuine goods in his line for the holidays should write for his prices before purchasing elsewhere, and thereby save money and get diamonds or gold ornaments or watches that are as represented. His address is John H. Drumgold, 113 Phelan Building, San Francisco. Give him a call.

SPECIAL ANNOUNCEMENT.

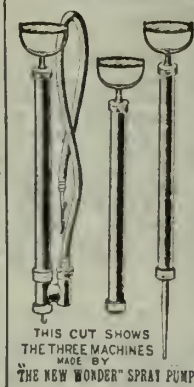
We have made arrangements with Dr. B. J. Kendall Co., publishers of "A Treatise on the Horse and his Diseases," which will enable all our subscribers to obtain a copy of that valuable work *free* by sending their address (enclosing a two-cent stamp for mailing same) to Dr. B. J. KENDALL CO., ENOSBURGH FALLS, VT. This book is now recognized as standard authority upon all diseases of the horse, as its phenomenal sale attests, over four million copies having been sold in the past ten years, a sale never before reached by any publication in the same period of time. We feel confident that our patrons will appreciate the work, and be glad to avail themselves of this opportunity of obtaining a valuable book.

It is necessary that you mention this paper in sending for the "Treatise." This offer will remain open for only a short time.

Hay Pressing.

If you are interested in pressing hay write Truman Hooker & Co., San Francisco. They will save you money

\$15 SPRAY PUMP FOR \$7 EXPRESS PAID.



Makes Three Complete Brass Machines.

WILL SPRAY TEN ACRES PER DAY.

Endorsed by the Leading Entomologist of the United States.

Satisfaction guaranteed or money refunded.

A valuable illustrated book on our insect pests given to each purchaser.

We will put this pump in competition with any other pump made, costing \$15 or less. Address

F. G. WORDEN, 2715 Mission St., S. F. Only General Agent of the Pacific Coast.

VALUABLE

Information relating to orchard tree planting and care of orchards, together with a complete catalogue of the

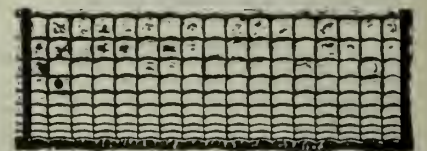
RANCHO CHICO

NURSERIES, will be sent FREE, postage paid, to any address, upon application to

JOHN BIDWELL,

Chico, Butte County, California.

RANCHO CHICO ORCHARDS EMBRACE OVER 1000 ACRES IN FULL BEARING.



Personal.

If the gentleman who told a fellow passenger on the train that he should "fence his whole farm with The Page, just as soon as he could afford it" will communicate with the undersigned at once, he will hear something greatly to his advantage. If you need fence, get particulars from the

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

HEALD'S

BUSINESS COLLEGE.

24; POST STREET.....SAN FRANCISCO. FOR SEVENTY-FIVE DOLLARS

This College instructs in Short-hand, Type-Writing, Book keeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR. E. P. HEALD, Pres. C. S. HALKY, Sec.

DEWEY & CO.
AMERICAN AND FOREIGN PATENT SOLICITORS
ESTABLISHED 1860.
OFFICE OF THE "Mining and Scientific Press" Pacific Rural Press
No. 220 Market St.
TAKE ELEVATOR No. 12 FRONT ST.
SAN FRANCISCO, CAL.



BERKSHIRE SWINE.

Prize Herd of Southern California.

PIGS OF ALL AGES FOR SALE.

SESSIONS & CO., Los Angeles, Cal.

P. O. Box 686.

Send for Price Lists OF GUNS

And all Articles used by Hunters and Anglers.



GUNS SENT ON TRIAL.

OLD GUNS TAKEN IN EXCHANGE.

GEO. W. BERVE, 525 KEARNY STREET, SAN FRANCISCO.

Seeds, Plants, Etc.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrabalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

Santa Rosa Nurseries.

AN IMMENSE AND WELL ASSORTED STOCK.

TREES TRUE TO NAME.—Warranted clean and raised without irrigation.

PEARS AND PRUNES at about HALF USUAL PRICES till my surplus is sold.

Price List mailed free.

Address **R. W. Bell, Santa Rosa, Oal.**

GOLD DUST.

"Gold Dust Cling," says H. E. Van Deman, U. S. Pomologist, "is a yellow cling of medium size, round and regular in shape, and very firm in flesh. The color is very attractive, being dark yellow with a very red cheek. It bears heavily and carries to market with very little damage. Coming as it does before the main peach crop is gathered, it is about the first yellow cling of any special value and therefore finds a ready sale. Each year it gains in favor, but as it is a variety but recently originated the public know little of it. It is a very profitable variety." Price \$1 each, \$5 per half dozen. For sale by **SACRAMENTO RIVER NURSERY COMPANY**, Growers of HIGH-GRADE Fruit Trees, Walnut Grove, Sacramento County, California. Our Specialties—Genuine Tragedy Prunes, Olyman and Japan Plums on true Myrobalan whole root seedlings—we use no piece roots nor cuttings; price 15 cents each; Sacramento River Bartlett's and Peaches—price 10 cents each. Large quantities at lower rates. WE GUARANTEE OUR TREES TRUE TO NAME.

Trees, Vines and Plants,

—FOR 1893 and 1894.—

Terms on Application.

Address, **L. D. BUTT,**

Penryn, Placer Co., California.

SPARK'S MAMMOTH.

A SUPERIOR QUALITY OF APRICOT.

Fine for Canning, Drying and Shipping.

They run 3 and 4 to the pound. The Largest and Finest fruit of the Apricot variety.

ADDRESS

N. B. SMITH, Ventura, Ventura Co., Cal.

B. F. GODFREY & CO., NURSEYRMEN,

Davisville, Oal.

Write for Catalogue and Prices.

OLIVE TREES.

Apply for Catalogue.

C. F. LOOP & SON, - - Pomona, Cal.

NAPA VALLEY NURSERIES.

NEW CATALOGUES NOW READY.

Fruit, Nut and Shade Trees, Grape Vines, Etc., Citrus Fruits, Ornamental Shrubs, Flowering Plants, Roses, Palms, Bulbs, Seeds, Etc.

Fruit and Nut Trees propagated from bearing orchards at Sausal Fruit Farm; Unirrigated, Clean and Healthy. Do not fail to correspond before making purchases. Satisfaction guaranteed.

LEONARD COATES, - - NAPA, CAL.

FOR THE SEASON OF 1893-94.

BUDDED ORANGE TREES, of the leading varieties, one and two-year buds; also a small lot of choice budded and seedling **LEMON TREES**. Sweet Seedling Oranges, 1 to 4 years old. Shade and Ornamental Plants. Prices to suit the times.

ORCHARD AND NURSERY.....THERMALITO, BUTTE COUNTY, CAL.

For prices and terms, address

OROVILLE CITRUS ASSOCIATION, OROVILLE, BUTTE COUNTY, CALIFORNIA

Correspondence Solicited.

OLIVE TREES

In Variety for Nurserymen,
Dealers and Planters.

Will also contract now to propagate Rooted Olive Cuttings for persons who wish to plant them in nursery spring of 1894.

OLIVE CULTURE IN CALIFORNIA,

Sixteen pages, mailed free.

Address:

JOHN S. CALKINS,
POMONA, LOS ANGELES COUNTY, CAL.

OLIVES.

Missions and Nevadillos

A NO. 1 TREES,

Two-Year-Old, 4 to 6 feet High.

Extra inducements offered to intending buyers both as regards choice trees and very low prices. Order at once or open correspondence with me.

J. E. PACKARD, Pomona, Cal.

OLIVE TREES.

ALL KINDS OF

Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,
Pomona, Oal.

OLIVE TREES FOR SALE.

Twelve years experience has taught me how to PROPERLY root the olive. No artificial heat used.

Address

W. ALSTON-HAYNE Jr.,
Montecito P. O., Santa Barbara, Cal.

MYROBOLAN PLUM

AND

MAZZARD CHERRY SEED.

Fresh Crop Now Ready for Shipment.

FULL PRICE LIST OF

FRUIT STOCKS AND SEEDS
ON APPLICATION.

THOMAS MEEHAN & SONS, GERMANTOWN, PA.

Pepper's Nurseries.

ESTABLISHED IN 1853.

For Sale at Low Rates, a General Assortment of Hardy Deciduous Fruit Trees.

I do not buy trees to sell; what is offered is grown in my own grounds and free from scale bugs. No scale bugs of any kind to be found in the Nursery. No agents employed. Order direct from the nursery and procure your trees true to label. Order early, as early planting is the most successful with deciduous trees. Prices furnished on application.

Address **W. H. PEPPER** Petaluma, Cal.

50,000 FRENCH PRUNE TREES

On California Peach Root, for sale.

No. 1—8 to 8 ft.\$50 00 per 1000
No. 2—4 to 6 ft. 30 00 per 1000
No. 3—3 to 4 ft. 15 00 per 1000

First class stock. Free from insect pest. Samples sent on application. Address

N. B. HARVEY, Milwaukee, Oregon.

Incorporated 1884.

500 Acres.

CALIFORNIA NURSERY COMPANY,

Niles, Alameda Co., California.

FRUIT TREES, SHADE TREES, EVERGREENS, PALMS AND FLOWERING PLANTS.

SPECIALTIES: OLIVES—38 sorts, French, Italian and Spanish.
ROSES—360 sorts, all the leading kinds, new and old.
CLEMATIS—25 Varieties.

SEND FOR CATALOGUES.

JOHN ROOK, Manager.

FANCHER CREEK NURSERY,

FRESNO, CALIFORNIA.

FRUIT TREES, ORNAMENTAL TREES, GRAPE VINES.

SPECIALTIES—OLIVES, ROSES, PALMS.

SEND FOR CATALOGUE AND PRICE LIST.

GEO. C. ROEDING, Manager.

STOCKTON NURSERIES,

—ESTABLISHED 1853.—

FRUIT TREES. FRUIT TREES. GRAPE VINES.

Also Fine Stock of Shade and Ornamental Trees, Shrubs, Palms, Roses and Carnations.

PLANTS IN GREAT VARIETY.

Correspondence Solicited.

E. C. CLOWES, STOCKTON, CAL.**PRUNE TREES**

FOR SALE—50,000 Trees on Myrobalan Stock.

Imported from one of the first French nurseries. Scions from an orchard near Saratoga. Fruit raised in this celebrated district has taken for us six first-class awards, INCLUDING HIGHEST AWARD, COLUMBIAN EXHIBITION. Apply to

BALFOUR, GUTHRIE & CO., 316 California St., San Francisco, Cal.
Agents for Saratoga Packing Company.

McKEVITT'S EARLY.

The New Yellow Freestone Peach!
—FIRST AND BEST OF EARLY YELLOW PEACHES.—

RIPENS IMMEDIATELY AFTER THE ALEXANDER (White Cling), which is the earliest peach in market.

Fruit is round, of medium size, **VERY HIGHLY COLORED**, flesh firm and sweet. **THIS PEACH HAS BEEN SUCCESSFULLY SHIPPED EAST FOR FIVE YEARS** and is **no new, untried variety.**

Tree healthy, strong grower, and heavy bearer, never having missed a crop. A limited number of yearling trees for sale this season. Apply early before stock is exhausted.

FRANK B. McKEVITT, : : : : VACAVILLE, CAL.

LOW PRICES

ON

ALMOND TREES!

California Paper-Shell, Nonpareil, Ne Plus Ultra and I. X. L.

A pamphlet on Almonds mailed free of charge on application. A large supply of the **GOLDEN PEACH** and **FRENCH PRUNE**. All kinds of leading fruit trees for sale. No charges made for baling trees.

Address, **PERCY W. TREAT,**

Davisville Nurseries.....Concord, California

IT TAKES TOO MUCH MONEY TO BUY PLOWS THESE HARD TIMES

Space in this paper, sufficient to show cuts of all the different styles of we manufacture or sell, and as you are not so much interested in seeing pictures as you are in informing yourself where the very best fall and winter implements can be procured during the prevalence of we have decided, for the present at least, to simply call your attention to the fact that we are fully equipped with catalogues and descriptive circulars of our seeding and cultivating implements, and you can have them sent to you, just as well as not, if you will only ask for them. A postal card addressed to us, with a request for such circulars and catalogues as you desire, will receive prompt attention and the printed matter desired will be forwarded to you by first mail.

If we can keep our expenses down, we can sell you all the more closely, and we respectfully invite your co-operation. We want your trade, and before buying you want to be fully assured that the articles we carry are what you want. Full descriptive circulars are the best mediums for the dissemination of just such information as you are in search of. Why not try it?

YOURS FOR
ECONOMY.

H. C. SHAW PLOW WORKS, STOCKTON, CAL.

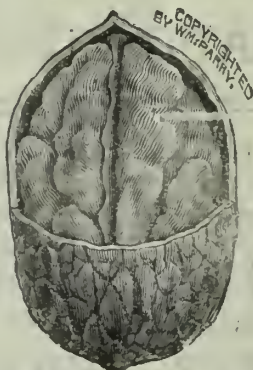
WE GIVE ESPECIAL ATTENTION TO

Fruit Trees! Deciduous Fruit Trees!

ALEXANDER & HAMMON'S

Rio Bonito Nurseries, Biggs, Butte Co., Cal.

KAGHAZI



PERSIAN

:- SOFT SHELL :-

:- WALNUT! :-

Our Stock of TREES and VINES is Most Complete
in EVERY CLASS of Fruits.

A LARGE STOCK OF THOMPSON'S SEEDLESS GRAPES.

SHIPPING, CANNING and DRYING Fruits of all Kinds.

Best Assortment of RAISIN and TABLE GRAPES in California.

Early Shipping Plums a Specialty.

SPECIAL PRICES FOR TREES IN LARGE QUANTITIES.

DURING the last three years, trees grown on the FEATHER RIVER BOTTOM LANDS, at RIO BONITO, BUTTE COUNTY, have been much sought after, and the demand for them is increasing all over the State where they have been planted. Owing to the peculiar adaptability of the soil and climate of this section for growing nursery stock, the trees making a very large and well-furnished system of root growth, and maintaining a correspondingly strong and vigorous top, maturing the wood thoroughly, we are enabled to supply our patrons with the best of trees, healthy in every respect, entirely free from insect pests, and in perfect condition for transplanting.

If You Are Going To Plant Trees, It Will Pay You To Correspond With Us Before Purchasing.

ALEXANDER & HAMMON,

BIGGS, BUTTE COUNTY, CALIFORNIA.

:- CALIFORNIA PRODUCTS. :-

P & B

ROOFING.

BUILDING PAPER.

ROOF PAINTS.

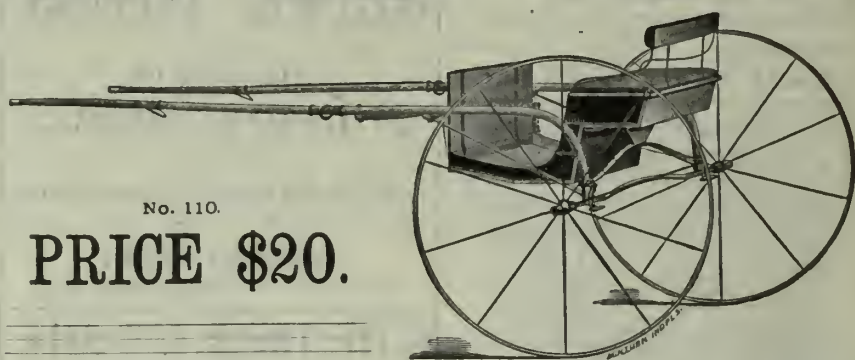
First Prizes at the World's Columbian Exposition, 1893.

PARAFFINE PAINT CO., - . 116 Battery Street,

SAN FRANCISCO.

E. G. JUDAH, Agent, - . 221 South Broadway,
LOS ANGELES.

50% SAVED.



PRICE \$20.

HARNESS, \$7. BUGGIES, \$75. SURREYS, \$130.



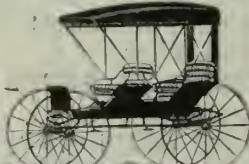
No. 129. Price \$35.



No. 800. Price \$65.
1 1/2 Axle, 1 1/2 Wheel.



No. 81. Price \$110.



No. 90. 1 1/2 Axle. Price \$125.

Write for Catalogue.

We Ship Goods
Everywhere.



No. 58. Price \$80.

50 PER CENT SAVED. **HARNESS!** 50 PER CENT SAVED.

No. 10 Single. Try a sample set and be convinced. If not entirely satisfactory you may return at our expense. No. 10 Single.

Bridle, 4 inch, box loop checks, over-check or round side reins and winker stay, fancy chain front and rosettes, patent leather blinds. Lines, 1 inch, black or fair hand parts. Breast collar, folded, with lay, box loops. Saddle, 3-inch, full pad, leather lined. Traces, 1 inch, double and stitched. Shaft tugs, 1 inch, box loops. Belly bands, folded. Breaching, folded with lay. Turn back, with round dock.

Fancy Nickel Trimmings, Breast Collar. Per set \$14 00
Fancy Nickel Trimmings, Harness and Collar. 16 00

CALIFORNIA WAGON & CARRIAGE CO.,

36 1/2 to 44 1/2 FREMONT STREET, SAN FRANCISCO, CAL.

RED SEAL GRANULATED 98% LYE

HAS NO EQUAL
FOR DESTROYING SCALE BUGS AND OTHER INSECT PESTS
ON TREES AND PLANTS.

FOR TREE WASH!

One pound to 5 gallons of water.

Thousands of Orchardists testify to its value, using it in preference to all other preparations. Where the Red Seal is applied it kills the insects and at the same time forms a coating through which others cannot penetrate. When used in the above proportions, it is a

**GREAT BENEFIT TO
THE TREES.**

Put up in SIFTING-TOP CANS, so that any quantity may be used and the balance preserved uninjured.

MANSFIELD LOVELL,
124 California St., San Francisco.



**SOLD
-BY-
ALL GROCERS.**

FOR HOUSEHOLD PURPOSES

The Red Seal Lye is indispensable.

USED AS DIRECTED it will take the place, and at 75% less cost, of all other alkaline preparations, soaps, etc., now on the market. ONE CAN will make 1" to 12 lbs of Hard Soap, or 200 lbs. of Soft Soap. See directions in can.

It cleans floors, kills roaches and bugs of all kinds, cleans milk vessels, tin or wood; keeps farming implements bright and free from rust; is a perfect disinfectant; softens water, washes dishes and clothes; and can be put to a thousand uses in place of soap or other preparations.

P. C. TOMSON & CO.,
Manufacturers, Philadelphia, Pa.

PACIFIC RURAL PRESS

Vol. XLVI. No. 25.

SAN FRANCISCO, SATURDAY, DECEMBER 16, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market Street.

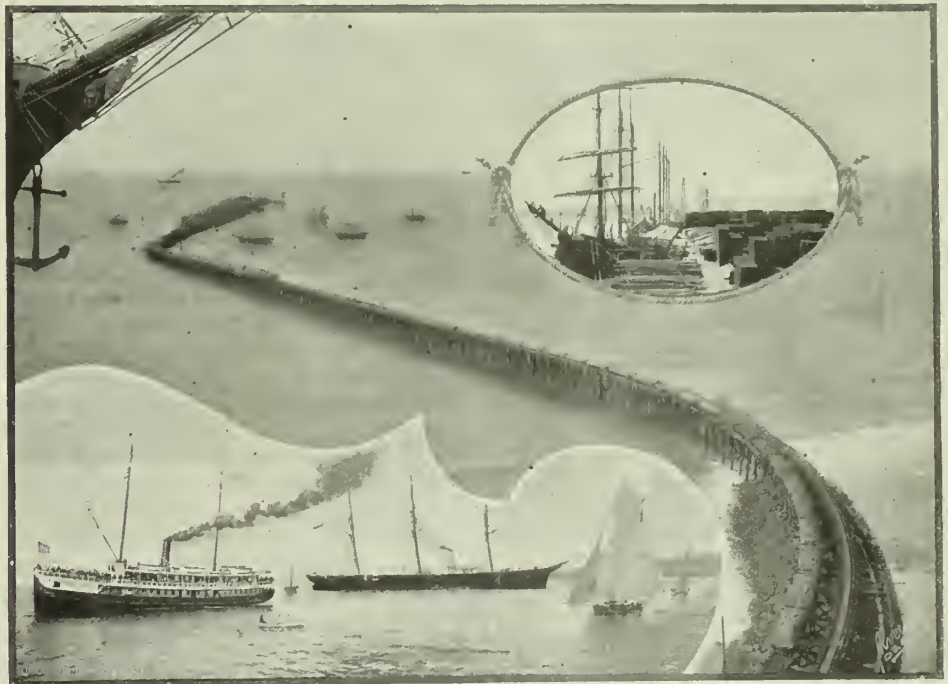
To the Seaward of Los Angeles.

We turn this week to contemplate two interesting scenes along the coast westward of Los Angeles. First we have a picture of a new piece of wharf-building which is to bring the cars of the S. P. Co. to deep-water shipping. The view is of the new point called Port Los Angeles, three miles north of Santa Monica. The new souvenir publication, "Vistas in Southern California," by A. C. Billicke of Los Angeles, says that this railway, after passing through Santa Monica, slips through a short tunnel on the bluff to the beach below, and then skirts the shore under the bluff to the vicinity of the mouth of the Santa Monica canyon, where it turns straight into the ocean and runs out 4593 feet into the sea. As one of the longest and most expensive wharves in the world, it has attracted the attention of the whole country, and it is one of the most important undertakings for the development of California that has ever been placed on foot. At extreme high tide the water is 40 feet deep at the sea end of the wharf, and at extreme low tide 31 feet, so that it is seen that the deepest vessels afloat can load and discharge there with ease. For a distance of 320 feet from the shore there is a filling of rock, followed by a trestle 2761 feet long and 25 feet wide, and then the wharf begins, extending 1512 feet farther, and 130 feet wide. It is covered with numerous tracks, and at the end are the coal bunkers, 816 feet long and 36 feet wide, with a capacity of 8200 tons of coal.

Port Los Angeles has special attractions of its own. One is the immediate nearness of Santa Monica canyon, one of the most beautiful and picturesque spots in California. It is in this famous glen where the people of Los Angeles and the surrounding country have their picnics

mer and winter resort. The prime attractions are boating, bathing, fishing and hunting. There is pure mountain water and balmy atmosphere, combined with a most even temperature, and these, added to the beauties of the

was all of one variety—Bellflowers. Evidently from the quality of the fruit the same care in selecting and packing had been taken as is usually observed with other varieties of California fruit. The gross price obtained for this car,



THE NEW RAILROAD WHARF AT PORT LOS ANGELES.



SANTA CATALINA ISLAND, OFF THE COAST OF SOUTHERN CALIFORNIA.

and summer camps. Just north of it rise the steep slopes of the Sierra Santa Monica, with their numerous canyons and glens, so that those who delight in the healthful sport of mountain climbing have no lack of opportunity. The view from the summit of the mountains is grand beyond description.

From Port Los Angeles, and from other landings on the coast of Los Angeles county, passenger steamers ply to Santa Catalina Island, comprising 48,000 acres and lying in the Pacific ocean, 60 miles southwest of Los Angeles City, California. This island is famed as a sum-

mer and winter resort. The prime attractions are boating, bathing, fishing and hunting. There is pure mountain water and balmy atmosphere, combined with a most even temperature, and these, added to the beauties of the

island scenery, which the engraving suggests, make it a very popular resort.

EASTERN PEOPLE seem to like our apples, of which unusually large quantities have been shipped overland this year. The St. Louis Notes of the *Fruit Trade Journal* have this encouraging paragraph:

"The first straight car of California apples to arrive here direct was received last Thursday by O. Volker & Co., the Third street commission house. The car contained 1000 of the usual-sized California fruit boxes,

\$1800, \$1.80 per box, was probably the largest ever received for a car of apples on this market. The fruit was in elegant condition, being bright in color and regular in size, and was packed to weigh 45 pounds net to the box.

WE alluded recently to the more aggressive warfare undertaken in New York State against oleomargarine even when marketed under its own name. We read now that the State Department of Agriculture has won a distinct victory in Albany county, the Supreme Court having made permanent a temporary injunction against Medard Bouchard and Peter Falardian of Cohoes, prohibiting them from selling "oleomargarine made in imitation and semblance of butter." The stuff is alleged to have been made in Missouri, and to have been disposed of in the original packages under its proper name—so that the case for the defense was about as strong as such a case can be. This looks encouraging.

THE questionable methods of some packers is well illustrated by the following story told by the *San Bernardino Courier*: The lemon-growers of that county sent a carload of lemons East through one of these packing-houses. In the car were 336 boxes of fine fruit, but when the returns came in one grower received \$3.85 as his share, while the other came out in debt to the "shipper" \$10.90. At the time the shipment was made lemons were bringing fancy prices East.

THE Inyo County Bee-keepers' Association met at Big Pine recently. One of the reports read shows that there are now between 3000 and 3500 stands of bees in Owens valley, a gain over last year. One object of the meeting was to arrange for purchasing in one lot all the supplies needed by the bee-keepers of the valley during the coming year, but no arrangement was made.

CHULA VISTA, in San Diego county, boasts of the largest lemon orchard in the world. There are now 70,000 trees planted on 1000 acres of land.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half inch (1 square).....	1.00	2.50	6.50	22.00
One inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Registered at S. F. Post Office as second-class mail matter.

Our latest forms go to press Wednesday evening.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, December 16, 1893.

TABLE OF CONTENTS.

EDITORIALS.—To the Seaward of Los Angeles; Miscellaneous, 405.
The Week; Higher Agricultural Education; Miscellaneous, 406.
From an Independent Standpoint, 407.
ILLUSTRATIONS.—The New Railroad Wharf at Port Los Angeles; Santa Catalina Island, 405.
MISCELLANEOUS.—Report of the Secretary of Agriculture; Wheat-Fed Pork; Favoring Beneficial Insects; Santa Clara Fruit Shipments; The Viticultural Commission, 408.
HORTICULTURE.—Fertilizers in an Orange Orchard; Curing the White Adriatic Fig; Co-operation in Orangeland, 409.
FRUIT MARKETING.—A Talk on Fruit Marketing, 409.
FORESTRY.—Forest Conservation, 410.
POULTRY YARD.—Hints from Experience, 410.
THE DAIRY.—Sterilized Milk; Alfalfa on Heavy Land, 411.
THE HOME CIRCLE.—412.
YOUNG FOLKS' COLUMN.—413.
PATRONS OF HUSBANDRY.—From Yuba City; Tulare Grange Entertainment; Anniversary Day at Sacramento; From Grass Valley; Grange Elections; Secretary's Column, 414.
AGRICULTURAL NOTES.—414.
MARKET REPORTS.—The Local Produce Market, 417.

BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

	PAGE.
Plows—Deere Implement Company.....	420
Plows—Baker & Hamilton.....	415
Money to Loan—Lindsey & Craig.....	417
Nursery Stock—Cox Seed and Plant Co.....	420
Nursery Stock—Baldwin & Stone.....	419
Feed Cutter—Belle City Mfg. Co., Racine, Wis.....	417
Artificial Limbs—Menzo Sprink.....	417
Harrows—The Cutaway Harrow Co., Higanum, Conn.....	418
Nursery Stock—D. M. Perry & Co., Detroit, Mich.....	419
Plows—Oliver Chilled Plow Works.....	411
Drills, Etc.—S. L. Allen & Co., Philadelphia, Pa.....	411
Road Scrapers—Fresno Agricultural Works.....	415

See Advertising Columns.

The Week.

The rain is on again as we write on Wednesday, with promise of accomplishing something if the low barometer is held long enough to the north of us, where the rainfall is heavy. The East is catching high barometer and low temperature in true Eastern style, with degrees enough below zero to suit the most exacting. It is really to be hoped that present conditions will hold long enough to cover the upper San Joaquin, where it is about nine months since they have had even a heavy shower. Plowing is seen everywhere over the lower end of the valley, and large areas of cheap wheat are going in. The grower seems glad to get the wheat under ground and out of sight. Certainly the crop seems dead enough to bury.

The pig and alfalfa men seem to have the long arm of the lever this year and consequently much valley land is going into alfalfa. It seems to us a very good move. Of recent years we have almost forgotten how good a thing alfalfa is. Present experience also teaches the safety and comfort there is in a small farm clear of debt and a mixed line of crops which furnish out the family well and give the grower several chances in the market lottery. We want more such debt-clear small farms, which are largely independent of low market prices. They may not be brilliant business enterprises, but they are awfully comfortable in such times as these.

AND now comes the frozen Australian mutton to this coast to knock the last breath of wind out of our sheep industry. It strikes Victoria, British Columbia, first, by steamer which reached there on Monday of this week. The telegram states that the experiment is being watched with keen interest. When trade with Australia was being discussed the local butchers did not seem to think that Australian mutton could be handled. The Arawa has cold storage for 50,000 carcasses, and on the success or failure of her shipment depends the future of the business. We notice the English meat-producers are doing their best to get a law passed by which the seller of overseas meats shall be obliged to notify the purchaser of the fact. They seem to think this will lead many to pay more for fresher meats. Canadian producers will have to do the same if they wish to save their mutton business.

THE San Bernardino supervisors have voted to continue the 20c bounty for jackrabbit scalps.

Higher Agricultural Education.

Now that it is between harvest and seeding and perhaps as nearly a leisure season as comes in this land where all the year favors out-door work, it may be acceptable to refer to a matter of general agricultural interest. There is none, perhaps, of wider importance than that of agricultural education.

It is a very notable fact that though progress has been rife in agriculture for the last half century, and though the last score of years has seen startling changes in agricultural belief and practice, it probably cannot be successfully disputed that just at the present time progress is being achieved at a rate which would have been regarded a few years ago as a thing incredible. Every branch of agricultural production shows the influence of progressive thought and research. We are doing few things just as they were done even a decade ago, and in some respects recent agricultural practice has almost radically changed during even that short period. Though many lines of illustration might be shown, there is none more striking than recent changes in dairy practice. By mechanical devices wholly new in principle and construction, we are securing more product from the same weight of milk than has ever before been possible. By mechanical devices, coupled with the most obscure chemical and bacteriological agencies, we are overcoming evil influences and promoting salutary ones, until the milk-manipulator is no longer the victim of mysterious forces as he once was, but is now the master of the same forces and handles them to his own advantage. The ordinarily good creamery man of to-day knows things that the most advanced scientific investigator of 20 years ago did not even dream of. On the farm side of the creamery there are still the pasture and the cow stable as they have always been, but on the other side there are implement factories and laboratories, furnishing materials for the creamery man's uses, which are so exact in their adaptation to his needs, and so obscure in their character, that no one but the most thoroughly educated expert can produce them.

This same progressive character enters to a greater or less degree into all lines of agricultural production. The horticultural industries are charged with it and are advancing through its influence. The animal industries display new policies and elevated practices throughout their whole course, from the breeding farm to the preserving factories. These, then, being the common marks of the recent courses of our agricultural arts, it is plain that agricultural education is to-day, as never before, the secret of agricultural success. And it is education of the highest sort. There is no longer the pressing demand that agricultural education should be mainly handicraft; the present demand is for the principles and ability to investigation and to observe. And as agricultural education advances its standard and its aims it comes into closer touch with higher education generally and is welcomed to its fellowship. We were reminded of this fact by the following paragraph, which we take from an English exchange:

The Senate of Cambridge University has confirmed a scheme for an annual examination in the science and practice of agriculture, drawn up by the syndicate appointed to consider the subject. The examination, which is to be open to members of the University and to outsiders, on terms to be fixed hereafter, will be in two parts, the first of which must be passed satisfactorily before the second can be gone through. The subjects in the first part are botany, chemistry, physiology and hygiene, entomology, geology, mechanics and engineering, and book-keeping; while agriculture will be a subject for the second part, with surveying, veterinary science, and economics in relation to agriculture added if the Managing Syndicate, now appointed, see fit. It will be open to the syndicate to institute a preliminary examination if they deem it desirable. A candidate who passes the first part of the examination will receive a certificate, and one who passes both parts will gain a diploma testifying to his competent knowledge of the science and practice of agriculture. A course of study which will qualify students for the examination has already been commenced at Cambridge, aided by several County Councils and managed by a committee, of which Mr. Henry Robinson, M. A., of Cambridge, is secretary. This course is under the personal direction of professors of the University, some of whom admit the students engaged in the course to their lectures and laboratories. It is not necessary to study at Cambridge, however, in order to qualify for the the University examination.

Here we have one of the time-honored English universities with all its inherited traditions of old-time educational tenets coming frankly to the modern notion that a farmer should be an educated man, and arranging to furnish special instruction to that end. We look upon this as one of the most significant incidents of the time. We commend it to those who may be inclined to think that universities should deal only with the 'ologies, and also to those who are disposed to think that agricultural schools should be isolated from the general educational undertakings of the people. We look for the disappearance of all such notions. The farmer is constantly approaching nearer to his true place among his fellow men, and education is the golden stair by which he rises to such position. What Cambridge now undertakes for England our own universities have already embarked upon. May they never retreat from their recent advances, and may the

people never lift from them one iota of the obligation which they now assume. The farmer needs the best and the highest schools; he injures himself and his children when he accepts anything else.

THE Farmers' Institute at Visalia was a very interesting and useful gathering, although the attendance was not as large as was hoped for. There was a strong force of local speakers in addition to the imported orators, and the discussions were never dull. The value of the Belgian carrot as shown by the experience of Mr. Thomas Jacob of Visalia was very important. He has secured large yield from these carrots sown in January, the crop being successively fed from the rows all the succeeding winter, being ever ready and requiring no storage in this climate. He sows the seed in drills two and a half feet apart, cultivates all summer, and secures a vast weight of stock feed to the acre. There were other subjects of general interest broached, such as the non-pruning of prune trees after the second year, allowing the branches to festoon outwardly, the claim being made that such pliable branches held their fruit without props, while short formed trees were broken to pieces in spite of props. In the evening there was a delightful musical programme and a stirring speech in favor of grange work by Rev. S. Goodenough of Oakland.

PROF. SMITH, who has now the charge of the agricultural as well as the horticultural department of the Mid-winter Fair, desires to secure the interest and co-operation of hundreds of individual exhibitors of creditable local products in all the lines he has in hand, and invites correspondence to that end. Wool, honey, hops, grains of all kinds, vegetables of all persuasions, and field crops of all beliefs, which will do credit to the skill of the grower and the resources of the country, will be welcome. No charge for space will be made to exhibitors who desire small room and no special business interest to serve. The products will be received whenever they are ready to go on show. It is not expected to do much with wool until the spring clip comes along, and honey probably will not show much until the bees and flowers move, but it would be a good point to show honey gathered while Eastern bees are under the snowdrifts. Hops can be shown in commercial samples and not necessarily in large bales. Let all who have good things show them.

THERE has just been issued by the State University the report of the work of the Agricultural Experiment Stations, by Prof. E. W. Hilgard, director. Our readers should apply to the director at Berkeley for a copy of this document, which is sent post free as long as the supply lasts. It is a publication of exceptional interest and value. There are 100 pages devoted to examinations of California soils and waters, and full records of work done with California fruits, fertilizers, native shrubs, accounts of work at the branch stations, etc. There is also a new feature in the line of economic entomology, which aims to enable the plant-grower to easily determine the nature of the injury he finds on his plants, and to detect the depredator. There is also a popular key to the classification of insects into families, and several papers upon fungoid diseases, woolly aphids, etc. The report will be found of constant value for reference.

THE orange business at Riverside is out of the hands of the old line of trade. A dispatch on Monday stated that the recently organized fruit exchange is all ready for business and has begun shipping the new crop oranges. Several carloads were shipped Monday and regular shipments will follow daily. The exchange has taken the place of private shipping firms and none of the latter are in business this season. The orange crop, which is a good one, of fine quality, is ripening rapidly. A railroad man who has just returned from the South has expressed himself as amazed at the large increase in the acreage of orange groves. At the present rapid rate of increase, he believes that the crop of California oranges will be doubled in five years.

WHAT the foothills have done in fruit during the few years of their enlistment in that industry can be learned in the records of two of the several shipping points. Penryn during the present year has shipped 275 full carloads of fruit aggregating 6,126,138 pounds, and there was shipped in less than carload lots 294,790 pounds, by express 115,400 pounds, and 11,490 pounds of dried fruit, making a total fruit shipment for the year up to November 1st of 6,547,818 pounds. Newcastle has shipped this year 526 full carload lots of fruit.

READERS should not forget the general convention of fruit-growers to discuss better plans for marketing fruit which will be held in Pioneer hall in this city on December 29th, beginning at 10 A. M. We have made full reference to this meeting before and we hope none will overlook it.

From an Independent Standpoint.

It was understood before Congress came together that the Wilson tariff bill was complete and that it would be presented to the House on the first or second day of the session; but more than a week has gone by and still it is not forthcoming. Meetings of the Ways and Means Committee are held daily; and since now the minority members, representing the protection side of the question, are in attendance, the wheels of reform do not turn as readily as when the majority had the committee room all to themselves. On Monday of this week Mr. Reed of Maine introduced into the committee a resolution reciting that the proposed changes would cut down the national income \$70,000,000 per year, and asking by what means it was intended to make up this deficiency. Chairman Wilson replied that it would be made up by internal revenue taxation, but that the schedules were not yet complete; and following the assumption that this was a sufficient answer, Mr. Reed's resolution was laid on the table by a party vote. It is not intended evidently to bring out the revenue features of the "reform" until the tariff part of the programme is carried out. Since the outline of the bill was given to the public last week, there have been several changes, some of which have a direct bearing upon Pacific coast interests. The rate on oranges is cut from ten to eight cents per cubic foot space; petroleum is added to the free list; champagne is restored to the present rates, and five per cent is added to the rate on carpets. On other woollens there is to be a general cut of almost twenty per cent—in no sense correspondent with the putting of raw wool on the free list.

The opinion at Washington is that this bill will be forced through the House of Representatives under whip and spur; that the organization is so thorough that the majority will be forced to vote for it whether they like it or not. Speaker Crisp is prepared, so it is declared, to employ every resource of parliamentary management to shut off debate and hurry the bill along. But whatever may be its career in the House, the measure is certain to encounter hard sledding in the Senate. In that body the champions of Protection are a minority in numbers, but they vastly outweigh the majority in experience and debating ability. Such men as Dolph, Hoar, Sherman, Aldrich, Lodge, Chandler, Fry, Hawley, Allison and Wolcott cannot be silenced and are not easily to be put down. Such a phalanx fighting in a just cause ought to be invincible; and in our judgment it will not be possible to enact the proposed law over such protests as they will make. When the facts and conditions are fully laid before the country, as they will be during the next few months, we have faith that the voice of the sovereign people will rebuke the effort for tariff revolution in terms which cannot be misunderstood.

It looks now as if Dolph would be the leader of the Protection forces in the Senate, although it is an office for which he is but moderately equipped. He has presence, personal force, wide knowledge, a good working mind and excellent skill in debate; but he is wholly destitute of that temperamental warmth which is so potent a quality in leadership. He is not, like Clay or Blaine, a figure around whom his partisans will make a ring and die fighting. It is unfortunate that there is not in the Senate at this time just such a figure—a man who could not only support the cause of Protection adequately in debate and in tactical management, but whose personality would add to its strength.

It is current gossip at Washington that President Cleveland intends very soon to propose a measure looking to the construction of the Nicaragua canal and to make American control over that waterway secure and permanent. He finds, so rumor has it, that foreigners are scheming to capture the canal, and he has learned from a report made a few days ago by the Secretary of the Interior that, owing to the serious financial embarrassment of the Maritime Canal Company of Nicaragua, no progress has been made in the work during the last twelve months. Simultaneously came the published statements that the President of Nicaragua had given instructions to abrogate the valuable concession of the American Canal Company. Although that rumor has been denied by President Zelaya he states that he has heard that British and German syndicates were about to make a proposition to his Government and that he "telegraphed the representative of his Government at Washington, directing him to ascertain what arrangements could be made for the prosecution of work by the American company."

The practical failure of the Maritime Canal Company really throws the project upon the hands of the Government. It is now a question whether the United States will put the canal through or allow it to fall into the hands of European capitalists and so under the control of some European government. As President of

the United States and as the dominating head of the party in authority, Mr. Cleveland has it in his power practically to determine this question. But if he goes in for the canal in an earnest and effective way he must run directly counter to interests and influences which have lately seemed to dominate his judgments and his official course. It may just as well be understood by the people who are crying for the canal, that the obstacles in the way of its construction are not the mountains of Nicaragua, but the opposition of capitalists in our own country. Every dollar invested in railroads or in any way related to transportation property is an enemy to the canal; and this comprises pretty much all the politically effective wealth of the country. There is, of course, more wealth in miscellaneous property than in aggregated form, but it has no personal, interested and potent representation in the political, social and business circles which make up Mr. Cleveland's environment and under whose influence his economic and political judgments are formed. Under the circumstances and in view of Mr. Cleveland's recent course in regard to other matters of popular interest, it seems to us hardly reasonable to hope for such help from him as will really put the project on its feet in a way agreeable to the plans and wishes of those to whose interests it is most directly related.

There can be no doubt that a proposition from Mr. Cleveland to take the canal off the hands of the Company and put it through on Government account would be well received by the general public; and it would without doubt do much to restore to the Administration the popularity lost by the Hawaiian blunder and in connection with financial and tariff matters. The assumption of a project of such magnitude and such promise would be in its effect a national flag-raising; it would strike the imagination of the country, rouse patriotic sentiment and inspire new pride and new hope for the future. The business effect would be wholesome and immediate, and the political effect could not fail to benefit Mr. Cleveland and his party. It would be a stroke of policy at once wise and brilliant; but—will Mr. Cleveland have the insight and the courage to see the opportunity and to use it? There is no question about his courage; but, since the Hawaiian matter and the recent message have been before the country, there is less reason to respect his judgment.

The dominant feeling in Congress respecting Mr. Cleveland's course in the Hawaiian matter is that of profound disapproval. The sending of a "personal representative" to supersede the regularly authorized minister, and with power to command the U. S. naval forces; the formulation without reference to Congress of the absurd plan to restore the deposed Queen; the instructions to this end given to Minister Willis; the withholding of the facts from Congress—these several acts are deemed unwarranted in their assumption, in contempt of Congress and of the people, and in violation of the Constitution and the statutes. The first business of the Senate, after the formalities of reading and referring the President's Message, was to discuss a resolution offered by Hoar of Massachusetts asking the President for all the correspondence in the matter of Hawaii. It was in effect a notification to the President that the Senate was not satisfied with what he had done or with what he had reported concerning it; and it was understood, as one Senator put it, to be a "direct slap in the face from the Senate." Mr. Hoar said that Mr. Cleveland had arrogated to himself a power belonging to the legislative branch of the Government; that under that assumption he had attempted to do an act violent to every American principle and sentiment; that he had said to Congress practically that it was none of its business what was done in Hawaii. His course, Mr. Hoar declared, was upon a basis of assumption which, if allowed, would permit a President upon coming into office to review our connection with foreign nations, and, if it suited his whim, to undo treaties and throw our international relations into confusion. Referring to the moral aspects of the presidential purposes as to Hawaii, he said that, to carry out Mr. Cleveland's idea completely, it would be necessary for us to give Texas back to Mexico. Mr. Dolph followed in the same strain, denouncing the course of the President both in its legal aspects and as to its policy. The surprise of the debate came from the Democratic side in the shape of a speech from Senator Hill of New York. He reasserted all that Hoar and Dolph had said, and in the name of the Democratic party denounced the whole presidential course in the matter of Hawaii as an outrageous usurpation. On the part of Senators Gray and Vilas there was a feeble attempt to defend Mr. Cleveland, but they did not dare to support it with their votes; for, when the roll was called, every Senator voted aye. The resolution thus adopted was immediately transmitted to the President; but, although a week has passed, no answer has been received. Early this week, Mr. Hoar introduced

another resolution inquiring into the legality of Commissioner Blount's doings at Honolulu, and reciting the statute which makes it a criminal offense for any citizen of the United States not regularly and officially authorized to negotiate with a foreign nation. This resolve is yet to be discussed; and, while it will not come to anything serious for Mr. Blount, it is certain to bring out some facts that will further illustrate the assumption and folly of the President and add to his confusion. As yet, the House of Representatives has taken no positive action, but there are numberless indications that it shares the feeling expressed by the Senate.

The variations of American policy have naturally made great confusion in the Islands. The first report that Mr. Cleveland proposed to put the Queen again upon the throne was not believed, and when the story was confirmed the surprise and indignation of the annexationists were unbounded. The spirit of Seventy-six prevailed. Within a few hours six hundred annexationists in mass meeting resolved:

That we read with surprise and regret of the recommendation of the Secretary of State of the United States to the President to restore the monarchy lately existing in Hawaii.

That we condemn the assumption of the Secretary that the right of the Provisional Government to exist terminated by his refusal to resubmit to the Senate the treaty of union pending between the two countries, and also his assumption that the Provisional Government submitted the question of its continued existence to the arbitration of the President or any other power.

That we will support to the best of our ability the Provisional Government in resisting any attack upon it which may be contrary to the usage of nations.

Before these resolutions were voted, F. M. Hatch, Vice-President of the Provisional Government, addressed the meeting, saying among other things:

From the very nature of things the Government which started in revolution, though now a Government de jure and de facto, could not submit the question of the legality of its existence to any arbitration, because its right lay in its might. Having satisfied our consciences as to the justice of our cause, we depend upon our might, and are answerable to no other power. I brand as false the claim that we put in issue the question whether or not we were proceeding legally in overturning the corrupt and rotten monarchy.

The resolutions above quoted, adopted in response to Mr. Hatch's high declaration, mean just one thing, namely, that the Provisional Government cannot be overthrown without war. The subsequent conduct of the authorities has been in line with the declaration. The Government house has been fortified and a regular military force organized and put under arms. The regular and militia forces now amount to 2000 fighting men, armed with the best guns and supplied with several rapid-fire batteries. It is claimed that this army is capable of whipping all the marines in Honolulu harbor, and it is not doubted that there would be a hot fight if any attempt should really be made by Minister Willis to carry out Mr. Cleveland's orders by force.

The wrath of the annexationists has been somewhat appeased by later reports from the United States, which assure them that the plan of restoration is only a personal whim of the President, and that it finds no general support in Congress or among the American people. The sense that American public sentiment is with them has an inspiring effect, and it is believed that the next steamer will bring a direct appeal to Congress as distinct from the President. The latest news from the islands bears date of the 5th inst. Up to that time Minister Willis had made no public move toward carrying out his "appropriate instructions," and it is now believed that he will do nothing. It seems that when he reached Honolulu he had the sense to see what the President, looking through Mr. Blount's eyes, failed to see, namely, that the Provisional Government was not a mere Punch and Judy show, to be bobbed up or knocked down by a whisper from the White House. This fact is in itself a good argument for annexation, for it shows that self-dependence, fortitude and capacity are the dominating forces in Hawaii. Of such stuff American States are made.

FROM the press of Murdock & Co. there has just come a pretty little book especially suited to the holiday time, written by Mr. Willard B. Harrington of this city. It is a true story of a Scotch terrier, telling in a simple and charming way how "Our Dick" established himself as the most indulged member of the Harrington household. In it dogginess and humanity are happily blended; and not least among its charms is that it recalls to each reader some particular "Jack" or "Bun" that he or she once knew and was fond of. The subject is one in which childhood especially delights, and while the story is not written for the little folks exclusively, it is among them, we fancy, that it will find the most ardent appreciation. To those who have known the author only as a writer on economics and politics this little book will be a surprise in its revelation of a lightness and kindness not usual in one who deals habitually with heavier themes. "Our Dick" is a fine story to read aloud to the family circle before a winter night's fire; and the hour it fills up will be a very short one. It is in flexible covers, beautifully printed and illustrated and sells for 50 cents; and may be had in the principal book stores or ordered through any book-seller.

Report of the Secretary of Agriculture.

Hon. J. Sterling Morton, Secretary of Agriculture, in his report submitted to the President, regrets the vague character of the Department organization, which, he says, "offers opulent opportunities for the exercise of the most pronounced paternalism," but he adds that there are many proper ways in which the Federal Government may legitimately serve the cause of agriculture. He devotes considerable space to a review of what he regards as an anomalous partnership between the Government of the United States and the Government of the respective States for the conduct and encouragement of State agricultural colleges and experiment stations. Referring to the sum appropriated for the use of State experiment stations, he says: "This appropriation is unlike any public moneys legislated out of the treasury of the United States because there is no officer of the United States authorized to direct, limit, control, or audit its itemized expenditures." He suggests that the stations should be entirely divorced from the Department and the sum appropriated charged directly to them or that the Secretary should have some power to direct and restrain their disbursements so as to insure a legitimate expenditure of the same. He adds that in view of rumors that have obtained credence in some of the States and Territories to the effect that moneys appropriated to the stations have been diverted from their legitimate public purposes, a thorough investigation should be made to demonstrate either the truth or falsity of such reports.

Efforts to Reduce Expenses.—In reference to the expenditures, the Secretary states that his strenuous endeavor, in view of a depleted public treasury and of the imperative demands of taxpayers for economy in the administration of the Government, has been to "rationally reduce expenditures by the elimination from the pay rolls of all persons not needed for an efficient conduct of the affairs of the Department." He gives the number of employees when he took charge as 2,497 and states that there are now on the pay rolls only 1,994, a reduction of 503; and of the 1,994 he says that eleven are on duty in the office of the Civil Service Commission, to which they were assigned by request of the Commission. He complains of the gross inequality in the compensation of the Department employees which has added to the difficulty of retrenchment. He has, however, during the first quarter of the fiscal year reduced expenditures in comparison with the corresponding quarter of the last year by over \$56,000. He presents a table giving the appropriations for the current fiscal year and his estimates for the next year, showing a net saving in his estimates over the appropriations for the current year of \$369,656.94.

Among the heads of division, changes under his administration have been exceedingly few and in these cases the vacancies have generally been filled by the promotion of experienced assistants and in recognition of a long, faithful and competent service to the Government.

Seed Distribution.—The distribution of seed at the public expense is reviewed at length, and its growth traced from the year 1839, when Commissioner of Patents Ellsworth obtained an appropriation of \$1000 for the purpose of collecting and distributing rare varieties of seed and for other purposes.

He shows a considerable saving to have been effected in the purchase and the distribution of the seed this year.

He holds that the experiment stations should be judges of seeds most desirable to their localities and that future distribution should be made through them.

Bureau of Animal Industry.—The work of the Bureau of Animal Industry is reviewed in considerable detail, each one of its principal features being briefly considered. The result of the Texas fever regulations is pronounced to be highly satisfactory; but to increase their efficiency it is suggested that a penalty should attach for violation of the Department regulations by railroad companies transporting infected cattle. The total number of import animals inspected the past year was 463,389, the total of export cattle inspected 611,542. A further reduction has been effected by vessel inspection in the percentage of cattle lost at sea, the ratio being for the last year less than one-half per cent. The law at present does not provide for the inspection of horses imported into the country, and an amendment in this respect is suggested. As regards meat inspection the microscopical inspection has been greatly reduced, the intention being to confine it rigidly to products intended for direct export to countries exacting the same. The microscopical inspection costs the country 6½ per cent of the value of meat sold to countries demanding that inspection. Careful comparison of meat exports for 1893 with 1892 shows that microscopic inspection has not increased our foreign sales, and the Secretary thinks it does not pay.

Further recommendations in the work of the Bureau are for legislation compelling the immediate destruction of any animal or carcass condemned by the United States inspectors; for an extension of the work in regard to tuberculosis in co-operation with local authorities until danger to human life has been reduced to a minimum, and for Civil Service examination for inspectors and assistant inspectors with the requirement of a diploma from a regular veterinary college.

Other Divisions and Sundry Recommendations.—The work of the other divisions is reviewed in detail but briefly and without extended argument. The question of forestry comes in for some special attention, and urgent recommendations are made for more thorough and extended effort on its behalf. The completion of experiments in sorghum sugar is announced, on the ground that a stage has been reached when "individual enterprise can and should take advantage of what the Department has accomplished." On the advice of Professor Wiley, some further experiments with sugar beets and with sugar cane in Florida are recommended.

Investigations of the chemical character of different typical soils of the United States are pronounced to be desirable. A special appropriation is also recommended in fur-

therance of the work of collating information regarding the nutritive value of foods for man, such appropriation being "to enable the Secretary of Agriculture to investigate and report upon the nutritive value of the various articles and commodities used for human food."

Weather Bureau.—Of the Weather Bureau it is stated that the work has been carried on with improved efficiency and economy, a reduction in cost of maintenance of nearly ten per cent being effected and estimates for the fiscal year being correspondingly reduced. A reorganization of the Bureau has been partially effected, designed to modify expenses and magnify the value of the service to agriculture, commerce and the people at large. The attention of the force has been fixed more strongly than ever before upon the work of forecasting as a primary duty of the Bureau to the public. Especial efforts have been made to improve the river-flood service and to increase the efficiency of the storm-warning system on the Great Lakes. A system of exchange with the Department and the Central Meteorological Observatory of Mexico is announced on terms similar to those in operation with Canada, while the desirability of full telegraphic reports from the Bahamas is emphasized.

Statistics.—The vast importance of the work of the Division of Statistics is forcibly presented. "That the work of this Division be efficiently performed and the information it gathers promptly diffused," says the Secretary, "is of profound importance and vital concern to the farmers of the United States, who represent nearly one-half of our population."

Agricultural Exports.—Reviewing with some detail our agricultural exports and their destination, an earnest plea is made for the diversification of agricultural exports and the widening of foreign markets therefor. "We want free entrance to all the countries of the globe which it is in our power to supply with any product the varied soil and climate of this vast country will enable us to grow at a profit."

Agricultural Imports.—Reference to the immense aggregate of imports of agricultural products suggests the inquiry, Ought not a large proportion of these to be produced upon our own soil in proximity to our own markets where this immense demand exists? And the reply is in the affirmative. "Hides, fruit, nuts and wine," says the Secretary, "could all be produced in this country," so with a considerable share of the fibers, tobacco and sugar. Our farmers would be benefited by a large number of subsidiary crops, the overproduction of certain staples avoided, the variety of our agricultural supplies in foreign markets themselves multiplied. All persons engaged in the work of agricultural education and experiment are enjoined to hold steadily in view the inexorable economic facts affecting the production and disposal of agricultural products. American farmers must produce what the world wants. That the relation of supply and demand is the sole regulator of value; that it applies equally to the products of the farm and of the factory, "ought to be engraved upon the memory and reflected in the judgment and the plans of every farmer in the Union."

Conclusion.—Concluding the report, Secretary Morton says "that there are in the United States more than 6,000,000 farms upon which dwell more than 30,000,000 people who furnish more than 74 per cent of the value of exports of this country." He argues, "as no edifice, however symmetrical and perfect its superstructure, can endure except the foundations be solidly laid, so everybody knows that the successful perpetuation of the industrial activities of the American people is based and possible only upon an intelligent and fecund agriculture."

Wheat-Fed Pork.

Some of the industries of St. Paul, says the *Pioneer Press*, are in a thriving condition. Among them is the South St. Paul stockyards, where the packing houses are doing a much brisker business than ever before. Their receipts of hogs are 50 per cent greater than last year, and it is an interesting fact that there has been a very large increase in the number of hogs received from the northern part of the State and North Dakota. On some of the roads the receipts have tripled and quadrupled. This is significant as showing the rapid transition which is going on in that section from an exclusive devotion to wheat culture to a diversification of the farming industry.

Another interesting fact is that the hogs from that section are of considerably higher grade than those of the corn regions. There is a decidedly larger percentage of pork to the pound of live hog in the receipts from the northern belt than from any other, because they are fed chiefly on barley, wheat screenings and other nutritious cereal foods. Every day's experience at the South St. Paul stockyards confirms the now well-established truth that hogs fed on the smaller grains are much more valuable to the packer than the corn-fed animals, and that even wheat converted into pork will yield the farmer a much higher price than he gets for it when sold by the bushel. At present prices, wheat in this form is worth at least a dollar a bushel.

Favoring Beneficial Insects.

In our reports of the Los Angeles convention the decision in favor of further effort for the introduction of beneficial insects from abroad was enlarged upon. The following resolution, introduced by Mr. Heath of Santa Barbara, was unanimously adopted:

WHEREAS, It is now apparent that the best method of overcoming the various insects, scale and otherwise, or detrimental to horticulture, is by the introduction of parasites, and whereas, the efforts of the State Board of Horticulture, so far, in the introduction from foreign countries of such parasites have been crowned with signal success.

Now, therefore: It is the sense of the convention that the Board should continue its experiments in such line and that it should receive the support of every industrial inter-

est of the State, so intimately connected with the prosperity of horticulture.

To this end this convention earnestly requests the Legislature at its next session to appropriate a sufficient sum of money, not less than \$10,000, to be expended in the discovery and importation of parasitic insects beneficial to horticulture into this State and that the law provide that the importation and culture of such insects and the expenditure of such sum of money be confided to the care of the State Board of Horticulture.

Santa Clara Fruit Shipments.

Over Sixty-Five Million Pounds Sent to the Eastern Markets.

The season's output of fruit from the Santa Clara valley has been immense, and the grand total of fruit exports from San Jose for the season of 1893 to December 2d was footed up Saturday and amounted to 65,432,700 pounds. This enormous shipment takes in only green, dried and canned fruit, and the former reached the big total of 21,004,080 pounds, of which pears and apples led, the former having almost 8,000,000 pounds to its credit and the latter reached over 3,000,000 pounds.

The total shipment of dried prunes to date leads all other shipments of this year's crop as well as beating all previous records, the grand total being 28,639,520 pounds. By appended statement of fruit shipments it will be seen in what quantity each separate export of fruits went forward.

Agent Steeple reports that the movement of claret from San Jose direct to Manchester, England, has commenced, and during the past month many gallons have gone to foreign countries to compete with the wines of the Old World. Since the opening of the Manchester (England) ship canal it has enabled shippers to send wine to Manchester without transfer. The wine is shipped via the Sunset route to New Orleans, thence by steamer to England.

The weekly overland shipments still require seven figures to print the grand total, and last week's output amounted to over 2,000,000 pounds, of which dried prunes led with 864,070 pounds. Wine and brandy came next, with green fruit slightly in advance of canned goods.

On the local (narrow-gauge) route the shipments to San Francisco and other California points amounted to over 1,000,000 pounds, which at this time of the year is not often recorded. The local shipments over coast and western divisions footed up almost 6,000,000 pounds, making the grand total shipment from San Jose nearly 10,000,000 pounds for the week ending December 2d.

A new rate has been made on potatoes in carloads from Castroville, Morocrojo, Coopers to Oakland, Market street and Alameda, \$3 25 per ton. From Neponset to the same points, \$3.45 per ton, and from Salinas to the same points, \$3.50 per ton, via San Jose and western division. A rate has been made on pine and rough hard wood in carloads from Paso Robles to San Jose of \$2.50 per cord. Minimum carloads, ten cords.

The Southern Pacific Company has made a rate, effective December 4th, on potatoes in carloads from Vega, Watsonville, Morocrojo, Castroville, Neponset, Coopers and Salinas to Los Angeles of \$4.60 per ton.

Following is the statement of fruit shipments from San Jose to Eastern points for the season of 1893 to December 2d:

TOTAL FRUIT SHIPMENTS—SEASON 1893.	
Green Fruit—	
Cherries.....	2,279 295
Peaches.....	1,763,135
Plums.....	2,591,185
Apricots.....	39 810
Apples.....	3,273 685
Pears.....	7 927 570
Grapes.....	2,509 665
Prunes.....	385 200
Quinces.....	235 385
	21,004,080
Canned fruits and vegetables.....	
	9 687,355
Dried prunes.....	
	28,639,520
Dried peaches.....	
	2 235,435
Dried apricots.....	
	4 453,530
Other dried fruits.....	
	412,720
Grand total.....	65,432,700

The Viticultural Commission.

The semi-annual meeting of the State Board of Viticultural Commissioners was held December 11th. Those present were Messrs. Bundschu, Preber, West, De Turk, Bichowsky and C. A. Wetmore. Officers' reports were received and will be duly published.

The following resolution was adopted:

Resolved, That it is the sense of the Board of Viticultural Commissioners that the executive committee of the Midwinter Fair be urged to use special efforts to receive an impartial and intelligent representation of California wines at the Midwinter Fair in all such places where concessions have been or will be granted to sell such wines to visitors, and that no discrimination to the detriment of our products shall take place.

Letters were read from Congressman Geary, dated at Washington, speaking with confidence of the ultimate passage of all the measures introduced by him in the interests of California wine-growers except the indemnification bonding bill.

Protests were made by several members against a reduction of the tariff on brandy from \$2.50 to \$1.80 per gallon, and the tariff on raisins from 2½ cents to 1½ cents per pound. Secretary Scott and C. A. Wetmore were appointed a committee to draft a memorial to Congress embodying the protest of the Commission on these points.

THE American vine root continues to be the safety of French vineyardists. At a meeting of the French Academy the other day Charmin read a paper on the extraordinary results obtained by grafting American on French vines. The American vine promises to save the French vine from the destruction with which it was threatened and to restore it to its original flourishing condition.

HORTICULTURE.

Fertilizers in an Orange Orchard.

The following paper was read by Mr. A. S. Chapman of San Gabriel at the last Fruit-Growers' Convention.]

My remarks will be confined to my experience in my own orchard at San Gabriel, some 12 miles east of here, situated on a granitic sand foundation—no bottom water, and irrigated from water of artesian wells. The land some 20 years ago in its wild condition supported a dense chaparral growth. When cleared and planted the summer weeds were mullein, purslane, "tumble weed," Burr clover did not grow, nor did alfalfa, nor malva.

I irrigate with the basin system, wetting the entire surface of the ground.

The first fertilizer I used was sheep manure, brought some eight miles and from a character of soil entirely different from mine. It was full of seeds of different grasses that did not grow on my place. It was evenly spread over the surface of the land, by being shoveled into the irrigating ditch, being thus diluted but frequently applied. This was carried on over a period of two years, and still the character of grasses that grew was not changed.

The next change of fertilizers was to superphosphate, dissolved bone black, made soluble in water by being treated with sulphuric acid. It was applied in the fall, a little over 1000 pounds to the acre. It produced a most remarkable change in the growth of the grasses; burr clover just seemed to take the orchard, and the following summer the orchard looked much better.

The next fall I used ground bone at the rate of a ton to the acre. The next summer the trees looked well, but the white scale also appeared, and things looked disheartening. The scale fast spread over the entire orchard, but during the second summer of the plague was introduced its wonderful destroyer, the *Vedalia cardinalis*. I immediately ordered a carload of ammonia sulphate, and I applied over 500 pounds to the acre in the months of August and September. The effect was magical. The *Vedalia* had subdued the scale, and the latter had left the trees yellow, and the crop on 3000 trees was some 300 boxes. But the trees rapidly recovered, and it was a green and healthy-looking orchard that went through the winter, and in the spring it set a crop of some 10,000 boxes, and once again the orchard was on its feet.

I now worried myself wondering what I should put on next. From analysis made of the seedling orange a maximum crop of 700 boxes to the acre removed from the soil about 112 pounds of potash, 28 pounds of phosphoric acid, 10 pounds of sulphuric acid and 63 pounds of nitrogen. The soil analyzed 1.14 per cent of potash, .16 per cent of phosphoric acid, .01 per cent of sulphuric acid, 6 per cent of iron oxide, 2 per cent of lime.

I was taught that I needed sulphuric acid and nitrogen, and that four-fifths of the air was nitrogen, and that when I bought it, as in ammoniac sulphate, it cost some 16 cents a pound. I calculated I had applied enough phosphoric acid for several consecutive maximum crops, and I aimed to derive my nitrogen from the air by growing weeds and turning them under, and inducing nitric fermentation in the soil.

At this stage of my progress I met Dr. Woodbridge of Los Angeles, who asked me to make some test plats, and I did so on an adjoining ranch that had not been fertilized, and on one plat we applied (1) nitrate of soda, on another (2) potash, on another (3) phosphoric acid, on another (4) soda nitrate and potash, on another (5) nitrate with phosphoric acid, on another (6) potash and phosphoric acid, on the other (7) potash, phosphoric acid and nitrogen. Inside of 30 days all those that had nitrate showed an improved appearance. The potash plat was not one bit improved. But the wonderful change was in the plat that had all three of the elements in combination. It held its greenness and kept on improving, and the following season showed up with a great deal more fruit. And now I am a believer in a "complete fertilizer."

And acting on that principle and guided by the result on the test plat, I bought from H. M. Newhall & Co., San Francisco, their brand "A" of fertilizer, containing ten per cent of phosphoric acid, ten per cent of potash and three per cent of nitrogen. I believe in composting all refuse from the stable with sulphate of lime—common land plaster. I believe an application of 50 pounds of iron sulphate per acre in the spring wonderfully beneficial. So much for my orange orchard.

Fertilizing Grapes.—I will now give you my experience with grapes, Cornichon and Tokay, on the same class of soil. These vines are some eight years old, and I have never been able until this fall to harvest any of the Tokay; they either dried on the vines or split. The Cornichon did fairly well. Last winter I applied to these vines at the rate of 200 pounds of muriate of potash to the acre and a good dressing of gypsum. After an interval of rain I again applied at the rate of two tons to the acre cow manure (six months composted with plaster) and 50 pounds of iron sulphate. I sulphured the vines in the spring. The result was Tokay grapes that sold for two cents a pound, and beautiful Cornichon that went at the same price here in Los Angeles. These vines were previously horribly affected with knot; they are healthy vines now.

From the *Florida Agriculturist* I learnt that sulphur was beneficial in keeping off red spider and preventing russet oranges. I tried the sublimed sulphur on three rows of Eureka lemon trees last spring. I must say the results are most satisfactory, the insect seeming to cease to increase on those trees and the fruit is clean. These trees were infested with black scale and Santa Ana red scale. I have since sulphured some ten acres of the orchard, using a common seed-sower, and in two hours' time did the work.

Curing the White Adriatic Fig.

[An essay by George A. Raymond of Miramonte, Kern county, at the Los Angeles Convention.]

In what I am about to say on the curing of the fig, please bear steadily in mind, first, that I speak of the White Adriatic only, and second, of that fig as grown by me in my own orchard and locality. Of other varieties, other localities and other methods I have but little knowledge and no practical experience. So I condemn none of these things, claiming no superiority in any respect.

The proper curing of the fig begins with the picking. No one with large, clumsy hands and thick, blunt fingers can pick as it should be done. The stem must be taken, but the skin must not be bruised nor the fruit split. Pick when the figs are fully ripe, but do not use figs that have dropped off the tree to the ground. I differ here from other growers, but I find that a sound fig will not drop, but will dry on the tree, and I also find that the figs that drop are always defective. Do not forget that I am talking only of my figs. Pick in small wire baskets that hang on the left arm, leaving both hands free. Empty these into shallow boxes or baskets. Do not use deep ones, as the fruit is so tender that the lower portion in a deep vessel becomes bruised and for curing worthless. Place the figs carefully on the trays, none touching, all lying in the same direction. Sort into two sizes and keep on separate trays. Use enough sulphur to burn 15 or 20 minutes and leave in the sulphur box an hour.

Place the trays on racks in the sun. When one side is bleached turn each fig over by hand to bleach the other. The racks for trays should hold them at a convenient height from the ground for the frequent handling they now require.

It is palpable that picking can be done only in the forenoon, as the entire afternoon is required for bleaching.

In from two to three days begin to roll the figs. This will require extreme care to avoid bursting the skin, as it is still quite tender. In laying down each fig, lightly press it a little flat.

The following day they can be rolled much more vigorously, and from now on will stand rough handling. In putting down the figs after the second rolling, press them quite flat. They will then cure more quickly. In another day or two they should be well cured, but not dried. Never let them get dry and leathery, as they cannot be restored to softness. Stack the trays for another day or so and then empty into the sweat-boxes. At every handling, beginning with the picking, a process of sorting and rejection goes on—the sorting for degree of curing and the rejection of bad and defective figs. The defects are mainly black mould and white and souring. How to detect these it is impossible to describe—partly by their appearance, but principally by the feeling. Often the bad figs are the largest and handsomest, but they never feel just as a perfect one does. The only rule I can prescribe is, until you have learned the trick, to break open and examine any fig that is in the least suspicious. In this way you will soon learn to detect the bad ones, and it will thereafter become almost instinctive and mechanical. This is a most important matter, as one bad fig will spoil a box. Keep in the sweat-boxes a few days, turning them over every day. Now dip in wire baskets in boiling water with a little rock salt added—about one pound salt to twenty gallons water. Dip in and out quickly and with a *swash* three or four times. This serves to wash off the dust that has settled while the fruit is on the trays.

Let the surplus water drain off and then spread out two or three inches deep on trays or a table, and at once cover carefully with light house lining. This keeps off the flies and other insects and still allows a circulation of air. If dipped in the forenoon they will be in condition to pack next morning. I have now fairly covered the entire process, but feel that I have failed to convey an adequate idea of the extreme watchfulness, care, patience, labor and neatness requisite to make it an undoubted success. Not once, except in pouring daily from one sweat-box to another, can they be handled in bulk. Each fig stands on its own merits and must be treated accordingly, never slighted. I imagine that figs call for infinitely more labor than any other cured fruit, and the detail is great. Let no one go into this business unless he can and will follow it out thoroughly.

Moreover, ascertain first whether your locality is adapted to the fig, for if not, you will be greatly disappointed. The trees may grow well and bear heavily; but, if the climatic conditions are not right, the crop will be useless for curing. That, however, is a matter outside of an essay on curing.

As to packing, do it to suit your own fancy, only do it well and in attractive form. Something original and novel, if neat and pretty or handsome, will prove of great importance in selling the goods. Do not imitate anything or any person, foreign or domestic, as thus you can never establish your brand and hold your market. If, however, you have something distinctively your own, and the quality of the fruit is good, your hold will become stronger and stronger and you will be pretty safe against even your imitators.

Co-operation in Orangeland.

A "Mighty Uprising" in the Ranks of the Growers of Southern California.

Reviewing the situation of the orange-grower of southern California at the present time, the *Covina Argus* says:

"Very few people, except those connected with the movement, realize what a complete revolution is taking place in the matter of marketing citrus fruits. The causes which have led to the present general movement to organize have been cumulative, beginning two or more years ago with the attempt by buyers to unduly bear the price of oranges, and an unwise holding out on the part of growers for a greater price than the market would bear. The consequent demoralization which followed emboldened the great fruit companies to make a grand effort to capture the

entire profits of the industry and do business largely on capital furnished by the growers themselves; in other words, to sell solely on commission, to make such returns as they pleased and at such times as they pleased; hence the growers soon discovered that they cut a very small figure in the deal.

"The effort might have been crowned with fair success had not the earstwhile buyers been robbed of their profits by the great California commission houses underselling them in the Eastern markets with fruit that cost them simply packing and freight, or less. Thereupon all the buyers turned commission men, and in the war that followed the grower had the pleasure of not only furnishing the fruit, but was required to pay packing and freight as well, being compelled to do so by the ironclad nature of his contract, the commission man being able to report just what he chose as to the price received and expenses of sale.

"But they bore down just a little too hard on the grower, and the past five months has witnessed a mighty uprising in the ranks of the growers. Unlike most movements of this kind, it has had as its leading agitator the most level-headed, intellectual and far-sighted business man and able organizer southern California contains, Mr. Chamblin of Riverside. Following the example of the Pachappa association, of which Mr. Chamblin has been successful manager for two years, Riverside was speedily organized under the title of "Riverside Fruit Exchange," composed of nine local associations, and controlling about 3000 cars of fruit. Mr. Chamblin then visited in turn every orange-growing district in southern California, with the result of calling a delegate convention in Los Angeles, at which a general plan of co-operation was evolved and subsequently adopted by the district exchanges provided for in the plan.

"The work of organization has gone forward until not less than 5500 carloads are positively assured to the associations, and the remaining 400 are rapidly coming into line."

FRUIT MARKETING.

A Talk on Fruit Marketing.

Fruit-Growers of Sacramento County Give Their Views as to Auctions and Other Matters.

The fruit-growers of Florin, Sacramento county, like their brethren in other parts of the State, are not satisfied with the way their product is handled in the Eastern markets. To consider the matter in all its relations, a meeting was held last week at which there was a general representation of the fruit-growing interest, not of Florin alone but of other parts of the county as well. Mr. Jones Rutter presided, and Mr. Geo. T. Rich acted as secretary. The principal talk was made by Mr. J. P. Murphy, who told the convention what he had learned about the marketing of California fruit in a residence of six months at Chicago. The procedure is radically wrong, he declared, and it is not surprising that the producers do not get adequate returns. He had visited the fruit auction house and found it about the size of an ordinary country-town lodge-room and not farther than across the street from the jobbers. "The auction plan has been a costly experiment to you, and it is a failure so far as the producer is concerned. You understand an auction sale as a sale where the article is sold to the highest bidder, but you should also understand that it is a forced sale; in other words, an article is put up to be sold, and it has to be sold. You put up a \$60 horse at auction and you will be lucky if you get \$20. That's the way your fruit is sold. A box of fruit is sold by auction at 90 cents, and in an hour afterward it is sold by the purchaser for \$1.25. I believe the open auction is the worst. The first complaint is of the riff-raff, the Jew peddler and the retail dealer. The first thing he does is to open and tear apart the packages and ruin them, and depreciate the value 25 per cent. Then the jobber, who realizes that he is bidding against his own customers, picks out the best and buys them, and the rest goes down as job lots. But the chief fault is the auction system. You shipped this year 130 carloads of fruit, and you paid \$7000 for commission and got nothing out of it. It would pay you to spend that commission in other ways and sell it on the street, where fruit sells for \$200 and \$250 per ton. Parker, of Placer, is very rabid on the closed auction. He believes that is where the difficulty exists. But I will tell you that the auction system generally is the great defect in the system of selling. There is no glut in the fruit market."

"Why were the prices in the aggregate less before the auction system than they were since?" asked a delegate.

"Because Chicago had more fruit to handle," was the reply. Mr. Murphy went on to explain that under the closed auction system nobody could bid unless he was a member of jobbers' association. But, of the two, he believed that the closed auction was the worst. It would be supposed, naturally, that the larger the attendance the higher would be the bids, and the most lively would be the bidding; but such was not the case, because the jobber feels that he has to bid against his own customers, and the consequence is that he chooses the best, and the rest goes to the riff-raff at jobbing prices, which are from 25 to 50 per cent less than the normal price.

Mr. Booth of Cosumnes did not agree with Mr. Murphy. He thought that the open auction brought the producer closer to the consumer. Mr. Murphy said that the auction men knew that they had the producer in their grasp, and therefore they had carried out the system that now prevailed.

Mr. Booth was of the opinion that the auction system would be good if it were carried out fairly as an auction. The purpose of the auction was to do away with the broker.

Mr. Murphy replied that such would be the fact if the auctions were carried on as they should be. But they were

not. No one could sell fruit to advantage by the single carload, because there could be no stability in that kind of business. He recommended that fruit should be sold on the commission plan. Fruit should be sent to the commission-houses, and the growers should have a man to attend to their interests. That is the only solution of the problem. The open auction is not a remedy.

J. P. Murphy Sr. of Brighton said that the Earle Fruit Company tried to get admittance into the closed auctions, and they were refused admission. The company brought the matter into court and the court decided against them.

Another fruit-grower said that he knew of an Italian fruit dealer who was not a member of the closed auction ring, but who was admitted without protest and who bought as many carloads of fruit as he wanted.

Mr. Murphy of Sacramento explained that the Italians had a great control of the fruit market in Chicago, and that if they combined to boycott a broker they could ruin his business. Therefore, there was no doubt that Mr. Italian could not be bound by the rules of the closed auction.

Murphy Sr. of Brighton asked whether there was not a fight between certain fruit sellers in Chicago. That meant competition among the auctioneers.

"Are they not fighting each other with our fruit?"

"No," replied Murphy of Sacramento, "because they get their commission no matter what the fruit sells for. There was a fight there, but it doesn't amount to anything."

"Well," continued Murphy Sr. of Brighton, "Earle & Co. have sent me circulars speaking about this thing and showing what a large attendance there was at the open auctions compared with the closed auctions."

To this Mr. Murphy of Sacramento replied that if such were the fact, Earle & Co. were trying to hoodwink Mr. Murphy.

"I will say that there is another remedy," said Mr. Murphy of Sacramento. "You can dry your fruit. I have never known a failure in the sale of dried fruits."

Mr. Booth interrupted the Sacramento Murphy by saying that he had had an experience in dried fruits which did not pan out profitably.

"Suppose everybody dried fruit, wouldn't there be a glut?" asked a delegate.

"No, sir," responded Mr. Murphy. "There are a large number of cities of 25,000 population and over to which no California fruit is shipped direct. They must get it from Chicago."

"If you cannot sell your fruit by the commission plan," added Murphy, "you have the auction to fall back upon."

"But," interposed the Brighton Murphy, "that's where you say the loss comes in."

The laugh that ensued drowned the reply of the Sacramento Murphy, and when he became audible he said that the California fruit always landed in Chicago in good condition. There was one lot of grapes during his six months' sojourn there that was a little watery—not spoiled—and they were hawked about the streets at ten cents per pound, and that was deemed a sacrifice. The man who sold them was so particular that he used a scissors to snip off a grape or two if the bunch was over weight.

The thanks of the meeting were extended to Mr. Murphy for his entertaining address.

James Rutter of Florin believed that men should be sent East to supervise the sale of California fruit. He was of the impression that the co-operative shippers realized better prices this year than ever before. Six hundred carloads of Tokay grapes realized 90 cents for 25-pound crates.

"The aggregate net yield of my Tokays was from 65 to 7 cents per single crate by open auction," added the speaker.

Mr. Murphy, Sr., of Brighton, said there was no question that there was a steal going on somewhere. It was so easy for the buyers to combine to get the fruit for less than nothing by not bidding against one another. In El Dorado county there was a bounteous fruit crop, but the growers there thought that the Eastern commission merchants were getting away with the cream.

Fifty thousand peach and pear trees have been set out in southern Missouri, and Michigan is following the example. That is a competition that California growers must prepare to meet. "We are sending fruit to cities in the East that are themselves shipping fruit away. What we want is to have a more scientific distribution of our products. Let us send our fruit in compartments in the cars, and distribute fruit among these towns of small population that depend upon Chicago and other large cities for their supply. We are all shipping fruit to Chicago, where it is slaughtered, and the buyers ship it out and supply these small cities at a big price. We could ship to those cities as easily as we could to Chicago."

"Ogden is a magnificent distributing point, which has been neglected, and there are many more. I believe in Mr. Murphy's idea of sending an agent East to work in conjunction with us. I sent 304 crates to Chicago and received as my return a bill for \$10 freight, and among that lot were eight boxes of quinces which would keep until Christmas, but the whole lot had to be sold and I was the sufferer."

"We must find better markets and more of them, and a better system of distribution, or else the fruit business will be a failure."

Mr. Booth, who had been appointed on the Committee on Organization, made the following report:

"I would suggest the formation of a corporation with a capital of \$5000 divided into 50 shares of \$100 each, or into 100 shares of \$50 each. Each stockholder should have one share and one vote only. There should be five directors, and a president elected by the directors, and the express purpose of the corporation should be to sell our fruit in the East at some specific points, to be selected by the directors. The stock should be non-transferable and every grower and shipper should be eligible for membership. Three-fifths of the profits should come back to the stockholders as a rebate, in proportion to their shipments, and two-fifths to the non-stockholding shippers."

Mr. Murphy, Jr., of Brighton, advocated the co-operation of the State fruit-growers in inviting and soliciting trade.

There was no reason why the growers could not send fruit to the East as cheaply as others could. The headquarters could be established at Florin, and all fruit could be shipped through one association. In that way two sets of employees would be necessary.

Mr. Booth explained that there was nothing in his plan to prevent a county organization.

Chairman Rutter said that the Directors of the Co-operative Fruit Company of Florin have formulated the nucleus of a plan whereby an agent could be sent along with the fruit to see that it was properly sold. Competition is from the Devil; co-operation is from God.

Mr. Taylor, of Florin, advocated the sending of a spy to the East to see how their products were disposed of. He added:

"These people in the East do not care for us. They would sell the whole State of California for \$50."

"I tell you again," said Mr. Murphy, of Sacramento, "that those people, with few exceptions, are sharpers. Do your business yourself. One of those dealers stated to me that prices at times were charged for the simple purpose of hoodwinking the rancher—playing him for a sucker. You may get \$4.50 for five boxes of your pears, while for the rest of the load you get only \$1.25. This agent admitted that he was in the business to make all he could out of it."

Several delegates having to go a long distance to resume their plowing, the meeting adjourned without action.

The fruit-growers will hold a meeting in January, which promises to be of unusual interest.

FORESTRY.

Forest Conservation.

[An Essay by Abbot Kinney, Lamanda Park, Los Angeles County, at the Los Angeles Convention of Fruit-Growers.]

The importance of a conservative forest policy is nowhere greater than in California. It is now fully established by the forest experience of France, Germany, India, Australia, etc., that judicious management will give a high and perpetual product of bark, fuel, tar, timber, etc., from the forest without injury to the forest reserve.

As great as is the value of a perennial and secure source of forest products, and as much as we may esteem the forest from a sportsman's side or regard it from the sentimental or sanitary view, it is all as nothing to its influence on the delivery of the rainfall from a country's watershed.

A forested watershed will deliver a given rainfall regularly and slowly over a long period as compared to the delivery of the same rainfall from the watershed deforested. The trees, roots and humus detain and divide the rainfall, so that the water has time to be absorbed into the soil and rock veins. Thus in a forested district there are none of the barrancas and gullies generally in a bare country. In California we have gullies and washes in the southern section with little forest and small rainfall, while at Mt. Shasta, with 60 to 90 inches of rainfall and a mountainous forest, these land scars are practically absent. On a bare mountain watershed there is little opportunity for the rain to be absorbed or for it to replenish the springs and sources of perennial water supply, consequently the rainfall from such a district is delivered suddenly and in a short time, and we have dangerous and destructive floods. As a watershed is without forest the delivery of its rainfall is uncertain and injurious.

We are quite safe in saying that in California "As the mountains are deforested so will the perennial character of the springs and streams diminish or be lost, while on the other hand floods and torrents will increase in force and destructiveness. The water flowing regularly from the forest mountain is the aid and servant of man in his mill, house or field. The water tearing madly over the denuded rocks of a bare and arid declivity is his scourge and his destroyer."

In the first report of the extinct Board of Forestry a number of domestic and foreign instances are collected showing the damaging effect of undue forest denudation. Our brush or chaparral acts as a forest in delaying the delivery of the rainfall.

Some time before the abolition of the State Board of Forestry the friends of forestry in California concentrated their efforts on a national system of forestry. Colorado has gone hand in hand with us in this work and participated in the results attained. We have achieved something important. We have secured the adoption of a policy of making forest reserves. The Federal Government has reserved large districts of land on the western mountain watersheds for the first time for forestry purposes and called them forestry reserves. In California, south of Merced, the most important mountain watersheds are now Government forest reserves. The Government has also taken the first step in recognizing its duty of protecting the public forest domain. The Yellowstone reservation and the Yosemite with its large addition are now efficiently and cheaply guarded by small detachments of cavalry. The result of these patrols in preventing forest fires has been very marked, and has demonstrated that these wasteful and destructive forest fires were mainly due to irresponsible sheep-herders. The exclusion of these herds from the Yosemite addition ended the danger from fire.

These matters promise well for the gradual establishment of a self-sustaining, scientific forestry system for the United States.

Nowhere is a conservative system of forest management more important than in a country of steep mountains alternating with fertile plains. When to this condition is added that of alternating dry and rainy seasons, under which irrigation becomes an important agency in agriculture, we have paramount reasons for a forestry system.

We say in a general way that the more difficult it is to

create or maintain forests on mountain watersheds the more important these become to preserve the perennial flow of springs and streams and to diminish or prevent floods and torrents.

The blue gum is still the most valuable addition to the forest flora of California. We have indeed demonstrated the superiority of *Eucalyptus Robusta* in situations exposed to the sea influence, on the one side, and the superiority of the *Eucalyptus Corynocalyx* (Sugar Gum) in resisting drouth on the other; but the Blue Gum is still king of rapid growth, available in most of the settled districts of southern California, quickly available for firewood, and eventually, in favorable situations, valuable as lumber. It is the tree giving the promptest results of any known in the State. It comes easily from the seed and gives the best results when planted small, and is therefore a cheap tree for forest planting. When some plantations of Blue Gums are made in favorable locations, say in a burnt-over redwood district or in any damp location on the central California coast, we may expect to get trees similar in grandeur to those of Tasmania, where the Blue Gum often surpasses 400 feet in height. It is not generally known that the Blue Gum is a close competitor for the glory of being the tallest known tree.

The introduction of insect pests, while introducing foreign plants, has been the cause of damage and injury to the State. Often this damage has far exceeded any possible benefit to be hoped for from the plant introduced. To obviate this, let me suggest the advantage of adopting the policy from which I never departed in introducing foreign plants to this State—that is, by the seeds alone. I have no knowledge of any insect whatever as ever following the distribution of forest trees grown from our examined seed. Such a policy would make little difference in time and result in much added security, not only to forest trees but apply to all other plants. I am decidedly opposed to the importation of nursery stock from any infected district, and I believe that every foreign district producing nursery stock should be deemed infected until proven otherwise.

The importance of forestry is a thing no Californian can afford to lose sight of. Every city, village, home, orchard and field in southern California is subject to damage or destruction by unwise forest denudation. Such destruction may come through diminished summer water supply or by excessive flood delivery of water or the creation of new torrents, as has already taken place in our section. With all our mountains bare, there is no place here that would be safe. Let us join, then, in advising our federal representatives on this vital matter.

POULTRY YARD.

Hints from Experience.

TO THE EDITOR:—At present eggs are a good medium of exchange—in fact one might almost say they are legal tender. The man who owns a flock of egg-producing birds, and understands discounting biddies notes, commands the situation, for be it known if you give to fowls value in the form of proper food and attention there will be no failure on their part of payment in full with interest.

There can be but one successful method of egg production during the annual period of scarcity, preparation for which begins with the hatching of winter layers at the proper season, which should begin about the 1st of March and carried to about May 1st or June. We speak now of getting layers for winter. For spring and early summer layers, set in November, December and January pullets from these settings. With proper care they begin laying at four months and keep up their paces through summer and early autumn, which permits selling old birds when eggs are low and poultry scarce. Young roosters from these hatchings command good prices. Proper care begins with warm, clean houses, movable perches, dirt floors, outside nests. As to cleanliness, the more of it the better; clean out droppings not less than once a week, twice is better.

The use of the following insecticide, sprayed or thrown about with whisk-broom, is found equal to those of high-sounding names and still higher price: Bisulphide of carbon, 1 part; carbolic acid, 1 part; coal tar, 3 parts; or bisulphide of carbon 1 part; coal tar, 3 parts; kerosene, 1 part. Use with care about setting hens and small chicks. Thorough and persistent use will put a quietus on vermin. Don't forget to keep the dust bath in order.

The present is an era of fads. In feeding it should be remembered that our domestic fowls are not scavengers by nature, and only practice the art from force of circumstances, much to their own detriment and that of their owner. It may often be desirable to utilize by-products. This can only be done profitably while keeping in view the fact that a ration must contain certain chemical combinations, else we are feeding only at expense of time and material so far as egg production obtains.

We read much of fresh ground bone for growth and eggs. Counting the first cost of bone, expense of preparation, the difficulty of securing supplies in condition to feed, butcher's scrap being often sour and unfit for food, there would appear ground for discussion. A certain amount of animal food is no doubt requisite to large egg production. There are, we believe, at present certain kinds of ground animal food much cheaper than fresh-ground bone, or at least for small feeders who cannot afford to use power bone-mills. So far as the element of lime goes, the cheapest and best form has been found in water-slacked lime, broken fine, to which fowls should have free access at all times, as also a box of wood ashes and broken charcoal or stone coal.

In feeding vegetables we have found it a useless waste

of time boiling, mashing or otherwise treating them. Beets, cabbage, turnips, onions, green clover or hay cut fine in moderate quantities—only enough to promote healthy digestion—are the best.

In selection of grain ration, care should be exercised to make combinations to promote growth in young and egg production, wheat being the best, and of the whole grains use oats, Egyptian corn, Indian corn. Of ground feed wheat bran and rolled barley stand at the head.

A change of food is of course desirable, and during winter the morning feed should be something hot. Do not feed too largely of ground food or cooked, remembering some form of grit must be always at hand. Of stimulating foods, tonics and medication we may write at another time.

Bakersfield, December, 1893.

THE DAIRY.

Sterilized Milk.

The application of heat to milk to retard souring by killing the germs of fermentation is receiving much attention from Eastern dairymen at the present time. At a convention in Iowa last month a paper was read on this subject by G. B. Lawson of Grinnell. He based his arguments upon the two facts that souring of milk is due to bacteria, and that heat will kill the bacteria. As to the method, he said it should be heated in open pans and constantly stirred so it will not have a cooked taste. He thinks milk would be much improved by running it through a separator without creaming it, the object being to purge out impurities. He showed a method by which creamery men can run private milkmen out of the business, or rather absorb their business as they do that of the home churner. It is by sterilizing milk and shipping it to the city market.

The cows can be milked in the morning, the milk taken to the creamery and sterilized before noon and shipped next morning. This would take that trade out of the hands of private dairymen, the creamery doing the work by wholesale.

In sterilizing cream equally marked advantages are gained. One quart of sterilized cream is worth two quarts of unsterilized cream for the manufacture of ice cream. Ice-cream makers say that it "swells" in making up. Cream is better for this purpose when 24 hours old than when fresh, and he has kept it from Tuesday until Friday and found it in prime condition. Butter made from sterilized cream has brought him one cent a pound above the highest quotations. He sent some to the World's Fair, and it scored as follows: Flavor, 42; grain, 25; color, 15; salt-

ing, 10; package, 5; total, 97, being three points off in flavor—otherwise perfect. This is convincing proof that sterilizing does not hurt the grain nor destroy the flavor, for it was still marked high.

Mr. Lawson's paper called attention to the fact that a starter must always be added to the sterilized cream to ripen it, as the bacteria have been destroyed by the heat. He is satisfied that thousands of dollars would be added to the value of Iowa butter by sterilizing cream.

Another paper was read by Prof. Pammell of the Iowa Agricultural College. It sketched the work of bacteriologists in this line and indicated the preference of the writer for the culture of Prof. Storch. He spoke of the care and skill required to propagate the desired species of bacteria, precluding its being done by amateurs. With the help of a young man at the college he was willing to furnish cultures to creamerymen, provided the matter was placed upon a commercial basis. The paper was in line with that of the preceding, showing the necessity of using a culture or "starter" with sterilized cream. It differed from it in suggesting the propagation and sale of it by those connected with the experiment station.

Mr. Mower remarked that Mr. Lawson's paper suggested to him the sterilizing of skim milk before it is taken from the creamery.

Mr. Dorchester: Last year I hauled my own milk, the creameryman sterilized the skim milk and I had good, sweet milk to feed regardless of weather. This year I hire my milk hauled, and it reaches home later in the day and is not worth more than half as much as it was last year—it begins to sour and curdle before it reaches me and is then past saving. My calves this fall are not worth so much by \$10 each as they were last fall, so I have lost \$10 on the skim milk of each cow. Last year the milk would keep three days; this year it is spoiled before I get it, and all the conditions are the same except the time of transit to and from the creamery.

Mr. F. A. Leighton: If I get the milk sweet, and heat the skim milk to 160°, it reaches the farmer sweet, but our patrons requested us not to sterilize and so we have quit it. The cans are too hot to handle, and the milk too hot to feed until it is cooled, and they prefer sour milk to scalded milk.

Prof. Kent: Needing milk for feeding purposes on the college farm, I bought 500 pounds a day last summer at the college creamery, sterilized it, and found that it would not keep sweet unless immediately cooled after being sterilized. Sterilizing is a very simple thing. Heat destroys organic substances. Warmth favors propagation of bacteria. Heating sterilizes the milk. This simply means that it kills the bacteria in it; but, unless immediately cooled, the new germs which get in from the air find congenial conditions for rapid propagation, for it drops to the favorable temperature for bacterial growth and the milk is soon swarming with bacteria and speedily sours.

Alfalfa on Heavy Land.

Mr. Ira W. Adams of Calistoga writes as follows to the Sonoma Farmer concerning his experience and observation of alfalfa:

I shall never tire in speaking or writing about the great value of this wonderful forage plant. One would naturally suppose while reading many of the articles that are written about it that it is a very difficult matter to get a "good stand." Furthermore, that it is almost useless to sow it on heavy land, especially if it has a stiff clay subsoil, and the land so situated that it is very wet and cold during the winter months and cannot be easily tilled. Now this is almost exactly a description of my land on which I have been raising alfalfa for the past ten years, with the very best of success. Water never stands on the land, but the ground is so very cold and wet during the rainy season that even wild turnips and mustard do not flourish until late in the spring. I sowed over an acre of alfalfa last spring, about the middle of April. The ground was too dry in many places, but I took my chances. No rain fell for about two weeks after I sowed the seed, and then only three-eighths of an inch, which was all the alfalfa got the benefit of. It came up nicely and I mowed the first crop, part of which was two feet tall, the last of May, and the second crop early in July and then pastured my cow on it until November. I shall give the alfalfa a most thorough harrowing this week, as the ground is completely covered with weeds that have all sprung up since our glorious rain. By so doing, my alfalfa will be greatly benefited and the troublesome weeds almost entirely destroyed. In a few weeks, if the ground is not too wet, I shall harrow it again and probably give it the third, if not the fourth, harrowing—it pays.

A friend of mine has offered me all I want of his first crop of alfalfa gratis, as he said it was not worth putting into his barn—it was so very foul with weeds and most of them were thistles. I went to look at it and concluded that it was not worth bringing home, although it was cut and cured. If he and many others that I know would make use of the harrow, as I have stated, they would find even the first crop a valuable one and almost free from weeds.

I acknowledge that a little of my alfalfa drowns out in very wet winters, but then the gophers and moles get the same dose and are almost entirely exterminated. Were it not for this fact they would destroy more of my alfalfa than the excessively wet winters. I would advise every one that has a small place, to have an acre or two in this valuable forage plant. Sow 30 or 35 pounds of seed to the acre and harrow it in well, any time in February, March or April, according to the season. Don't be afraid of frost, notwithstanding what many have written about alfalfa being easily killed by frost when young. I had several acres just out of the ground some years ago, when a severe frost came that almost completely killed the young grape shoots and my alfalfa was frozen stiff, but was not harmed.



FACTS FOR FARMERS

Oliver Invented and Gave to the World the Chilled Plow.

THE GENUINE OLIVER CHILLED PLOWS

MADE ONLY BY THE

Oliver Chilled Plow Works,

South Bend, Indiana,

ARE THE BEST GENERAL PURPOSE PLOWS IN THE WORLD.

A strong statement but a true one, for these plows are better known, have reached a larger sale, have had a longer run, have proved more popular and given better satisfaction than any other plows on the face of the globe.

We mean the GENUINE OLIVER, and not the imitations claiming to be the Oliver, or equally as good. Such imitations are on the market, placed there by unscrupulous manufacturers who seek to trade on the good name of the OLIVER.

Look out for imitations, buy only the genuine Oliver plows and repairs, and be sure you are right before you take the plow home.

Once more—Beware of "bogus" Oliver plows and repairs, and take none but the genuine, made by the OLIVER CHILLED PLOW WORKS, SOUTH BEND, INDIANA.

PACIFIC COAST BRANCH:

37 Market Street, - - San Francisco, Cal.

A SEAL SKIN COAT FREE.

Send 25 cents for particulars, including sample cake of SEAL'S SKIN SOAP, for Complexion and Toilet.

A. J. McKnight.

1125 Mission St., San Francisco, Calif.

TREE WASH.

OLIVE DIP.

"Greenbank" Powdered Caustic Soda and Pure Potash.

T. W. JACKSON & CO..

Sole Agents,

No 5 Market Street, San Francisco, Cal.

RED SEAL GRANULATED 98% LYE

HAS NO EQUAL

FOR DESTROYING SCALE BUGS AND OTHER INSECT PESTS ON TREES AND PLANTS.

FOR TREE WASH!

—USE—

One pound to 5 gallons of water.

Thousands of Orchardists testify to its value, using it in preference to all other preparations. Where the Red Seal is applied it kills the insects and at the same time forms a coating through which others cannot penetrate. When used in the above proportions, it is a

GREAT BENEFIT TO THE TREES.

Put up in SIFTING-TOP CANS, so that any quantity may be used and the balance preserved uninjured.

MANSFIELD LOVELL,

184 California St., San Francisco.



SOLD

—BY—

ALL GROCERS.

FOR HOUSEHOLD PURPOSES

The Red Seal Lye is indispensable.

USED AS DIRECTED it will take the place, and at 75% less cost, of all other alkaline preparations, soaps, etc., now on the market. ONE CAN will make 10 to 12 lbs. of Hard Soap, or 200 lbs. of Soft Soap. See directions in can.

It cleans floors, kills roaches and bugs of all kinds, cleans milk vessels, tin or wood; keeps farming implements bright and free from rust; is a perfect disinfectant; softens water, washes dishes and clothes; and can be put to a thousand uses in place of soap or other preparations.

P. C. TOMSON & CO.,

Manufacturers, Philadelphia, Pa.

The Green Competition of these days

Renders it imperative that a Farmer's acres give him back the largest possible returns for the labor he bestows upon them. This means labor-saving tools, especially such as perform a variety of operations that when done by hand are slow, tedious, and consequently costly ones.

The Planet Jr. Combined Hill Dropping and Fertilizer Drill

is a "Competition-meeter," and is but one of an interesting family of labor-saving, and therefore money-earning, tools. Our latest Catalogue will tell you all about the whole family, and will give any Farmer valuable information in the line of improved methods for cheapening his cost of production.

We send this book FREE to any address. A postal card will bring you a copy.

S. I. ALLEN & CO., 1107 Market St., Philadelphia.

FRANCOIS SMITH & CO.,

MANUFACTURER OF

SHEET IRON & STEEL PIPE

FOR TOWN WATER WORKS.

Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes.

NO. 130 BEALE STREET, SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.

THE HOME CIRCLE.

The Lost Kiss.

I put by the half-written poem,
While the pen, idly trailed in my hand,
Writes on, "Had I words to complete it,
Who'd read it, or who'd understand?"
But the little bare feet on the stairway,
And the faint, smothered laugh in the hall,
And the eerie-low lisp on the silence,
Cry up to me over it all.

So I gather it up—where was broken
The tear-faded thread of my theme,
Telling how, as one night I sat writing,
A fairy broke in on my dream—
A little inquisitive fairy—
My own little girl, with the gold
Of the sun in her hair, and the dewy
Blue eyes of the fairies of old.

'Twas the dear little girl that I scolded—
"For was it a moment like this,"
I said, "when she knew I was busy
To come romping in for a kiss?—
Come rowdying up from her mother,
And clamoring there at my knee
For 'One little kiss for my dolly,
And one 'little uzzer for me!'"

God pity the heart that repelled her,
And the cold hand that turned her away,
And take from the lips that denied her
This answerless prayer of to-day!
Take, Lord, from my mem'ry forever
That pitiful sob of despair,
And the patter and trip of her little bare feet,
And the one piercing cry on the stair!

I put by the half-written poem,
While the pen, idly trailed in my hand,
Writes on, "Had I words to complete it,
Who'd read it, or who'd understand?"
But the little bare feet on the stairway,
And the faint, smothered laugh in the hall,
And the eerie-low lisp on the silence,
Cry up to me over it all.

—James Whitcomb Riley.

The New York Girl.

I ALMOST wish I hadn't been invited," said Jenny, as she stood before the dressing glass pinning around her neck the old piece of white lace Aunt Barbara had given her.

"O Jenny! I only wish I could go!" I wouldn't care what I had to wear," cried Madge, who, with a red flannel bandage about her throat and a bottle of cough mixture in one hand, sat by the fire watching her sister. It's just my luck to be laid up with this horrid cough."

"And it's just my luck to have to wear this old blue cashmere," said Jenny.

"I do wonder what the girl from New York will have on!" and Madge looked reflectively.

"Madge! You've said that at least twenty times! Of course she will be dressed to death. She won't lose such a chance as this to show off."

"The street dress she had on yesterday was perfectly lovely!" said Madge. "She went by here twice, and I had a good look at her. I only wish I could see all her clothes. I might get some ideas for my own. Find out how long she is going to stay with Ella Eastman, Jenny, and do get well acquainted with her, so you'll have a lot to tell me when you get back."

"Indeed I shan't! I'm not going to toady to her for anybody. She is stuck up enough as it is. If you'd just seen the way she looked at me when Ella Eastman introduced us yesterday in Sil's store! Evidently so surprised that Ella should know any one who would wear an old waterproof cloak and carry a cotton umbrella. I never will forgive her that look."

"Now, Jenny! you're so sensitive, you know. Perhaps you only imagined she looked surprised."

"No imagination about it. I guess I can see. I only wish she weren't going to be at the party. It will just spoil it for me. Now, how does this arrangement strike you?" turning for her sister's inspection.

"Well, you look very nice, considering. I don't like that breastpin exactly; but of course you're obliged to have something to hold the lace. I wish you had some flowers; they always add so much to a dress."

"Flowers! at this time of the year! and in Westbridge! You might as well wish I had diamonds."

"Jenny, isn't it time you were going, my dear?" called Aunt Barbara's mild voice from the foot of the back stairway; and Jenny caught up her waterproof cloak, threw a "fascinator" over her curly head, and, with a parting glance in the glass, hurried down into the sitting room, Madge following with the lamp.

"You look very well—very well indeed," said Aunt Barbara.

"O Aunt Barbara! I know I'll be the worst-dressed girl there."

"Try not to think of your clothes, my

dear, and he so pleasant that other people won't think of them either. You won't enjoy the party if you let envy and discontent into your heart."

"I know—but it isn't always easy to be pleasant, particularly when one has to wear a thick, dark dress to a party. But it's no use to talk about it. We can't help being poor, and it's no disgrace. Is Huldah ready? I might as well go out the kitchen way."

Old Huldah, who had lived with Aunt Barbara for ten years, was waiting by the kitchen stove, muffled in a big plaid shawl and a thick black worsted hood. Jenny didn't like to take the old woman out at night, but her aunt wouldn't let her go through the streets alone.

"You'd oughter er let me see how you looked," said Huldah, as they went along the path leading to the front gate. "I ain't never seen you dressed out for a real party."

"Oh, I'm not worth looking at, Huldah. I haven't any finery, you know, and you've seen me in this old blue cashmere fifty times."

"I hearn down to the store this mornin' that that girl that's visitin' to Squire Eastman's had flowers sent all the way from New York," said Huldah slowly. "Come by express. I guess she'll be as fine as a fiddle."

"Oh, of course," replied Jenny, a little sharply. And then they tramped on in silence, the hard snow crunching under their feet. The people in Westbridge never cleaned off their sidewalks in winter; the snow always lay on them until thawed by the sun.

Dr. Wright's house, where the party was given, was lighted up from the ground floor to the attic; and Jenny felt quite excited when she saw that the steps were covered with carpet, and that the doctor's boy, with white cotton gloves on his hands, stood in the vestibule waiting to open the door. She bade Huldah "good night," and ran lightly up the steps, wondering if, under the circumstances, she ought to speak to Tim. She thought it would hardly do not to recognize him in some way, as he was Huldah's nephew; so she compromised on a little nod, and then hurried up the broad flight of stairs to the second story, in the wake of three girls who had gone in just before her.

The doors of the front parlor were open, and Jenny saw Mrs. Wright and Bertha standing just within, the latter wearing a pale blue nuns'-veiling trimmed with white lace.

"I do hope I won't be the only one in a thick dress," thought Jenny, sighing involuntarily.

One of the girls in front of her turned suddenly and looked back, and Jenny recognized her as Edith Alden, the girl from New York, in whose honor the party was given. She nodded as indifferently as she could, and the next moment they were in the dressing-room.

The room was half full of girls, all chattering like magpies; and Jenny's heart sank like lead as she saw that nearly all wore light dresses, and the few whose dresses were dark had turned them in at the neck and filled in the space with illusion or silk, so as to give them a pretty effect, while all wore little ornaments in the shape of chains, fancy pins or bracelets. Oh! If only she could slip out and go home! But it was too late for that. Half a dozen girls had already spoken to her.

She made her way to a far corner, and began slowly to unbutton her long cloak, dreading the moment when she should stand revealed in her plain, dark dress, with the ancient hair breastpin as her only ornament, and just then she heard some one say:

"Lend me your glove hook, Fannie. I never can button these gloves with my fingers."

Gloves! Jenny had never thought of gloves! The only pair she owned were dark brown, and were reserved exclusively to wear to church. Oh! what could she do! It was bad enough to have on a dark, heavy dress—but no gloves! Tears of wounded pride rose so thickly to her eyes that she could not see to unfasten the "fascinator," which had caught in the breastpin.

She heard the girls troop out, eager to see what was going on below; but she stood there fumbling with the breastpin, and wishing—oh, how earnestly!—that she hadn't come, and wondering if she would ever have the courage to go downstairs.

"Want to use my glove hook, Jenny?" asked Ella Eastman, on her way to the door.

"I—no—I—I didn't bring my gloves," faltered Jenny, without looking around, and dragging desperately at the "fascinator."

"Well, I came very near forgetting mine," said Ella, in an indifferent tone. "Come on, Edith. Are you ready?"

"Almost. Go on, don't wait for me. I'll follow you in a minute."

"I'll wait at the stairs for you. I want to look down into the hall," said Ella, as she left the room.

An instant of hesitation, then swiftly the girl from New York crossed the room to Jenny's side. How sweet she looked in her white crepe with pearls on her neck, and a great bunch of tea roses on her breast! And how carelessly she tossed on a chair her plummy fan and lace handkerchief. Then, as in a dream, Jenny saw her plunge her hand into a blue plush "party bag" and heard her say:

"It is too bad you forgot your gloves. Can't you use these? They look as if they'd fit you. I always bring two pair, so that if I tear one pair I have another ready. And I want you to have these roses, too. See how pretty they look against your dark dress. They scarcely show at all on mine."

Then—so quickly that Jenny scarcely knew how it was done—the roses were pinned on her breast, and with a little smile and nod, as if pleased with the effect, the girl from New York was gone.

Jenny stood there a moment, dazed, bewildered, with a lump in her throat, tears in her eyes, and the pretty gloves in her hand. Only the arrival of a fresh bevy of gay young guests aroused her.

"Why, Jenny Cole, that you?" said one. "How nice you look, Jenny," from another; and "Where did you get those exquisite roses?" cried a third.

"They were a present," answered Jenny, as, drawing on the gloves, she moved so as to see herself in the long mirror.

She hardly recognized herself, so much did the beautiful flowers add to her appearance. And oh! how happy and gay and well satisfied with everything she felt as she descended the stairway a few minutes later and joined the merry crowd in the parlors. And to think that she owed it all to the girl from New York!

Madge was sitting up in bed with an old shawl around her shoulders when Jenny came in at midnight.

"I've just been taking my medicine," she said. "Did you have a good time, Jenny? And, oh, where did you get all those roses?"

"The sweetest, dearest girl in the world gave them to me," answered Jenny; "and she's coming to call on you to-morrow, Madge. I told her about your cold—and—"

"Who is coming to call? Who is the sweetest, dearest girl in the world?" interrupted Madge. "Do explain who you mean, Jenny."

"I mean the girl from New York," answered Jenny.

"What? That hateful, stuck-up girl who looked so surprised when Ella introduced you? The one you wished wouldn't be at the—"

"Don't say another word," interrupted Jenny. "Oh, Madge! I am so ashamed of myself."

And then she told her all about it.—*Demo-*
rest's Magazine.

Hints for Christmas.

We all like to give Christmas presents, and as many of us have not the money to buy very expensive ones, perhaps a few suggestions about making pretty articles would not come amiss.

To make a photograph holder, take a piece of plush seven inches wide and ten inches long and line it with silk of a pretty contrasting color, with an interlining of strong muslin. Put two pockets on the inside just wide enough to put the pictures in; leave the pockets $1\frac{1}{2}$ inches apart, to allow the case to shut up like a book. Finish the edges with silk cord and fasten narrow ribbon on the sides to tie it together. Embroider the words "Our Friends" on the outside with gold-colored silk.

Pretty thermometers are made by removing the tin frames of a small thermometer. Cut out a piece of pasteboard in the shape of a palette and cover it with plush or velvet, with a design of golden rod painted or embroidered on it. Fasten this thermometer

to the cardboard and tie a bow of ribbon in the thumb hole.

Pretty bangle boards are made of small rolling pins. Cover the middle with plush and gild the handles. Fasten small brass hooks through the plush and tie ribbon to the handles to hang it up by.

One way to make a pretty blotting-pad is to take a piece of celluloid about eight inches long and five inches wide. Paint a bunch of pansies on it. Lay it over four sheets of blotting paper the same size, cut two slits in the top of each, and tie them together with bows of ribbon. Bristol board may be used instead of celluloid for covers, or a piece of cardboard covered with embroidered plush or velvet.

Have you seen the handkerchief, glove, collar and cuff boxes, crocheted out of fine macrame cord, white carpet chain or knitting cotton? They are beautiful and cost so little that any lady can afford to make them. A glove box should be 12 inches long, $4\frac{1}{2}$ inches wide and $2\frac{1}{2}$ inches deep. Use a close pattern for the bottom and three-fourths of an inch of the sides, then crochet open spaces large enough to run a ribbon one inch wide through; then crochet the remainder of the sides close. The lid is made like the box, a little less than one inch deep. Finish the edge with scallops; crochet a ring and fasten it on the lid to lift it by. Use a block of wood for a mold. After the crocheting is done rub stiff flour starch into the work, draw it over the mold and set it away in a warm place until dry, then give it two coats of varnish. This hardens the work and makes it durable. When thoroughly dry, give it a coat of diamond bronze paint. Line it with satin and weave satin ribbon, the same color as the lining, in and out of the space left for it, and tie a pretty bow where the ends meet.

Collar and cuff boxes may be molded over a half gallon jar turned upside down, or a small tin bucket. Make them deep enough to hold the cuffs. Leave space all around the top of the lid to about an inch from the edge for a ribbon to run through. Handkerchief boxes are made square and just large enough to hold large handkerchiefs, folded twice. Any pretty color may be used to line them. Pretty work-baskets are made in the same way, with or without spaces for ribbons. Shape them over an oval baking-dish or a round, square, oblong or octagon-shaped cake-pan. A card-basket is made quite shallow, and is pretty with pale-blue ribbon run through it and tied in bows.

If you wish to make a waste-paper basket, use coarse twine; crochet a close bottom and use a more open pattern for the sides. Mold over a tin or wooden bucket.

To make a pretty shopping-bag, crochet a strip six inches wide and twelve inches long for the bottom. The sides are done in shells by crocheting them double two chains and then double in one stitch, then two chain and repeat with the fifth stitch. Next row put the shells into the two chain of the shells in the row below. Make a handle 12 inches long and stiffen it well. Line with satin. Finish the basket, or any other stiffened crochet work, with diamond gold, bronze or copper paints, or a combination of them. These paints are very easy to use, and the results are always satisfactory.

ELSIE GRAY.

The Way to Sit.

When our grandmothers were girls and straight-backed chairs instead of cushioned divans were the usual resting places, the young women held themselves with a straightness that was almost stiffness. Then when they grew old they still held themselves like duchesses. For it is the way one sits rather than the exercises one takes that determines the erectness of the figure.

A prominent physician says that the proper sitting position requires that the spine shall be kept straight and that the support needed for the upper part shall be felt in the right place. Therefore, it is necessary to sit as far back in the chair as possible, so that the lower end of the spine

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder
ABSOLUTELY PURE

shall be braced against the back of the seat. If this back is straight the shoulders will also rest against it; but even if the shoulders have no point of support, it will be found that they do not need it when the base of spine is supported properly. This position makes no strain upon the ligaments of the spine. Every organ of the body is properly fixed by this attitude.

The feet should rest squarely upon the floor; the hands should rest lightly in the lap, and thus perfect equilibrium and rest is secured. The arms should never be crossed, for that position causes a strain upon the spine, places a weight upon the stomach and diaphragm and thus increases the labor of digestion and respiration.

Once in a while it is a good thing to place the arms behind the back, giving, as it does, the fullest expansion to the upper part of the body.—N. Y. World.

Comfort and Decoration.

The fact is, decoration may be good, but comfort is always the most precious element of home life, says the *New York Recorder*. Some of the effort expended in hand-painting broom handles would go a long way, if properly directed, toward giving people a thimbleful of black coffee in bed in the morning.

A jug of hot water, as a matter of course, without effort, every morning—what a necessity to comfort that is, and how many families have plush banners till they can't rest, and never see a drop of hot water outside the general bathroom, except they make violent and unseemingly excursions after it at strange hours and in weird costumes.

The proper receptacle for it, by the way, is not a jug at all, but a tin can with a spout, a handle and a cover.

Why not, if you love to do things for your house, have as many of these cans made as there are bedrooms in your house? Have it done on the pattern of the cans that come with tin foot-baths, only about half the size. Have them painted to match your rooms, if you love a dainty finish to your arrangements.

All the worked mottoes and scripture texts you can hang on the walls are not so conducive to sweet plety on a hot night as a pitcher of ice water.

Every one can get and always does get it in a hotel—how sad to so often languish for it in a guest chamber! And how little comfort, while one languishes, is the cross-stitch purple needlework dog with bead eyes on your footstool.

Guest chamber and torture chamber are too frequently synonymous terms anyhow.

To run around with a match burning your fingers because there is no place to throw it—who but a guest experiences that particular form of painful lunacy?

For, of course, he could blow the match out, but he's so confused by the absence of an accustomed receptacle for it that he loses his head and a portion of his cuticle, and finally puts it in the slop jar, whence it gets into a drain pipe and brings woe to everybody but the plumber.

These hints indicate a field for household decorations lying all too fallow.

A little decoration of daily life with ease-getting arrangements is more needed than all the ribbons that ever tied up kindling wood or floated from enameled wooden spoons.

Humorous.

"Fred," said a school teacher to a little boy who was behind in his classes, "you are always behind; you should have more push." "How can I push," retorted Fred, "if I am not behind?"—Harper's Bazar.

Mrs. Carper (fretfully)—Another button to sew on? It is sew on buttons and sew on buttons and sew on buttons from morning till night. Mr. Carper (calmly)—My dear, you ought to have married a rattlesnake.—Life.

True Chivalry.—Mrs. Strongmind—Why don't you go to work? Tramp—Please, mum, I made a solemn vow twenty years ago that I'd never do another stroke of work till money was paid th' same wages as men.—New York Weekly.

Lady Visitor (to policeman at the exhibition)—Why do you constables wear a strap under your chin? Policeman—Well, you see, miss, we are compelled to, for our jaws get very tired with answering so many questions.—Das Ausland.

Mollie had been to church for the first time, and on her return her grandmother asked her what she thought of it. "I liked it very much," she replied, "but there was one thing I didn't think was fair. One man did all the work, and then another man came around and got all the money."

Uncle Ezra's Chrysanthemum.

I'm a-comin' round ter, fashions; I'm a-gittin' old but gay;
I'm a-goin' out in public with a buttonhole bouquet,
An' my floral decoration is most gorgeously good form,
Fur its petals goes a-streamin' like a haystack tuk by storm.
An' I r'ally do admire it; but ter tell the bones' truth,
I hev trampled, without thinkin', lovelier blossoms in my youth,
An' I can't keep from confessin', though I know 'tain't so with some,
That I druther hev a daisy than a big chrysanthemum.

It's culture puts the fixin's on the blossoms or the man,
An' I'm goin' fur ter keep right up with culture ef I can;
An' yet, I get ter thinkin', ev'ry time it greets my eyes,
Of the white an' yaller beauty I've seen smilin' at the skies,
It never sought attention, only lovin' sun and air;
It knowed that it was purty, so it laughed an' didn't care.
My languid pet is lovely, but the truth hez got ter come—
I druther hev a daisy than a big chrysanthemum.
—Washington Star.

How Diamonds Are Cut.

The first operation in the art of diamond-cutting is that of splitting or cleaving, says an exchange. The process consists in determining the proper plan and direction for dividing the stone to give it the final shape it will assume, without needlessly sacrificing any of the weight of the stone. On the sound judgment and skill of the splitter—qualifications gained by long experience—the future of the stone depends. He decides how the stone must be shaped so as to retain the highest weight with the most brilliant effect. He examines it for flaws and defects, and must be able to know to a certainty whether the imperfections are at the surface or in the heart of the stone. Having made his decision, he proceeds to work. The rough stone is imbedded in cement and a dull edge diamond is rubbed across its surface, so as to leave an indentation that determines the line of cleavage. The operation is then repeated with a diamond having a slightly sharper edge, and finally one as keen as a razor. A marked depression is thus made, into which a sharp steel knife is inserted. A quick and light blow divides the stone into two parts. It is now removed from the cement; the main part is then replaced in the cement and another fragment is split off, and these operations are repeated until all the flaws are removed and the stone has received the proper outlines of the form it is destined ultimately to take on. The fragments are all carefully preserved, to be cut into tiny gems, and for other uses.

The next operation is that of cutting, during which the stone receives its finished outlines. This work is still almost entirely done by hand. The cutter has two diamonds attached by cement to wooden handles, and a box in which to collect the diamond dust. The cutter must laboriously grind the two stones together in order that by their mutual attrition he may develop, from the primitive form received from the splitter, the facets of the brilliant or rose form that the stone is required to take. This work requires great muscular force, and the hands of the cutter must be protected by stiff gloves of leather.

To Stand An Egg On End.

A contributor to the *Scientific American* gives the following: My method of standing an egg on end is not by cracking it, but by taking the egg in one hand and striking it in the other three or four strong licks, which readily breaks the thin membrane separating the air from the end of the egg; it also breaks up the yolk of the egg; the parts of the contents of the egg being thus free to move among themselves, the heavier ones settle to the bottom, the lighter ones above, and the air at the top. This is done by placing the egg on end a few seconds and holding it perpendicularly. The center of gravity is thus easily brought within the base, and the egg stands readily on either end. I find that this is a fact that is known by but few. It is sometimes used by jugglers who pretend to conjure by incantations.

Bits of Information.

No bird can fly backward without turning. New York contains more Hebrews than there are in Jerusalem.

In 1721 an English law was passed against calico, fining wearer and seller.

Noah's ark was bigger than the Great Eastern and it proved to be a perfect success.

In 12 marriages out of every 100, one of the parties has been married before.

YOUNG HOLKS' COLUMN.

A Tub Full of Mice.

"It's very shivery, mamma!" Deda Burns put her curly head deeper into the pillow as she said it.

Tucking the clothing carefully about her little girl, Mrs. Burns went into a closet rarely opened, for another blanket. A soft, woolly one lay folded on the shelf, and on top of the blanket was Mrs. Burns' very best muff. Deda's mamma took hold of the muff, but she could not lift it.

"Oh, my! what can be the matter?" she cried.

Just then the light in her hand shone on the open end of the muff, and something bright glittered. It was the eye of a mouse. Mrs. Burns took the heavy muff tight in both hands into her room and shook it over Deda's bathtub.

The mice had crowded in so tightly that not one fell out. Maybe they were sound asleep the first time, for when she tried again out fell one, two—twenty. It seemed like an army of mice.

But they did not wait to be carried downstairs, not they. Over the sides, scurrying across the floor, out into the hall, under the bureau. Such a lot of little black things, so pretty and soft, so naughty and full of mischief, chewing up everything with their sharp, white teeth.

It seemed a pity to shake them out of their warm nest.

"See the mice run!" cried Deda, clapping her hands as they scampered off, and went downstairs in their hurry and fright, bumpety, bumpety, bump.

The traps were set next day in the closet, but not one was caught; nor did one come back all that winter to make trouble for Mrs. Burns.

"I think," said Deda's mamma to her one day, "that all the mouse mothers must have scolded their little sons and daughters for making a sleeping nest of a lady's muff, and so they never mean to be naughty again."—Cora Stuart Wheeler in Our Little Ones.

The Best Kingdom.

A pretty story of the old Kaiser Wilhelm, at the age of eighty-five, is told in "Germany Seen Through Spectacles." During his stay at Ems, where he had gone to drink the waters, he paid a visit to a large orphan asylum and school that was under Government patronage. Of course the presence of so distinguished a personage created a sensation in the establishment.

After listening with much interest to the recitations of several of the classes, his Majesty called to him a bright, flaxen-haired little girl of five or six years, and lifting her into his lap said to her:

"Now, my little fraulein, let me see how well you have been taught. To what kingdom does this belong?" and taking out of his pocket an orange, he held it up to her.

The little girl hesitated a moment, and looking timidly up at the Emperor's face, replied, "To the vegetable kingdom."

"Very good, my little fraulein; and now to what kingdom does this belong?" and he drew out of his pocket a gold piece and placed it on the orange.

Again the little girl hesitated, but soon replied, "To the mineral kingdom."

"Better and better," said the Emperor. "Now look at me and say to what kingdom I belong."

At this question there was an ominous silence among the teachers and visitors, who were listening with much interest to the royal catechism. The little girl hesitated long, as if perplexed as to what answer she should give. Was the Emperor an animal?

Her eyes sought those of her teachers and schoolmates. Then she looked up into the eyes of the aged Emperor, and with a half-starved, frightened look, as if she were evading the question, replied:

"The kingdom of heaven."

The unexpected answer brought tears to the Emperor's eyes.

"Yes, yes, my little fraulein," said he; "I trust I do belong to God's kingdom. And you think it time I was there, do you not? And the day is not far distant."

MRS. M. H. OBER,

Phelan Block, 816 Market, S. F.
Branch, 1236 San Pablo Avenue, Oakland.

All qualities Ypsant Union Suits for ladies and children. Headquarters for the Coast. JAROS Hygienic Union Underwear.

Sample pieces and Catalogue sent free.

TIGHTS.

Knee and ankle, open and closed seat, \$1.25 up. All qualities.

Fine Black Hosiery for ladies and children.

Sponge Silk for underwear.

Cleopatra and Delsarte Girdles.

R. F. Sensible Waists for ladies and children.

MRS. MILLER'S PUBLICATIONS.

Book on mother and babe, a few hints for expectant mothers. Send for circular.

Also Physical Beauty Treats on the care of the body. Monthly Magazine, \$1 a year.

Physical Culture by Mabel Jenness, 50 cents.

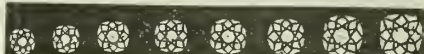
Only authorized agent for EQUIPOISE WAIST and JENNESS MILLER GOODS.



DIAMONDS!

GENUINE AND FIRST QUALITY.
Warranted Pure White and Perfect, and of Extreme Brilliancy.

This diagram shows the approximate sizes of the stones



1/8	1/4	3/8	1/2	5/8	3/4	7/8	1 K
1-16 carat...\$4 00	1 carat...\$8 00	1 carat...\$15 00					
1 carat...25 00	1 carat...35 00	1 carat...50 00					
1 carat...70 00	1 carat...90 00	1 carat...110 00					

I will retail these stones at the above wholesale prices and mount them in the latest styles in Rings, Pins, Studs, Ear Screws, Combination sets, etc., at cost of gold and labor.

Diamond Engagement Rings a Specialty.

DIAMONDS, WATCHES and FINE JEWELRY sent C. O. D., with privilege of examination, on receipt of \$1.00 to guarantee charges, or sent express or post paid if cash accompanies order.

Correspondence solicited. Particular attention paid to mail orders.

Jewelry of every description in stock and made to order. Strictly First-Class work. No Imitation Goods.

JOHN H. DRUMGOLD,

Manufacturing Jeweler, Watches and Diamonds,

Room 113, Phelan Building, S. F.

PATRONS OF HUSBANDRY.

From Yuba City.

TO THE EDITOR:—I might excuse my long silence by saying that times have been dull and material scarce. Luckily Uncle Sam sent us a weather clerk from Oregon, and, in response to the request of the RURAL, he gave us, *i. e.*, northern California, a page of webfoot weather, lasting a week or so, which did a world of good. But, don't you know, Mr. Editor, when you called for an Oregon "downpour," I became seriously alarmed, for I remembered the saying, "The prayer of the righteous availeth much." I very distinctly remembered the "Oregon mists" of recent years when we had to throw boards to the ducks and geese. No, dear Mr. Pague, let us have this season a little sunshine between the showers, at least till we get our crops in. But the weather is always a timely topic when other matters fail, and the recent shifting of the programme was relished with delight even by the belated raisins, the corn and potato growers and everybody else.

We had had sprinkles before, and the dust and smoke of summer had been cleared away, but the soil was stiff and hard and forbade the advent of the plow, so when the "storm" ceased, there was found something over two inches of water distributed over our fields, wetting the ground six inches or more in depth and putting it in the best possible condition for the plow and harrow. And then it was warm, too—remarkably so—which had the effect of starting vegetation with a bound. Such a start is always desirable; first, because pasture starts early and vigorously and helps the stock that is thrown on its own resources for food; secondly, the seed already in the ground comes up evenly, quickly, vigorously, and always produces a good stand; and lastly, all foul matter sprouts and yields its life to the plow more readily than when it comes up tardily. All these conditions are present at this moment, better and more pronounced than for many years, and the appearances indicate a coming year of progress, activity and prosperity, and soon we shall forget the "piping" times of '93.

As a result of the rain, the plows are running in all directions. The long teams are moving in the fields at the dawn of day, and are closed to view by the day's departure. We know they spend the night in shelter and rest, but the stranger on the highways does not miss them from the fields. But the days are short and the nights long, and the husbandman must strike while the iron is hot.

The National Grange has engaged our attention for several weeks, but all we know of its doings has come to us through the medium of the Syracuse papers, which could only print what was permissible under the rules of the order, and may or may not reflect the nature of the business of the session. May the National Grange not have gone a little too far in the Morton incident? The Secretary could not have meant to reflect upon the earnest and honest efforts of the men and women who have met and still meet for the purpose of bettering their condition morally, mentally, physically and financially. In this they are only attempting to do what all others are doing, without which they are or must become mere "hewers of wood or drawers of water."

Surely no intelligent Cabinet officer would thus kick over the ladder by which he had ascended. Doubtless the Secretary had in mind the promoters of rural organizations for personal aggrandizement. These were numerous 20 years ago, but their number has greatly decreased of late years, especially in the grange, a fact the Secretary may not be aware of. At all events, it has seemed to me that our strength and influence is in proportion to our moderation, dignity and forbearance.

Our Grange held its annual election last Saturday, December 2d, which resulted in the choice of the following members to serve the ensuing year:

Worthy Master, Geo. Ohleyer Jr.; Overseer, F. D. Walton; Lecturer, Mrs. W. E. Tucker; Steward, Starr Walton; Assistant Steward, J. P. Onstott Jr.; Chaplain, Mrs. B. F. Frisbie; Treasurer, Geo. W. Carpenter; Secretary, Miss Nellie Brophy; Gate-keeper, Harry Tucker; Ceres, Miss Dora Kells; Pomona, Miss Alice Robinson; Flora, Miss Ada Ohleyer; L. A. Steward, Miss Etta Gray; Organist, Miss Annie White; Trustee, George Ohleyer Sr.

The election passed off quietly yet spiritedly, revealing combination qualities among the sisters that was admirable, especially to those in whose interest it was exerted.

The installation will take place at the regular meeting January 6, 1894. A committee

of three was appointed by Worthy Master Bunce to make all necessary arrangements for the occasion as may to them seem best. The committee is composed of the three first on the list of officers elected. Fraternally,
Yuba City, Cal., Dec. 3, 1893.

Tulare Grange Entertainment.

Tulare Grange, on the afternoon of Saturday the 2d, celebrated the 27th birthday of the grange by an open session, an address by Miss Sara Gill, a musicale, a lunch, and recitations by pupils from the Tulare public school, the following being the programme:

- 1—Address: "The Grange—Its Aims and Objects.".....Miss Gill.
- 2—Quartet: "A Damsel Fair.".....Mesdames Tozier and Allen, Messrs. Conley and Evans.
- 3—Song: "Killarney.".....Mrs. Allen.
- 4—Duet: "My Love is Dead.".....Mrs. Tozier and Mr. Evans.
- 5—Recitation: "Money Musk.".....Vivian McCrary.
- 6—Recitation: "Pyramus and Thisbe.".....Belle Murray.
- 7—Song: "The Skipper.".....Mr. O. C. Conley.
- 8—Song: "Pauline.".....Mrs. Tozier.
- 9—Duet: "When I Know That Thou Art Near Me.".....Mrs. Allen and Mr. Conley.
- 10—Recitation: "Married Life.".....Ella Twaddle.
- 11—Song: "Near It.".....Mr. Evans.
- 12—Quartet: "Jack Frost.".....Mesdames Tozier and Allen, Messrs. Conley and Evans.
- 13—Recitation: "Maria Spicers' Census Returns.".....Vivian McCrary.

The special feature of the day was, of course, the commemorative address by Miss Sara Gill. She reviewed the history of the grange movement from its beginning in 1866. Coming down to the organization of Tulare Grange, she said: "Tulare Grange was organized in May, 1874, with 19 charter members—D. E. Wilson as worthy master and Victoria Neff, Wright as secretary. In April, 1886, a meeting to reorganize was held in Fireman's hall, Tulare, at which A. P. Merritt was elected worthy master, N. L. Wright, overseer, and Joseph Merritt, secretary pro tem., but the work being done by J. W. Mackie. On May 17, 1886, installation of officers took place in the public schoolhouse, Tulare, by I. C. Steele. No further meetings were held until September 1st, and at this meeting Bro. A. P. Merritt was elected a delegate to the farmers' convention to be held at Sacramento, the grange paying his expenses. Since reorganizing Tulare Grange has held a distinguished place among subordinate granges. Its meetings have been held regularly semi-monthly. It has earnestly considered and intelligently discussed matters of public interest and of interest to our order. It has endeavored to promote good government, good legislation, good morals, sociability and education. Its action mainly led to the location of our national Sequoia park in Tulare, to be a place of resort and recreation for all ages and preservative of those wonderful Sequoias, relics of past ages long ere Christianity began rescuing them from the vandal's ax that they may be bequeathed to future generations. In it also originated action which led to the location of our forest reservation, which will conserve our water and lumber supply for all time."

The hall was comfortably well filled. The school children displayed aptitude in their recitations. The lunch, cake and coffee were enjoyed with that gusto peculiar to lack of ceremony, good fellowship and appetizing viands. The musical programme was rendered with spirit and expression. All of the quartette being in their best mood, it was appreciated and warmly approved by those present. Miss Grace Anderson accompanied on the organ.

It must be said of the quartette that they all, in their rendition, displayed musical taste and ability difficult to excel outside the trained artists.

Taken as a whole, the entertainment has not been excelled by any social entertainment in Tulare this season.

Anniversary Day at Sacramento.

Sacramento Grange celebrated Anniversary Day with a feast and a grand social time. American River, Enterprise, Florin and Elk Grove Granges were well represented by earnest members, who came to enjoy the hospitality and good-cheer or Sacramento Grange. Addresses were made by Erskine Green, Rev. S. Goodenough, W. W. Greer, Louis Sehlmeier and others. The literary and musical exercises were especially good, and there was a novelty in the shape of an auction sale of young ladies enveloped in sheets and so completely disguised that none of the bidders had the slightest idea what particular young ladies were seated in the market. Mrs. D. D. Hull acted as auctioneer and made a success of the sale. Bidding became very spirited, many of the young men getting

quite excited and offering fabulous prices. As the hammer fell and the word "Sold" was uttered, it was soon apparent that some realized they were precious packages.

From Grass Valley.

Mrs. R. S. Twitchell writes from Grass Valley Grange that at the last meeting in November a class of three were given the third and fourth degrees. She reports that while the membership is nearly 40 the regular attendants are only a little handful. Nevertheless, Grass Valley Grange is prosperous. Running over the events of the year, our correspondent says:

"We celebrated Children's Day with a picnic on June 3d; Flora's Day on June 17th with an all-day's meeting, with free dinner to all; in the evening a fine programme was given; a living picture of Flora and her maids in a frame of ivy was represented, receiving much praise; music by the brass band, etc. Bro. Frisbie was with us and made an interesting address in the afternoon. Closed grange with initiation in A. M. in third and fourth degrees."

"On the Fourth of July the sisters of the committee on woman's work had refreshments at our hall for the benefit of the treasury of said committee. The supply was not equal to the demand, but it was very successful; would have been more so if we had been sure the venture would be a success, but we were afraid to go to too much expense."

"We of our grange have adopted a 'Funeral Fund,' to begin the first meeting in January. Each member who wishes to have the benefit of this pays to the treasurer 25 cents each month, until the sum of \$100 be in hand, that being enough to pay two funeral benefits of \$50 each. This is under the head of good of the order, as it will be an inducement for some to join. A great want in our grange is the lack of young people. All our members have young hearts, if not young bodies, I must say. This is what brought up the idea of a juvenile grange. Supposing the little ones love that, will they not go from that into the big grange when they become of the right age? In this vicinity it seems to be very hard to interest young men and women in the grange; there are so many orders more fashionable—or high-toned, perhaps they think—sometimes calling us by the euphonious name of 'that hay-seed lodge.' I have been a member only a little over two years and I feel like saying that I don't believe that those not belonging have any idea of the interest they would take in it were they members, nor of the lofty and ennobling sentiments expressed in the beautiful work of the ritual. A house-to-house canvass and lots of little leaflets of grange talk would help the order out a great deal in letting people know what the grange is, and that it is no political party, but is for the elevation and education of the American farmer and his family."

Grange Elections.

Pescadero Grange has elected the following officers: Master, I. C. Steele; overseer, B. Hayward; lecturer, Geo. G. Smith; steward, Geo. Steele; assistant steward, R. E. Steele; chaplain, R. Taylor; treasurer, E. Leighton; secretary, Miss M. A. Manly; gate-keeper, C. N. Steele; Ceres, Miss Mattie Thompson; Pomona, Miss M. O. Leighton; Flora, Miss Lizzie Crisman; lady assistant steward, Miss Clara Adair; organist, Miss Clara Steele. Installation first Saturday in January.

Temescal Grange elected the following officers: Master, A. T. Dewey; overseer, H. H. Stevens; lecturer, Mrs. S. H. Dewey; steward, Maurice Woodhams; assistant steward, Walter Renwick; chaplain, Sister S. A. Whidden; treasurer, L. Frink; secretary, Sister N. G. Babcock; gate-keeper, Walter Harper; Ceres, Sister S. E. Stevens; Pomona, Sister H. C. Paine; Flora, Sister Irene B. Woodhams; lady assistant steward, Sister M. A. Renwick; trustee, S. Goodenough.

Secretary W. L. Whitaker reports that Bennett Valley Grange has elected officers for the ensuing year as follows:

Master, Peter Hanson, Santa Rosa; Overseer, Mark S. Whitaker, Santa Rosa; Lecturer, Holman Talbot, Yulupa; Steward, G. F. Clark, Yulupa; Assistant Steward, J. P. Whitaker, Santa Rosa; Chaplain, A. Benjamin, Yulupa; Treasurer, John Burnham, Yulupa; Secretary, Wm. E. Benjamin, Yulupa; Gate-keeper, Olney E. Bremner, Yulupa; Ceres, Mrs. S. A. Hanson, Santa Rosa; Pomona, Miss Mabel Burnham, Yulupa; Flora, Miss Ada Burnham, Yulupa; Lady Assistant Steward, Miss Esther Mather, Yulupa.

Selma Grange has elected officers for the ensuing year as follows:

Master, Paris Allen; Overseer, S. B. Holton; Lecturer, Mrs. J. J. Roadhouse; Steward, W. A. Kidd; Chaplain, Mrs. S. B. Holton; Treasurer, J. J. Roadhouse; Secretary, T. B. Smith; Assistant Steward, Holt R. Shaw; Lady Assistant Steward, Jessie Ross; Ceres, Mrs. T. B. Smith; Pomona, Mrs. Paris Allen; Flora, Mrs. Geo. Drew; Gate-keeper, R. C. Holton; Trustee, A. A. Whitten.

The day of election was made a grange festival. There was a bountiful spread and the usual good time.

Secretary's Column.

Pescadero Grange celebrated Pomona's day Nov. 24th and carried out the programme as near as circumstances would permit. Several of its members were absent by reason of the storm. The attendance was very good, however, and all present seemed to enjoy themselves.

Good music with literary exercises, a nice supper spread by the sisters, followed by a social hop, afforded pleasure for all present.

The net receipts for Grange Temple are about \$17.

Have received the quarterly report of Selma Grange, No. 291, also accompanying cash.

They report that they had a general round-up on the 30th. Had a nice harvest feast, elected a full set of good officers, raised money enough to pay their State dues and the back hall rent, and believe they can be depended upon to stand up shoulder to shoulder with their brothers and sisters in the field. This is their first meeting since July 15th. A special meeting is called for Wednesday, December 13th, at 2 P. M.

Bro. J. C. Purvine of Two Rock Grange offers his services to any grange desiring an installing officer. Bro. Purvine is up in the work of the order and does not use the manual in his installation work. His address is Petaluma, Cal.

Worthy Master Roache was taken seriously ill with typhoid pneumonia while in Syracuse, N. Y., and was unable to be present but part of the session of the National Grange. It is hoped that by this time he is sufficiently recovered to have resumed his journey homeward.

Past Master Davis arrived home on the 7th, and, on account of death in his family, was not able to meet with the good people of Visalia.

Yuba City Grange reports they are having lovely weather and that farmers are busy putting in their grain. They will install officers the first Saturday in January, and expect to have some of the State officers present at that time.

Address all communications for California State Grange to Don Mills, Santa Rosa, Cal.

AGRICULTURAL NOTES.

CALIFORNIA.

Colusa.

Colusa Sun: The oranges in the courthouse yard are beginning to get ripe and make a fine display. Had not the Supervisors taken the precaution to put a wire fence around them, there would not have been an orange on the trees by now, and nobody would have been an orange richer.

Glenn.

Willows Review: Charles Glenn has decided to plant 50 acres to prunes this spring on his farm near St. John, and the next year he will increase his orchard to 200 acres.

Humboldt.

Mrs. Ben Arthur, of Alder Point, recently fed some spoiled corn to her poultry, and the next morning found 50 chickens, 7 turkeys and 2 ducks stone dead.

The Rohnerville Herald reports that O. P. Wyatt filled an ordinary potato sack with 17 spuds.

Kern.

Bakersfield letter: The Egyptian corn was an abundant yield in this part of the country this season, but the price is so low that the producer is again bagged with his crop.

Los Angeles.

The Pomona Progress tells of an apricot grower who offered his 5-acre orchard for sale on its merits at \$1000 per acre. After doing a little figuring one Sunday morning behind the barn, he withdrew the property from the market, saying he didn't know of a better investment for \$5000 than that very apricot orchard.

Monterey.

Salinas Index: We have been shown a sample of red sweet potatoes grown by Fred Brnchard on his farm near here, which are beauties in their line, and show that this tuber is undoubtedly at home in this soil—more so, perhaps, than the ordinary variety of sweet potato. Some of these potatoes weigh more than three pounds each, grown entirely without rain or irrigation, and are of much finer flavor than the other variety.

Napa.

Napa Register: Young trees from the Napa Valley Nurseries are being planted in trenches at corner of First and Coombs streets, where Mr. Coates has a new office, handsomely fitted up with telephone and other conveniences for business. The display of choice plants under glass is large, and every preparation has been made for a big planting this season.

Orange.

Anaheim Gazette:—When the farmers below town put in their sugar beets last season there were patches here and there where the seed failed to come up either because there was not sufficient moisture to cause the seed to sprout or because of improper planting. It was then thought by some that the beets would not

grow in these spots because the soil was too poor or because the farmer did not seed right, but since the recent rains the seeds have begun to sprout, and the young beets are as thick as they can possibly stand. It has heretofore been demonstrated that sugar beets can be grown and matured here the year round where the soil has sufficient moisture to sprout the seed at the time of planting. This is a big advantage over most sugar-beet growing countries, and the fact that we raise the richest beets in saccharine makes this the ideal sugar-producing section.

Placer.

The *Argus* reports the fruit shipments from Penryn during the year until October 31st have been 6,647,808 pounds, including 275 carload lots. Newcastle for the year to December 1st has shipped 14,953,989 pounds of fruit, including 527 carload lots.

The Placer County Horticultural Society has appointed the following committee to take into special consideration the subject of Eastern fruit shipments, and the possibilities of forming an organization among the fruit-growers of the county by which a satisfactory handling and accounting can be gained, said committee to report to the society at such time as it conveniently can: From Colfax, W. B. Hayford and Mr. Ewers; from Newcastle, G. L. Threlkel, J. F. Madden, W. R. Fontain and W. B. Gester; from Auburn, Captain McCann and Dr. Pillsbury; from Penryn, H. E. Parker, A. P. Hall and P. W. Butler; from Loomis, J. N. Barton and J. F. Hill; from Rocklin, Capt. E. L. Hawk; from Roseville, Mr. Bedell, Sr.; from Lincoln, L. H. Carey and J. Crowley; from Monte Rio, T. W. Madeley; from Gold Hill, J. H. Bickford.

The apple pruning season has begun in Placer county.

A local paper chronicles the shipment of the first carload of French prunes from Clipper Gap, and, if we mistake not, it is the first full carload from Placer county, says the Colfax *Sentinel*. The carload referred to was grown by S. F. Woodworth, of Clipper Gap, on 650 trees, six years old, occupying six and one-half acres of land. The product was 20,000 pounds, for which five cents per pound was realized, or \$1000 for the shipment. The cost of plowing, cultivating, and preparing the prunes for market was \$350, leaving a net profit of \$650, or \$100 per acre.

Riverside.

The Riverside Fruit Exchange (co-operative) is now ready for business. Its official organization is as follows: A. H. Naftzger, president, and S. C. Evans, Jr., secretary, and the other directors are: M. J. Daniels, T. H. B. Chamblin, D. W. McLeod, Geo. Frost, Henry A. Westbrook, R. W. Meacham, J. B. Crawford and J. Harrison Wright.

San Benito.

Hollister *Advance*:—Bonnie Brae Farm is engaged in shipping direct to Chicago, 30 tons of dried apricots. The fruit is of the finest quality and was eagerly sought after by Eastern buyers. In course of time every orchardist in the valley will ship directly East, instead of submitting to the extortion of San Francisco middlemen.

San Bernardino.

The cattle-feeding operations of Mr. Richard Gird are on a very large scale, there being at present close upon 1500 head in his yards. The *Champion* says: "These cattle are all fattening on beet pulp for the market of southern California. From the silo just below the yards there are hauled every day about 40 tons of beet pulp, and with this ration is fed from 4 1/2 to 5 tons of hay per day. This makes an average daily ration per head of over 70 pounds of pulp and over 8 pounds of hay. The pulp is hauled out of the silo and along the long feeding troughs just inside the fence in tram cars, from which it is shoveled into the troughs. The pulp has preserved in a more satisfactory manner this year than last, drains having been fixed through the silo to draw off the water as it gathers at the bottom. No cover is used over the silo, the pulp itself, being put on wet and laying under the hot sun, soon makes an impervious coating a few inches thick, beneath which the pulp is in fine condition. The cattle like the beet pulp. They lick it up clean, and are fattening wonderfully fast."

Times-Index: Orange-growers should beware of the commission men now industriously engaged in flooding the country with circulars containing gilt-edged but fraudulent "quotations" of citrus fruits. This is an old dodge, which has resulted in binding the grower hard and fast and invariably driven him to financial desperation. There is great need to discover some mammoth vedalia, which will kill off these commission men as they have done the other small parasites of the orange grove. In the local Orange-Growers' Association alone is safety.

San Diego.

The usual area of 90,000 acres has been sown to wheat in the San Jacinto valley. In consequence of the early rains it has already begun to sprout.

San Diego *Union*: During the month of November the inspectors under Horticultural Commissioner Gunnis examined 63,002 fruit trees and 139,290 pieces of nursery stock. Of the whole number 22,501 were found to be infested with pests. The fumigating outfits of the commission, under direction of Superintendent Kretsinger, operated on 2919 trees during the month, entirely destroying the scale. Fumigating is being carried on energetically in various parts of the bay region, but orders are coming in almost beyond the capacity of the outfits to meet.

Sutter.

The Yuba City *Independent* notes with approval that the Sutter county authorities have

advanced the pay of the County Horticultural Commissioners from \$1 to \$2 per day while on duty. Heretofore the nurserymen have paid the extra dollar a day themselves, but as this year their nursery stock is taxed, they decline to pay it, and as inspectors cannot be engaged for less than \$2 a day, the county must either pay it or discontinue the inspection of nursery stock. The work heretofore done by the commissioners and inspectors has been of great value, and it would be a retrograde movement to stop it at this time. Our orchards and nurseries are now reasonably free from scale, but the root knot is more or less to be found in both, and is considered to be more serious than the scale, which can be eradicated by spraying. The work of the commissioners also prevents the bringing in of infected trees from other counties and States.

Santa Clara.

A Japanese persimmon tree in Mr. Lennon's yard at Gilroy, six years old, is loaded with fruit measuring eight inches in circumference.

Sonoma.

The highest price offered to Sonoma county hop-growers last week was 17 cents and as a rule they are holding for better offers.

Henry Limebaugh of Blitcher valley brought to the office of the Santa Rosa *Democrat* last week two potatoes weighing six and a half pounds, of this year's crop. He promises to bring fifteen specimens out of the lot which he thinks will weigh fifty pounds, and we shall turn them over to the Midwinter Fair exhibit.

The annual show of the State Poultry Association will be held at Petaluma in February, from the 4th to the 10th.

Sonoma *Farmer*: L. L. Cannon brought in 99 rolls of fresh butter the other day, the output of 35 cows for one week. Mr. Cannon has started three big teams with gang plows on the Clark ranch, intending to plant 300 acres to wheat. He has dry sowed 30 acres in oats for cow feed, which will yield from 75 to 100 tons.

Tulare.

Porterville *Enterprise*: A three-year-old orange tree at R. H. McDonald's yielded 350 St. Michael oranges this year. Some of his orange trees put out last year also have oranges already on them. There is no place in the State where citrus fruits grow so quickly as at Porterville.

Mrs. G. B. Fifield of Tulare has succeeded in making an excellent article of syrup from grapes. This should become a paying industry.

Tulare *Citizen*, 7th inst.: The farmers are getting very anxious to commence seeding, but owing to the dryness of the ground but few plows have started and but little will be done in the way of farming until the rains set in.

Ventura.

The Ventura County Poultry Association (organized in November) has elected officers as follows: Dr. C. F. Miller, president; W. M. Zeller, first vice-president; G. W. Tighe, second vice-president; T. G. Morrison, secretary; John B. Wagner, treasurer; W. E. Ready, B. F. Knox, Wm. Reiman and Ed Mercer, executive committee. The executive committee will be completed when Santa Paula is heard from. It is proposed to hold a county show in January.

The Ventura County Horticultural Commissioners report much red scale in the county, and have notified the owners of diseased trees to disinfect at once.

Venturian: Several growers in this vicinity who have been experimenting in the curing process have thoroughly exploited this fact, and claim that no other fruit has the superior advantage of being independent of the market prices—it can wait for better prices when properly preserved and cured. In fact, the longer the process of successful curing the more superior the fruit.

The *Venturian* reports an increased interest in olive-planting. This movement, it declares, is largely due to the fact that a permanent market has been found for olives. The Elwood Cooper Company of Santa Barbara has issued a standing offer of \$100 per ton delivered or \$60 per ton on the tree, the buyer to do the picking. This offer, it is also stated, will be made by the Kimball Olive Company of National City. On this basis growers and intending growers have begun to figure. It is a matter of easy mathematics that \$100 per ton is equal to five cents per pound, but the bearing capacity of the tree is not so easily discovered by mathematics. At the fourth year from 30 to 40 pounds of olives can be secured from trees which do well.

Yolo.

A Dennigan correspondent says: "Another rain would do a power of good just now."

Knights Landing letter: A large force of men are at work on the Fair ranch. The old pipe in Sycamore slough, which was defective, has been removed and a new pipe put in, and the water is now running through it. Plowing and seeding is also going on, and, if the weather continues favorable, they will have between nine and ten thousand acres seeded by Christmas.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by him. West & Traux, Wholesale Druggists, Toledo, O. Waldring, Kinnear & Marvin, Wholesale Druggists, Toledo, Ohio.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75c per bottle. Sold by all Druggists. Testimonials free.



Their MERITS are:

They are made by the
Benicia Agricultural Works
With California Capital and Labor.
There is just as good money
There is no better labor.

Every year they
Take Premiums
Over Eastern Plows.

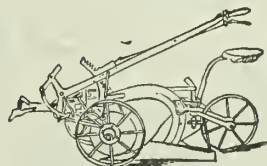
They are better made
Last longer and
Cost no more than
Any of their Competitors.

Made to suit all Work,
Garden, Orchard, Vineyard,
Stubble, Breaking, Subsoil, &c.
Every Plow marked "Benicia"
Which means "GUARANTEED"
By the oldest Implement House
On the Pacific Coast.

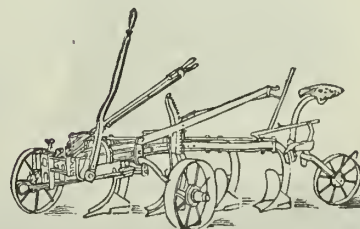
BAKER & HAMILTON

SAN FRANCISCO AND
SACRAMENTO

PEERLESS SINGLE AND GANG PLOWS.



Sulky Attachments
To fit all sizes.



Steel Beams,
Steel Axles.
Absolutely Center Draft,
And Strongest Beams made
Are used on this Plow;
Hence draft very light.

This is the best Plow
Of its class ever sold.
We Guarantee it.

BAKER & HAMILTON,
SAN FRANCISCO and SACRAMENTO.



Guano Fertilizer!

PLAIN AND NITROGENOUS
SUPERPHOSPHATES.

GUANO FLOUR.

Complete and Special Fertilizers

FOR ALL KINDS OF

Fruit, Grain, Sugar Beets, Vegetables, Etc.

MANUFACTURED BY THE

MEXICAN PHOSPHATE & SULPHUR CO.

For circulars and other information address

H. M. NEWHALL & CO., Agents,
809 & 311 SANSOME STREET,
San Francisco.

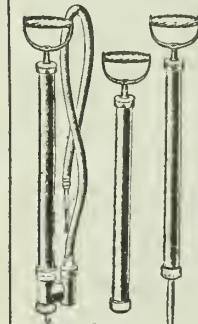
HAYWARD'S SHEEP DIPS

Hayward's famous Paste and Liquid Dips received the Highest Award at the World's Columbian Exposition, also the Prize Medal at the California State Fair. Dips from all over the world were exhibited at Chicago and practical sheep men pronounced Hayward's the best and most effective medicine for the cure of scab and general benefit to wool.

CHRISTY & WISE,

General and Sole Agents for the Pacific Coast,
Office—Fifth and Townsend Streets,
San Francisco.

\$15 SPRAY PUMP FOR \$7 EXPRESS PAID.



Makes Three Complete
Brass Machines.

**WILL SPRAY TEN
ACRES PER DAY.**

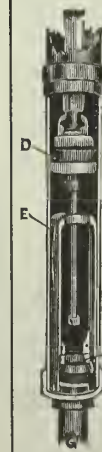
Endorsed by the Leading
Entomologist of
the United States.

Satisfaction guaranteed or
money refunded.
A valuable illustrated book
on our insect pests given to
each purchaser.

We will put this pump in
competition with any other
pump made, costing \$15 or
less. Address

F. G. WORDEN,
2715 Mission St., S. F.
Only General Agent of the
Pacific Coast.

Deep Well Pumps.



The valves and working parts of the Fulton Pump can be removed, repaired and replaced without taking the pump out of the well.

Pumps fitted up for all depths of wells, ready to put in.

Send for illustrated circulars and price list to

A. T. Ames,
GALT, CAL.

Manufacturer of Pumps and Windmills.

Sure Way to Make \$100.

Send 25 cents for particulars, including sample cake of **SEAL'S SKIN SOAP** for Complexion and Toilet.

A. J. McKNIGHT,

1125 Mission Street, San Francisco, Cal.

CALIFORNIA If you want to know about California and the Pacific States, send for the **PACIFIC RURAL PRESS**, the best illustrated and leading farming and horticultural weekly of the Far West. Trial, 50c for 3 mos. Two sample copies, 10 cents. Established 1870. DEWEY PUBLISHING CO., 220 Market St., San Francisco.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

JERSEYS AND HOLSTEINS, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. **Wm. Niles & Co.**, Los Angeles, Cal., Breeders and Exporters. Established in 1876.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. **Wm. B. Collier**.

PETER SAGE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS—The best A. J. C. C. Registered Prize Herd is owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

WM. NILES & CO., Los Angeles, Cal., Breeders of nearly all varieties of Poultry, Dairy Cattle and Hogs.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

R. H. CRANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

SWINE.

H. J. PHILPOTT, Niles, Cal., Importer and breeder of Tecumseh and other choice strains of Registered Poland-China Hogs.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine. Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, new Prices.

BERKSHIRES & POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. **Wm. Niles & Co.** Los Angeles, Cal. Established 1876.

MONROE MILLER, Eliso, Ventura County, Cal., Breeder of Registered Berkshire Hogs.

P. H. MURPHY, Perkins, Sao, Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

TYLER BEAUB, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.

CHAS. A. STOWE, Stockton, Reg'd'd Berkshires.



In These Dull Times

You Can Largely Increase Your Income by buying an Incubator and engaging in the chicken business. Send stamp for our cat. logue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember, the best is the cheapest. **PACIFIC INCUBATOR CO.** 1317 Castro St., Oakland, Cal.

FRANK A. BRUSH, SANTA ROSA, CAL. (Care Santa Rosa National Bank.) Importer, Breeder, Exporter.

S. O. White Leghorn
S. O. Brown Leghorn
Barred Plymouth Rock
Black Minorcas

Eggs, \$3 per 13. Send for circular.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.



—THE—
HALSTED INCUBATOR
COMPANY,
1312 Myrtle Street, Oakland, Cal.
Send Stamp for Circular

HATCH CHICKENS BY STEAM
With the Improved Excelsior Incubator.

Simple, Perfect, Self-Regulating. Thousands in successful operation. Guaranteed to hatch a larger percentage of fertile eggs at less cost than any other Hatcher. Lowest priced first-class Hatcher made. Circulars free. Send 5c. for Illus. Catalogue. **GEO. H. STAHL**, Quincy, Ill.

CALIFORNIA PRODUCTS.

P & B

ROOFING.
BUILDING PAPER.
ROOF PAINTS.

First Prizes at the World's Columbian Exposition, 1893.

PARAFFINE PAINT CO., - - 116 Battery Street,
SAN FRANCISCO.

E. G. JUDAH, Agent, - - 221 South Broadway,
LOS ANGELES.



ONLY 25 YEARS OLD
AND A GIANT!

THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.

GRANGERS' BUSINESS ASSOCIATION,
GENERAL COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

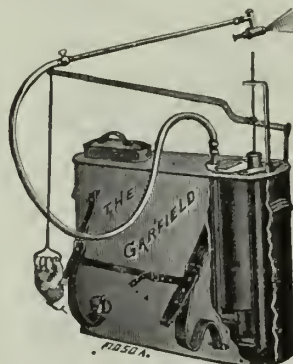
Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

T. R. BALLINGER, Grain Salesman.



SPRAYING PUMPS.

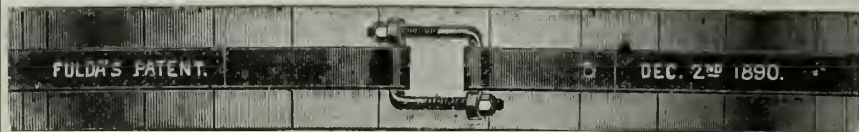
Ours always the best—We lead others follow—Our Double Empire Barrel Pump has brass cylinder, plunger and rod, brass valve seat, and brass spout. Our

GARFIELD KNAPSACK

is made of heavy sheet copper, concaved to fit the back, with metal valves, and furnished with the latest improved Vermorel Nozzle. The very best Knapsack Sprayer on the market. Our Little Gem pail pump is all brass with metal valves, heavy hose and the improved Vermorel Nozzle. Special prices to offset high transportation rates. Catalogue free.

FIELD FORCE PUMP CO.

141 BRISTOL AVE., LOCKPORT, N. Y.



FULDA'S PATENT BAND AND HOOP COUPLING.

The Best, Simplest and Cheapest Coupling for Tank Hoops. A sufficient lap of hoop renders it unnecessary to rivet the hoop. It will fit the circle of any tank, regardless of size. Made in sizes to fit any width of iron.

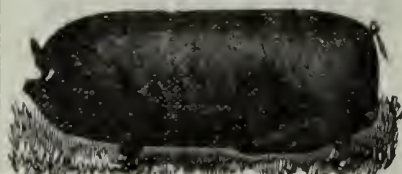
Prices, \$1.00 to \$1.50 per Pair. For sale to the trade. Liberal discount in quantities.

FULDA BROTHERS,

30 TO 40 SPEAR ST., SAN FRANCISCO,

MANUFACTURERS OF MINING AND WATER TANKS

Send for Catalogue.



BERKSHIRE SWINE.

Prize Herd of Southern California.

PIGS OF ALL AGES FOR SALE.

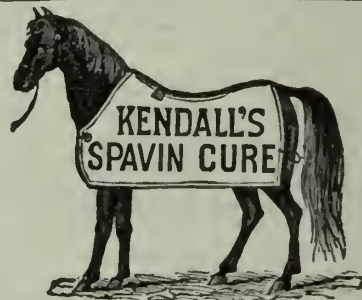
SESSIONS & CO., Los Angeles, Cal.

P. O. Box 686.

LOOK FOR



ON
HORSE
BLANKETS
It is a guarantee of quality.
250 STYLES.
ALL PRICES.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STAR, LANE CO., OREGON, Feb. 8th, 1892.

DR. B. J. KENDALL CO.

Dear Sirs:—I have used your **KENDALL'S SPAVIN CURE** for the last twelve years never being without it but a few weeks in that time and I have made several wonderful cures with it. I cured a Curb of long standing. Then I had a four year old colt badly **sweated**; tried every thing without any benefit, so I tried your liniment, and in a few weeks he was well and his shoulder filled up all right, and the other, a four year old that had a **Thoroughpin** and **Blood Spavin** on the same joint, and to-day no one can tell which leg it was on. These statements can be proven, if necessary; the four year olds are now seven and can be seen any day at Cottage Grove, Or.

S. Z. PAXTON.

—Price \$1.00 per bottle.—

DR. B. J. KENDALL CO.

Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular.

E. FOUGERA & CO.

30 North William Street, New York.

California Inventors Should consult **DEWEY & CO.** AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists and large practice as Patent attorneys enables them to offer Pacific Coast Inventors far better service than they can obtain elsewhere. Send for free circulars of information. No 230 Market St., San Francisco Cal.

Go For the Gopher!

In a recent issue of the PRESS some attention was called to the destructive work that is yearly accomplished by squirrels, gophers, crows and similar pests. As a matter of course, many farmers are familiar with the facts therein set forth, nearly all having met with more or less loss and annoyance through their depredations. But as the season is timely for a crusade against these robbers, it is thought well to offer some further remarks as to the best means by which the crusade may be carried on to the successful and complete destruction of the common enemy. It is a well-known fact that these little animals are extremely sensitive and equally wily in the manner of selecting their food. Consequently, the difficulty of inducing them to take a poison of any kind is not lightly overcome.

Traps of various ingenious designs have for years been tried with but little success, as have also different plans for fumigating, smoking, inundating, shooting, digging, etc. Of course, poisoning has met with more or less success; but, as a rule, it has not been presented to the fastidious little epicures in a sufficiently attractive form, or its quality has been poor, and it has failed to stand the test of exposure to weather and earth absorption that it must necessarily be subjected to when scattered in their runways. As a result, most attempts in this direction have proved expensive and have been abandoned. As has before been stated, it was to obviate these difficulties that the researches and experiments of Wakelee & Co., the well-known chemists of this city, were begun some fifteen years ago. The principal points to be attained were: 1st. A poison that, when taken, would prove sure death. 2d. A poison that gophers, crows, squirrels and their kind would find so much to their taste that, instead of rejecting it, they would seek it and greedily devour it when found. 3d. Put up in a form that would be easy to ship, as well as convenient and safe to handle. 4th. At a cost that would make the article very much cheaper than anything of the kind ever before attempted, and, lastly, of a quality so enduring that neither time nor exposure would be able to deteriorate it.

That Wakelee & Co.'s celebrated Exterminator has filled all of these requirements for years past, almost innumerable testimonials from the most trustworthy sources bear ample evidence. As is commonly the case when an article placed upon the market proves a success, Wakelee & Co.'s Exterminator has been extensively counterfeited; therefore it behooves the farmer who is anxious to build the largest and dearest pile of squirrels, gophers, crows, etc., at the least expense, to be cautious and buy only the genuine Wakelee & Co.'s Exterminator. Directions for using accompany each can.

Where Seeds Come From.

First among the seed producing houses of the world stands the old establishment of D. M. Ferry & Co., Detroit, Mich. Established in 1856, this firm has been for years the largest and best-known seed house in the world. In 1893 over one hundred thousand dealers handled Ferry's Seeds, and the number of people who planted them runs far into the millions. For 1894 this firm has made preparation to supply at least 50,000 bushels of garden beans alone. Something more than shrewd business methods is required to place and keep such a business in the lead. It is something that deserves the thought of every one who plants a seed. If every sower could go on a tour of inspection through this great establishment and see what is behind the name of Ferry's Seeds, see with what care they have been developed and tested, see with what precision they are sorted and packed, ready for planting, there would be less disappointment and fewer losses from the use of inferior seeds.

Every year D. M. Ferry & Co. issue an Annual for the convenience and instruction of those who plant seeds. It is prepared by the most competent authors, and is rightly looked upon as a standard authority on the most profitable things to plant, and the best way to cultivate them. This book is sent free of charge to all who send their name and address to the above-mentioned firm.

Improvement in Business.

The effects of the World's Columbian Exposition are being felt by Eastern manufacturers. The Cutaway Harrow Co. of Higganum, Conn., who manufacture the celebrated "Cutaway" Harrows, reports a large increase in business from their exhibit. They received FIVE First Premiums, and these awards were made for actual work done at the Great Field Trial, at Wayne, Ill., August 8th, where the "Cutaway" goods received the only award for actual field test.

They are now driven to their utmost capacity, and are completing one single order of twenty carloads of the celebrated "Cutaway" Harrows, all of which are of the seven and eight-foot sizes. These Harrows are designed for the Nebraska and Iowa trade and are for the Lininger & Metcalf Co., Omaha, Neb. This is the largest shipment of agricultural implements ever made from the East to the West. The special train will leave Higganum about the first of January.

Their orders from the Pacific coast have also been unusually heavy this season.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 11, 508 Montgomery St., San Francisco (Pacific Mutual Life Insurance Building).

Hay Pressing.

If you are interested in pressing hay write Truman Hooker & Co., San Francisco. They will save you money

LIGHTNING LARGEST WELL MACHINERY Works.
All kinds of tools. Fortune for the driller by using our Adamantine process; can take a core. Perfect Economical Artesian Pumping Rig to work by Steam, Air, etc. Let us help you. THE AMERICAN WELL WORKS, Aurora, Ill.; Chicago, Ill.; Dallas, Tex.

BEEKEEPERS SEND FOR SAMPLE COPY OF CLEANINGS IN BEE CULTURE.
A Handsomely Illustrated Magazine, and Catalog of BEE SUPPLIES FREE. A. I. ROOT, Medina, O.

Buy Land NOW, While Cheap!

I offer for sale the following:

\$9000—40 ACRES ADJOINING TOWN OF LOS Gatos, 20 minutes walk from station; 13 ac es fruit; small house and barn; a charming place.

\$1400—80 ACRES, SANTA CRUZ MOUNTAINS, 5 miles from Alma; small house; 5 acres fruit; climate unexcelled; plenty of wood.

\$1000—100 ACRES, SAN LUIS OBISPO COUNTY; with good spring.

\$2500—35 ACRES, NEAR SONOMA; HOUSE AND barn; abundance of fruit and grape vines in bearing and a fine place for poultry; this is a good and very cheap property.

\$250 EACH—9 LOTS AT COLMA STATION, 25x 120.

JOHN F. BYXBEE,

22 Market Street.....San Francisco.

C. H. EVANS & CO.,

(Successors to THOMSON & EVANS.)

110 and 112 Beale Street, S. F.

MACHINE WORKS,

Steam Pumps Steam Engines

And All Kinds of MACHINERY.



DEEP WELL PUMPS

ACTUAL BUSINESS PRACTICE.

PACIFIC Business College,
320 POST ST. SAN FRANCISCO.

Established 1863

Bookkeeping, Penmanship, Shorthand, Typewriting, English Branches, etc. Graduates aided in getting positions. Send for circulars. T. A. ROBINSON, Pres.

HEALD'S

BUSINESS COLLEGE.

24 POST STREET.....SAN FRANCISCO.

FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR. E. P. HEALD, Pres. C. S. HALEY, Sec.

VALUABLE

Information relating to orchard tree planting and care of orchards, together with a complete catalogue of the

RANCHO CHICO

NURSERIES, will be sent FREE, postage paid, to any address, upon application to

JOHN BIDWELL,

Chico, Butte County, California.

RANCHO CHICO ORCHARDS EMBRACE OVER 1000 ACRES IN FULL BEARING.

A LOT FOR \$1 A WEEK

A dollar a week for sixty weeks, buys a lot 25x125 feet east of Chicago Heights, the great manufacturing suburb of Chicago. Sixteen factories, streets paved, stone sidewalk, beautiful shade trees, schools, churches, etc. No doubt these lots will treble in value within one year. No such bargain was ever offered in Chicago Real Estate. These lots are now on the Belt Line where factories are now in successful operation, employing over 50,000 people. Business transacted for non-residents. Address, DeForrest Land Co., Unity Building, Chicago.

\$100 for the Best Advertisement

For SEAL'S SKIN SOAP for Complexion and Toilet.

All advertisements must be in by January 1st, 1894.

Send 25 cents for sample cake and full particulars to

A. J. McKNIGHT,

1125 Mission Street, San Francisco, Cal.

The American Bee Journal,

(Established 1861.)

Is Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample.

\$1.00 BEE-BOOK FREE

W. W. YORK & CO., 415 N. La., Chicago, Ill.

YES THERE'S MONEY IN IT

FARMERS WHO MAKE THE MOST MONEY USE THE LATEST AND MOST IMPROVED MACHINERY.

JUST SEND FOR OUR CIRCULAR OF **CLARK'S CUTAWAY HARROW** AND SEE WHAT IT WILL DO. **THAT'S WHAT COUNTS**

THE CUTAWAY HARROW CO., HIGGANUM, CONN. NEW YORK OFFICE: 18 CLIFF STREET.

CANCER CURED

WITH SOOTHING BALMY OILS.

WE SUCCESSFULLY TREAT

Cancer, Tumor, Catarrh, Piles, Fistula, Eczema and all Skin and Womb Diseases.

CANCER of the nose, eye, lip, ear, neck, breast, stomach or womb; in fact, all diseased internal and external organs or tissues, successfully treated, without the knife or burning caustic plasters, but with soothing, balmy magnetite oils. Beware of imitations as there are those who hope to profit by advertising an oil cure for these diseases. We are the originators of this system, all others are frauds. Correspondence solicited. Consultation free. Testimonials furnished. Address

DR. EUGENE BUELL,

Cancer Institute,

ROOM 57, SUPREME COURT BUILDING,

Cor. McAllister and Larkin Sts., San Francisco, Cal.

STOCK SCALES

4 TON \$45

U. S. STANDARD. FULLY WARRANTED

Delivered at your R. R. Station and ample time for unloading and testing allowed before acceptance.

OSGOOD & THOMPSON, 611 N. Market St., S. F.

PORTABLE PLATFORM SCALES, TRUCKS, ETC.

Twenty-five per cent cheaper than any other on the market. Send for Catalogue.

C. H. LINDEMANN, Agent,

126 KEARNY STREET, SAN FRANCISCO.

CANCER.

THE KOEHLER CANCER CURE CO., 1428 Market St., San Francisco.

CANCER, Tumors or Malignant Growths removed without knife or caustic. A GUARANTEED CURE a specialty. Call or send for circular. Over 300 cancers preserved in alcohol in our office. Consultation free.

PHILIP KOEHLER, Manager.

GRANGERS' BANK OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 187



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 500,000
Dividends paid to Stockholders.... 720,000

OFFICERS.

A. D. LOGAN.....President
I. O. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on wheat and country produce a specialty.

January 1, 1893.

A. MONTPELLIER, Manager

FARM-POULTRY.

The Best Poultry Paper IN THE WORLD.

Write for SAMPLE COPY; Sent Free.

"It opened up a new field and cultivated it thoroughly."—So says the Fanciers' Journal.

"FARM-POULTRY is covering itself with glory."

—Thus the Philadelphia Farm Journal writes us.

It is worth \$1.00. It Teaches How to

Send on Trial. Make Money with

Six Months for A Few Hens.

ONLY 25 CENTS.

IF YOU MENTION THIS PAPER.

One department "Answers to Correspondents," is worth ten times the subscription price to anyone; explains many things apt to trouble even old breeders. Send for Index to first 3 Vols. free; judge your self, if as much instructive matter can be bought anywhere, for many times the price. Remit cash or stamps. This special offer good for only three months. I. S. JOHNSON & CO., 22 Custom House St., Boston, Mass.

AGENTS WANTED

FOR DR. JOHN HENRY BARROW'S Great History of the

WORLD'S PARLIAMENT OF RELIGIONS.

SELLS ON SIGHT. For territory and terms apply to THE KING PUBLISHING CO.,

132 Market Street, San Francisco, Cal.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering.

Surveying, Architecture, Drawing and Assaying. 728 MARKET ST., SAN FRANCISCO, CAL.

Open All Year.

A. VAN DER NAILLEN, President.

Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50.

ESTABLISHED 1864. Send for circular.



SEND FOR CATALOGUE TO

FRESNO AGRICULTURAL W'KS, FRESNO, CAL.

Send for Price Lists

OF GUNS

And all Articles used by Hunters and Anglers.



GUNS SENT ON TRIAL.

OLD GUNS TAKEN IN EXCHANGE.

GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.

Seeds, Plants, Etc.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrobalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond
Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

Santa Rosa Nurseries.

AN IMMENSE AND WELL
ASSORTED STOCK.

TREES TRUE TO NAME.—Warranted clean and
raised without irrigation.

PEARS AND PRUNES at about HALF USUAL
PRICES till my surplus is sold.

Price List mailed free.

Address R. W. Bell, Santa Rosa, Cal.

OAK LAWN NURSERY.

90,000 First-Class Fruit Trees
AT LOWEST PRICES.

MUST BE SOLD.

PLEASE WRITE AT ONCE.

HARRY E. HULBERT,
211 THIRD STREET,

SANTA ROSA, - - SONOMA CO., CAL.

GOLD DUST.

"Gold Dust Cling," says H. E. Van Deman, U. S. Pomologist, "is a yellow cling of medium size, round and regular in shape, and very firm in flesh. The color is very attractive, being dark yellow with a very red cheek. It bears heavily and carries to market with very little damage. Coming as it does before the main peach crop is gathered, it is about the first yellow cling of any special value and therefore finds a ready sale. Each year it gains in favor, but as it is a variety but recently originated the public know little of it. It is a very profitable variety." Price \$1 each, \$5 per half dozen. For sale by SACRAMENTO RIVER NURSERY COMPANY, Growers of HIGH-GRADE Fruit Trees, Walnut Grove, Sacramento County, California. Our Specialties—Genuine Tragedy Prunes, Clyman and Japan Plums on true Myrobalan whole root seedlings—we use no piece roots nor cuttings; price 15 cents each; Sacramento River Bartlett and Peaches—price 10 cents each. Large quantities at lower rates. WE GUARANTEE OUR TREES TRUE TO NAME.

Trees, Vines and Plants,

—FOR 1893 and 1894.—

Terms on Application.

ADDRESS, - - L. D. BUTT,

Penryn, Placer Co., California.

Don't Lose Heart.

PLANT FERRY'S SEEDS this year, and make up for lost time. Ferry's Seed Annual for 1894 will give you many valuable hints about what to raise and how to raise it. It contains information to be had from no other source. Free to all.

D. M. Ferry & Co.
Detroit,
Mich.

CALIFORNIA FRUITS

AND HOW TO GROW THEM. By Prof. Edward J. Wickson. A practical, explicit and comprehensive book embodying the experience and methods of hundreds of successful growers, and constituting a trustworthy guide by which the inexperienced may successfully produce the fruits for which California is famous. 600 pages. Fully illustrated. Price \$3. Postpaid. Send for circular. DEWEY PUBLISHING CO. Publishers, 220 Market Street, San Francisco, Cal.

FANCHER CREEK NURSERY,

FRESNO, CALIFORNIA.

FRUIT TREES,
ORNAMENTAL TREES,
GRAPE VINES.

SPECIALTIES—OLIVES, ROSES, PALMS.

SEND FOR CATALOGUE AND PRICE LIST.

GEO. C. ROEDING, Manager.

STOCKTON NURSERIES,

ESTABLISHED 1853.

FRUIT TREES. FRUIT TREES.
GRAPE VINES.

Also Fine Stock of Shade and Ornamental Trees, Shrubs, Palms, Roses and Carnations.

Correspondence Solicited.

PLANTS IN GREAT VARIETY.

E. C. CLOWES, STOCKTON, CAL.

PRUNE TREES

FOR SALE—50,000 Trees on Myrobalan Stock.

Imported from one of the first French nurseries. Scions from an orchard near Saratoga. Fruit raised in this celebrated district has taken for us six first-class awards, INCLUDING HIGHEST AWARD, COLUMBIAN EXHIBITION. Apply to

BALFOUR, GUTHRIE & CO., 316 California St., San Francisco, Cal.

Agents for Saratoga Packing Company.

McKEVITT'S EARLY.

The New Yellow Freestone Peach!
—FIRST AND BEST OF EARLY YELLOW PEACHES.—

RIPENS IMMEDIATELY AFTER THE ALEXANDER (White Cling), which is the earliest peach in market.

Fruit is round, of medium size, VERY HIGHLY COLORED, flesh firm and sweet.

THIS PEACH HAS BEEN SUCCESSFULLY SHIPPED EAST FOR FIVE YEARS and is no new, untitled variety.

Tree healthy, strong grower, and heavy bearer, never having missed a crop.

A limited number of yearling trees for sale this season. Apply early before stock is exhausted.

FRANK B. McKEVITT, : : : : VACAVILLE, CAL.

LOW PRICES

ON

ALMOND TREES!

California Paper-Shell, Nonpareil, Ne Plus Ultra and I. X. L.

A pamphlet on Almonds mailed free of charge on application. A large supply of the GOLDEN PEACH and FRENCH PRUNE. All kinds of leading fruit trees for sale. No charges made for mailing trees.

Address, PERCY W. TREAT.

Davisville Nurseries.....Concord, California

NAPA VALLEY NURSERIES.

NEW CATALOGUES NOW READY.

Fruit, Nut and Shade Trees, Grape Vines, Etc., Citrus Fruits, Ornamental Shrubs, Flowering Plants, Roses, Palms, Bulbs, Seeds, Etc.

Fruit and Nut Trees propagated from bearing orchards at Sausal Fruit Farm; Unirrigated, Clean and Healthy. Do not fail to correspond before making purchases. Satisfaction guaranteed.

LEONARD COATES, - - - NAPA, CAL.

FOR THE SEASON OF 1893-94.

BUDDED ORANGE TREES, of the leading varieties, one and two-year buds; also a small lot of choice budded and seedling LEMON TREES. Sweet Seedling Oranges, 1 to 4 years old. Shade and Ornamental Plants. Prices to suit the times.

ORCHARD AND NURSERY.....THERMALITO, BUTTE COUNTY, CAL.

For prices and terms, address

OROVILLE CITRUS ASSOCIATION, OROVILLE, BUTTE COUNTY, CALIFORNIA

Correspondence Solicited.

B. F. GODFREY & CO.,
NURSERYMEN,
Davisville, Cal.

Write for Catalogue and Prices.

SPARK'S MAMMOTH.
A SUPERIOR QUALITY OF APRICOT.
Fine for Canning, Drying and Shipping.

They run 3 and 4 to the pound. The Largest and Finest fruit of the Apricot variety.

ADDRESS

N. B. SMITH, Ventura, Ventura Co., Cal.

San Ramon Valley Nursery.

Surplus Stock of

ALMONDS, 8 Varieties.

PEACHES, 4 Varieties.

PRUNES, 3 Varieties.

At very LOW PRICES. Also an assortment of other varieties of Fruit Trees.

WRITE FOR PRICES ON STOCK YOU NEED.

BALDWIN & STONE,
Danville, Cal.

OLIVE TREES

In Variety for Nurserymen,
Dealers and Planters.

Will also contract now to propagate Rooted Olive Cuttings for persons who wish to plant them in nursery spring of 1894.

OLIVE CULTURE IN CALIFORNIA,

Sixteen pages, mailed free.

Address:

JOHN S. CALKINS,
POMONA, LOS ANGELES COUNTY, CAL.

OLIVES.

Missions and Nevadillos.

A NO. 1 TREES,

Two-Year-Old, 4 to 6 feet High.

Extra inducements offered to intending buyers both as regards choice trees and very low prices. Order a once or open correspondence with me.

J. E. PACKARD, Pomona, Cal.

OLIVE TREES.

ALL KINDS OF

Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,
Pomona, Cal.

OLIVE TREES FOR SALE.

Twelve years experience has taught me how to PROPERLY root the olive. No artificial heat used.

Address

W. ALSTON-HAYNE Jr.,
Montecito P. O., Santa Barbara, Cal.

MYROBOLAN PLUM

AND

MAZZARD CHERRY SEED,

Fresh Crop Now Ready for Shipment.

FULL PRICE LIST OF

FRUIT STOCKS AND SEEDS
ON APPLICATION.

THOMAS MEEHAN & SONS, GERMANTOWN, PA.

Pepper's Nurseries.

ESTABLISHED IN 1858.

For Sale at Low Rates, a General Assortment of Hardy Deciduous Fruit Trees.

I do not buy trees to sell; what is offered is grown in my own grounds and free from scale bugs. No scale bugs of any kind to be found in the Nursery. No agents employed. Order direct from the nursery and procure your trees true to label. Order early, as early planting is the most successful with deciduous trees. Prices furnished on application.

Address W. H. PEPPER Petaluma, Cal.

50,000 FRENCH PRUNE TREES
On California Peach Root, for sale.

No. 1—6 to 8 ft.\$50 00 per 1000
No. 2—4 to 6 ft. 30 00 per 1000
No. 3—3 to 4 ft. 15 00 per 1000

First class stock. Free from insect pest. Samples sent on application. Address

N. B. HARVEY, Milwaukee, Oregon.

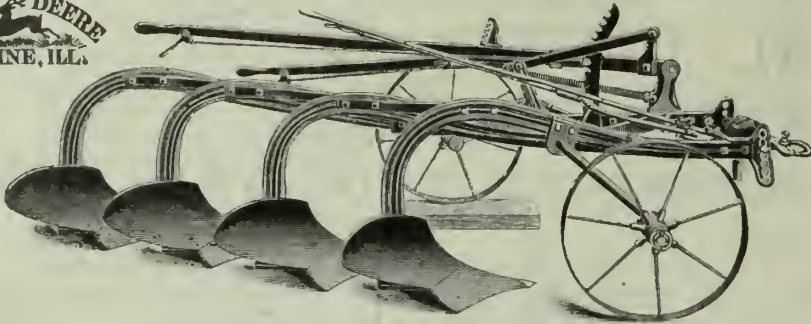
OLIVE TREES.

Apply for Catalogue.

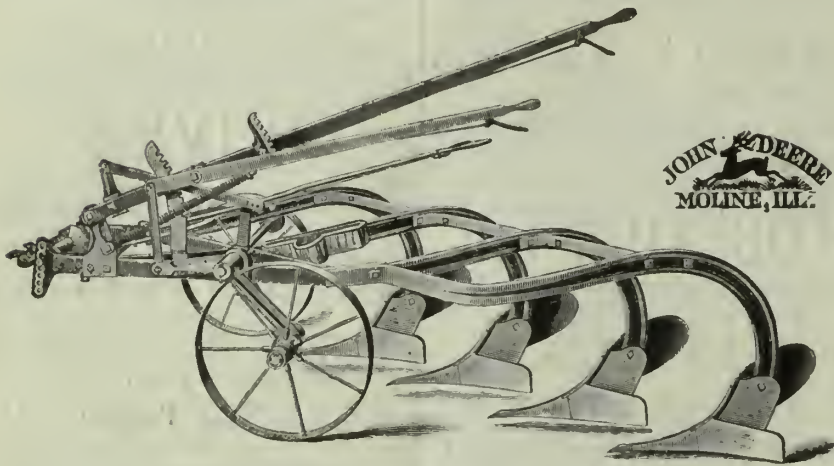
C. F. LOOP & SON, - - Pomona, Cal.

WE ARE ALWAYS THE FIRST TO MEET "A LONG FELT WANT."

JOHN DEERE
MOLINE, ILL.



"VAUGHAN" ORCHARD GANG.
(Cut Above Shows Levers in Position for Deep Plowing.)



"VAUGHAN" ORCHARD GANG.
(Cut Above Shows Levers Up, to Throw Plow Out.)

CUT THIS OUT.

"VAUGHAN"

REVERSED LEVER ORCHARD GANG.

JUST OUT.

LIGHT WEIGHT, LIGHT DRAFT, FOR CULTIVATION ONLY.

This is the First Plow Ever Built on Correct Principles for Plowing in Orchards. The Deeper it Plows, the Lower the Levers are Set, and the Less They Interfere with Overhanging Branches.

ANY ONE CAN SEE THE ADVANTAGE OF THIS CHANGE.

The Levers of ALL OTHER gangs are
UP IN THE AIR

When in operation; the trees suffer
AND MEN SWEAR.

JOHN DEERE PLOWS
ARE ALWAYS BEST.

For Particulars Address DEERE IMPLEMENT CO., San Francisco.

WE GIVE ESPECIAL ATTENTION TO

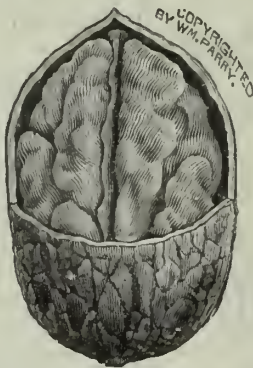
Fruit Trees! Deciduous Fruit Trees!

ALEXANDER & HAMMON'S

Rio Bonito Nurseries, Biggs, Butte Co., Cal.

KAGHAZI

:- SOFT SHELL :-



PERSIAN

:- WALNUT! :-

Our Stock of TREES and VINES is Most Complete
in EVERY CLASS of Fruits.

A LARGE STOCK OF THOMPSON'S SEEDLESS GRAPES.

SHIPPING, CANNING and DRYING Fruits of all Kinds.

Best Assortment of RAISIN and TABLE GRAPES in California.

Early Shipping Plums a Specialty.

SPECIAL PRICES FOR TREES IN LARGE QUANTITIES.

DURING the last three years, trees grown on the FEATHER RIVER BOTTOM LANDS, at RIO BONITO, BUTTE COUNTY, have been much sought after, and the demand for them is increasing all over the State where they have been planted. Owing to the peculiar adaptability of the soil and climate of this section for growing nursery stock, the trees making a very large and well-furnished system of root growth, and maintaining a correspondingly strong and vigorous top, maturing the wood thoroughly, we are enabled to supply our patrons with the best of trees, healthy in every respect, entirely free from insect pests, and in perfect condition for transplanting.

If You Are Going To Plant Trees, It Will Pay You To Correspond With Us Before Purchasing.

ALEXANDER & HAMMON,

BIGGS, BUTTE COUNTY, CALIFORNIA.

Incorporated 1884.

500 Acres.

CALIFORNIA NURSERY COMPANY,

Niles, Alameda Co., California.

FRUIT TREES, SHADE TREES, EVERGREENS, PALMS AND FLOWERING PLANTS.

SPECIALTIES: OLIVES—38 sorts, French, Italian and Spanish.
ROSES—360 sorts, all the leading kinds, new and old.
CLEMATIS—25 Varieties.

SEND FOR CATALOGUES.

JOHN ROCK, Manager.

CATALOGUES MAILED FREE.

Cox Seed & Plant Co.
San Francisco, Cal.

New Roses.
New Chrysanthemums.

Our Descriptive Catalogue contains valuable information about GARDEN, FARM and FLOWER SEEDS, PLANTS, SHRUBS and FLOWERING BULBS, AUSTRALIAN and PACIFIC COAST TREE SEEDS.

Fruit Trees,
CALIFORNIA GROWN VEGETABLE and FLOWER SEEDS.

PACIFIC RURAL PRESS

Vol. XLVI. No. 26.

SAN FRANCISCO, SATURDAY, DECEMBER 23, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market Street.

At the Midwinter Fair.

The time is approaching for the opening of the Midwinter Fair, and preparations are going forward with surprising speed. Things are being accomplished in the art of

ministration building the length of the central court upon the distant Manufactures and Liberal Arts building, which is the greatest structure on the grounds. It is probably a quarter of a mile distant from the camera. On right and left, in nearer view, are the two buildings next in size,

180 feet in greatest length by 150 feet in greatest width. The different counties participating in its construction have been awarded space as follows: Yuba, 950 square feet; Napa, 1400; Solano, 1400; Sacramento, 1400; Placer, 900; Butte, 900; Colusa, 900; Shasta, 250; Siskiyou, 250.

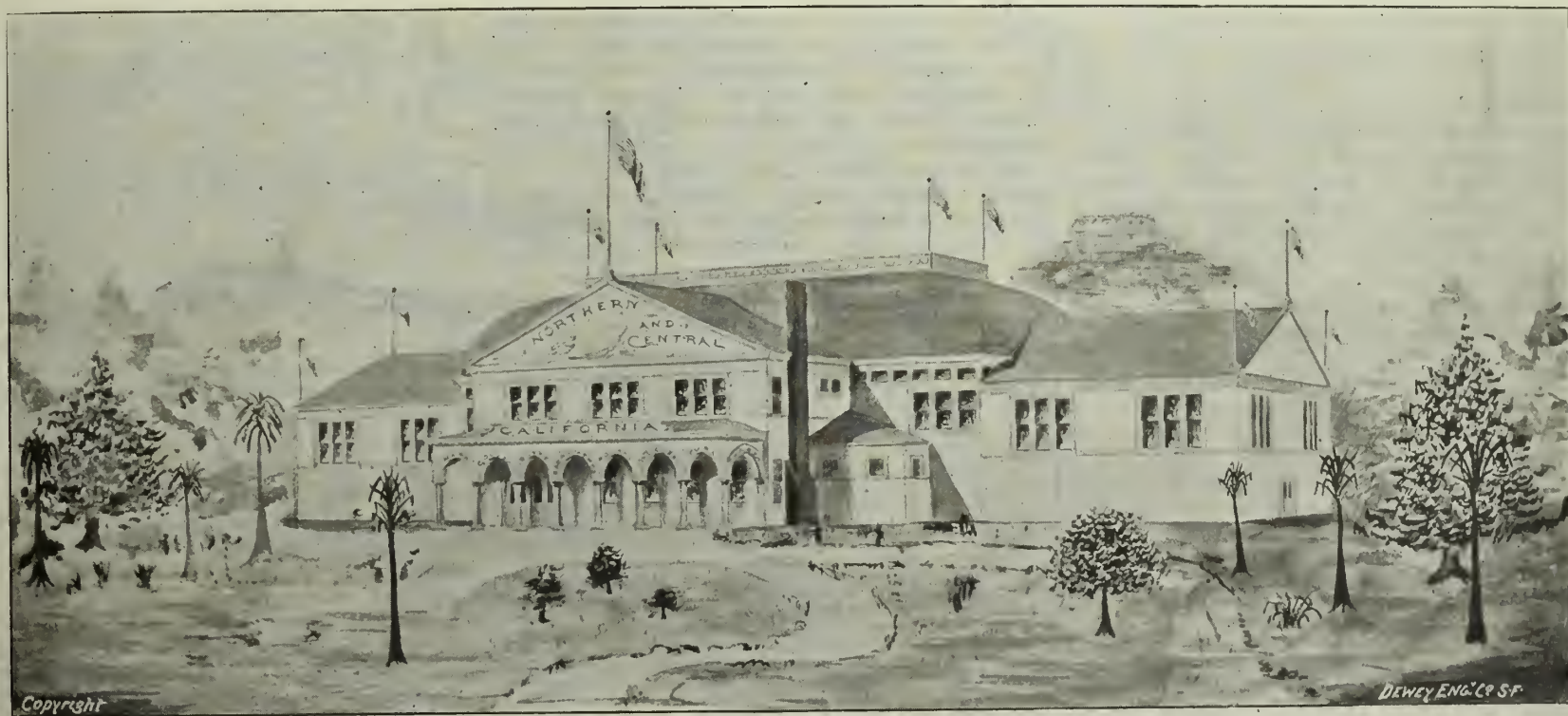


construction which seem almost incredible considering the days involved. Fortunately for the enterprise, we are having a season of exceptional salubrity, and each day finds some new building roofed from the floods which in the nature of things must soon come.

that for machinery and the one for agriculture, while beyond the latter is the Egyptian style of building devoted to the fine arts.

The second plate on this page shows the building constructed by joint subscription of northern and central

This will not, of course, include all the counties exhibiting, for county exhibits will doubtless form a leading feature of the main exposition building devoted to agriculture. Our engravings are reproduced from the *Midwinter Exposition Illustrated*, a San Francisco publication



NORTHERN AND CENTRAL CALIFORNIA BUILDING AT THE MIDWINTER EXPOSITION.

Our engravings are in part a demonstration to distant readers of the actuality of the enterprise. The upper plate of pictures is made from photographs of the buildings themselves and not from architects' perspectives, so the views are real. One thing, however, is lacking in these reduced views, and that is that they do not carry the impression of size which the buildings themselves convey to the beholder. The buildings represented in the small pictures occupy the same correlative positions that the pictures hold, and the general view, including the three, is such as the beholder would get by looking from the Ad-

counties for the special display of their productions and resources. The southern California counties are also erecting a building of their own, of which we hope to have a view at another time. It has been somewhat changed from its original design and we desire to present it in true form.

Much cannot be said of the beauty of the building in construction by the northern and central parts of the State. It will serve, however, as a neat and commodious pavilion, in the interior of which it is hoped the visitor will find greater interest than in its exterior. It will be

of high artistic merit, which devotes considerable space to the coming fair.

ALFALFA and sorghum for feeding have been studied at the Arizona experiment station. Results show that alfalfa fed alone gives much better results than sorghum alone, but a combination of the two is superior to either feed singly. Alfalfa is a flesh-forming food, while sorghum is a heat and fat-producing food; the two put together make the best kind of a food, in that the flesh-forming, heat and fat-producing qualities are combined.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING Co.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, 5 months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.50	\$ 1.50	\$ 4.50	\$ 12.00
Half inch (1 square).....	1.00	2.50	6.50	22.00
One inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Registered at S. F. Post Office as second-class mail matter.

Our latest forms go to press Wednesday evening.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, December 23, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—The Northern and Central California Building at the Midwinter Fair, 421.
EDITORIALS.—At the Midwinter Fair, 421. The Week; The Government Seed Shop; The Fruit-Marketing Convention; Miscellaneous, 422. From an Independent Standpoint; The Proposed State Fruit Exchange, 423.
CORRESPONDENCE.—The Necessity for Co-operation in Fruit Marketing, 423. The Proposed Fruit Exchange, 424.
MISCELLANEOUS.—Gleanings; State Floral Society; A Flyer in the Wheat Trade, 424. The Berlin Sewage Farms; Why Ice Cream Is Sometimes Poisonous; Seasoning Oak, 432. An Important Link; The Earth's Interior, 436.
HORTICULTURE.—What the Olive Did for an Arid Country; Lemon-Curing at Florin, 425.
THE FIELD.—Asparagus for Market; Germany Wants Flax Fiber, 425. Distribution of Seeds and Plants, 433.
THE DAIRY.—Quantity of Food for Cows, 426.
TRACK AND FARM.—The Trouble with the Horse Business, 426.
AGRICULTURAL ENGINEER.—Cost and Profits of Good Roads, 426.
POULTRY YARD.—Poultry in the Orchard, 427.
THE KENNEL.—Educating the Dog, 427.
THE VETERINARIAN.—Veterinarians Discuss Glanders, 427.
THE HOME CIRCLE.—428-429-430.
DOMESTIC ECONOMY.—430.
PATRONS OF HUSBANDRY.—Editorial Observations; Random Thoughts; Lecturer's Notes; The Grangers' Bank; From Tulare Grange; Secretary's Column; Notes; From New Hope; From North Butte Grange, 434. Grange Elections, 435.
AGRICULTURAL NOTES.—435.
SWINE YARD.—Charcoal and Ashes for Hogs, 436.
MARKET REPORTS.—The Local Produce Market, 437.

BUSINESS ANNOUNCEMENTS.

(NEW THIS ISSUE.)

	PAGE
Windmills, Tanks, Etc.—Krogh Manufacturing Co.....	440
Nursery Stock—Central Nursery Co., Acampo.....	439
Nursery Stock—Sunset Nursery Co.....	440
Nursery Stock—E. J. Bowen.....	439
Nursery Stock—Pikington & Co., Portland, Or.....	439
Nursery Stock—Robert Davis, Yuba City.....	439
Cutaway Harrow—The Cutaway Harrow Co., Higganum, Conn.....	432
Stable Blanket—Burlington Blanket Co., Burlington, Wis.....	437
Situation Wanted—C. B., Diamond, Alameda Co.....	437
Hood River Strawberry—Guy M. Pikington, Hood River, Or.....	432
Situation Wanted—F. Foreman, Sacramento.....	438
Dividend Notice—San Francisco Savings Union.....	437

See Advertising Columns.

The Week.

Christmas affairs constitute the leading feature in the city's business, as is usual during the third week of December. It is encouraging in a certain way to see that the hard times do not apparently cloud the Christmas spirit. The throngs in the holiday marts seem as great as ever and the era of parcel-bearing on the public thoroughfares is as clearly discernible. This, of course, signifies that many people have the funds for merry-making, and that the stringency which stops investment and arrests enterprise does not reach to the private purse strings which answer to holiday considerations.

Possibly we ought to be thankful for this much of comfort, and yet it is hard to repress the thought that this is not the highest manifestation of the Christmas spirit. He that careth not for his own receives very forcible scriptural denunciation; and yet he who does only this does not rise above the level of the beast and the bird. The spirit of Christ and of his great mission was far above and beyond this, and unquestionably a better embodiment of that spirit would be a disposition to loosen the bands which have so tightly enwrapped funds which should be available for the pursuit of enterprises, which would give work to those who need the proceeds for their daily sustenance. There comes then the sad thought that while the city shows on its surface the wonted holiday life and liberality, there is, beneath, the tide of hungry, homeless wanderers, hither bound from distant parts where local industries have been paralyzed by the unsettled condition of public affairs.

It is fitting that the preachments of this season should be more than ever charged with the duty of the fortunate to the unfortunate classes of society. If a certain amount be available for Christmas spending, let one-half be devoted to articles of less intrinsic value which will carry just as rich a sentiment, and the other half to the relief of the present distress of our fellow men. In this way hunger would be at least for a day appeased, and courage might be made to arise anew in the hearts of the desponding. In this way, too, there might be a gentler

spirit disseminated through the ranks of the suffering who are now withheld from desperate deeds but by the vigilance of the police. The influence of such a course cannot be measured. It may be the cast of the die which would save hundreds from crime, from abandonment, from self-destruction.

The spirit of Christ is the essence of the sublimity of the universe, but it often reaches the human heart through the humblest media. During these days which are dedicated to manifestations of this spirit there should surely be a desire to possess something of its depth and breadth and to communicate it to others. The present moment calls for that transmission through the act of giving, and we hope the call will be freely and gladly answered. Let the organized charities of the city make distribution from unusually full supplies, and let the plenty of the farm house bring a day of comfort to the throng of tramps which line our highways. Twice blest is the act by its own nature and influences. Let each discharge it as his means permit.

The Government Seed Shop.

President Cleveland has been able, even while carrying Hawaiian conservatism in one hand and American reform in the other, to throw a bomb at the seed shop of the Government at Washington. The missile exploded well but it is not yet time to measure the effects. We are rather surprised that Mr. Cleveland did this for it was also done by the last administration and in fact the denunciation of the seed distribution feature of the Government has become a sort of a stereotyped paragraph in presidential messages for some years. It has also been presented in the reports of the commissioners and secretaries of agriculture. Secretary Morton speaks very forcibly of the unwisdom of this expenditure of public money as heretofore carried on, and as we have had so much occasion to differ from Mr. Morton we are glad to heartily agree with him in his proposed reformation of this part of his work.

The question naturally arises, why, if the seed distribution from Washington has been so long denounced in documents presented to Congress has it not before this been changed or done away with. The reason is plain. It survives because it is dear to the Congressional heart; because it serves as a constant means for representatives to remind their constituents that they still exist even while discriminating reporters will not include their names in accounts of important legislative proceedings. It furnishes a most direct means of rewarding the faithful in the hamlets of the remote districts and of approaching the wavering voter so that he may remember the donor with gratitude at the coming election. It tends somewhat to equalize Congressional influence and talent, for the member who cannot understand great questions nor lift his voice on any matter is not wholly without weapons. While his brainy rivals may be spouting eloquence which will heat the wires in transmission to local journals, the tongue-tied member may be quietly emblazoning his constituents' names on packages of turnip seeds, and there will go to the farm house in the same pocket the county paper with the praise of one Congressman and the turnip seed showing the practical remembrance of another. Honors are made easy. It is a great scheme of equalization, and why should not the public treasury pay for seeds for one member as well as for printing ink for the other. But even this lovely reciprocal scheme does not please Mr. Cleveland, for he says in his Message:

In the year 1838 the Congress appropriated \$1000, to be taken from the Patent Office funds, for the purpose of collecting and distributing rare and improved varieties of seeds and for prosecuting agricultural investigations and procuring agricultural statistics. From this small beginning the seed division of the Department of Agriculture has grown to its present unwieldy and unjustifiable extravagant proportions. During the last fiscal year the cost of seeds purchased was \$66,548.61. The remainder of an appropriation of \$135,000 was expended in putting them up and distributing them. It surely never could have entered the minds of those who first sanctioned appropriations of public money for the purchase of new and improved varieties of seeds for gratuitous distribution that from this would grow large appropriations for the purpose and distribution by members of Congress of ordinary seeds, bulbs and cuttings which are common in all the States and Territories, and everywhere easily obtained at low prices. * * * And yet this indiscriminate and wasteful distribution by legislation and legislators continues, answering no purpose unless it be to remind constituents that their representatives are willing to remember them with gratuities at public cost.

The last sentence shows why this large seed business continues, and it is not easy to see how it can be either reformed or stopped, for the appropriation of money is made for the special purpose of giving members this sort of valentine material. There is always trouble if the supply runs low, and for this reason the head of the Department of Agriculture has had to stretch the money to its utmost limit by the purchase of heavy weights of cheap common seeds; and, this being his weakness, unscrupulous dealers have emptied their bins of tons of old and killed seeds, until the influence which could negotiate a sale of worth-

less stuff to the Government was as valuable as "pulls" are in other political transactions. It is to be hoped, however, that Secretary Morton may be able to accomplish something in the reformation of the Government seed business, and to restore to it the motive which prevailed at the beginning, and that is to introduce to the country seeds and plants from other countries which seem to be worthy of introduction and trial. These plants are not to be had through ordinary trade channels. They should be wholly, or at least largely, new to the country. For years something has been done in this line, although the Congressman's cry for "more seeds" has reduced the department's funds for strictly new things to a pitifully small amount. We have in this State good evidence upon which to determine what could be done if the whole appropriation were properly used. The Washington Navel orange came to us in this way. During the incumbency of Prof. Van Deman as U. S. Pomologist there were a number of valuable things brought from far distant parts, which bid fair to be of permanent value to our horticulture. Such work should be pushed forward until the uttermost parts of the earth shall yield their best indigenous or cultivated trees and plants for the enrichment of our vegetable resources.

President Cleveland wisely declares that such proper work could be best done through the experiment stations which are established in each State and Territory. He says in his message:

In each State and Territory an agricultural experiment station has been established. These stations, by their very character and name, are the proper agencies to experiment with and test new varieties of seeds. * * * Anticipating a consummation so manifestly in the interests of good administration, more than \$100,000 has been stricken from the estimate made to cover this object for the year ending June 30, 1895; and the Secretary recommends that the remaining \$35,000 of the estimate be confined strictly to the purchase of new and improved varieties of seeds, and that these be distributed throughout experiment stations. Thus the seed will be tested, and after the test has been completed by the experiment station the propagation of the useful varieties and the rejection of the valueless may safely be left to the common sense of the people.

Our California Experiment Station has been doing for years through its own resources just such work as President Cleveland commends. It has introduced many things from distant regions and localized them in this State. It has taken material introduced by the Washington authorities and multiplied it so that it is available to all who desire it. The character of this work can be learned from the University Bulletin, offering seeds and plants, which we publish upon another page of this issue.

Such work can be done in all the States; it is a very important branch of experiment station work, and would, we believe, be welcomed by all such institutions throughout the country.

The Fruit-Marketing Convention.

We give on other pages a very strong appeal for the success of the convention of fruit-growers which will be held in Pioneer hall in this city on Friday, December 29th, beginning at 10 A. M. Certainly the statements made should arrest attention and many will find in them a reflection of their own beliefs drawn from recent experiences. How the ills shall be cured except those who suffer apply the remedies, is beyond conception. If producers have yet suffered enough to make them seek relief, they will soon get all that is needed to give them such an impulse. Whenever that condition of readiness shall come the co-operative remedy is the only genuine and lasting one. Just what form it shall take is the matter for conference and discussion, but as to the essential nature of the remedy there can be no doubt. Again, the sooner present evils are attacked the better. They are growing; they will grow by inaction and neglect. We trust every fruit-growing reader of the RURAL will carefully peruse the papers we present in this issue and will come to the meeting informed of what the organizing committee think feasible and desirable, and with forethought as to the features of the situation, so that discussion may strike at once at the roots of the matter. For this reason especially we publish the report of Mr. Adams, who has been manager of the provisional organization which has acted in the matter up to this point. The plan outlined by Mr. Adams will naturally come before the convention as the proposed basis of future work, and if it can be in any way improved, the convention will be glad to know it. Those conducting the effort for organization have only two desires, viz.: to do the best possible thing and to do it now.

THE Poles are after the persimmons in spite of the danger to the bounty. It is telegraphed from Omaha that Count Lubinski and other Polish capitalists have been there for months investigating the beet-sugar industry with the view of establishing large factories. They have decided to establish a factory and a refinery at a cost of \$1,500,000, and will bring over a colony of Polish beet-sugar farmers.

From an Independent Standpoint.

The Hawaiian matter, or, to be accurate, the political questions growing out of the Hawaiian matter, continue to engross public attention. On Monday of this week the President sent a special Message on this subject to Congress, accompanied by transcripts of the written instructions given to Minister Willis. In this Message the whole matter is gone over, but nothing new developed. Mr. Cleveland accepts absolutely the statements of Commissioner Blount to the effect that the United States forces were landed prior to the revolution in the face of the fact that everybody else who has spoken declares the landing to have been after the revolution, was accomplished. Upon this assumption as to the facts, Mr. Cleveland proceeds to score the then U. S. Minister (Stevens) soundly, denouncing him as a conspirator against the Government to which he was accredited as the American representative. In proof of all this, he submits a series of letters written over a year ago by Mr. Stevens to Mr. Blaine, then Secretary of State, setting forth the rottenness of the Island monarchy, asserting that the time had about come for the country to be taken under the wing of the American eagle, and asking for specific instructions in case the expected revolution should occur. To the average American citizen these letters seem to do credit to the patriotism and good sense of the Minister, but by Mr. Cleveland they are taken to imply not that Mr. Stevens was a watchful, zealous and discreet Minister, but a meddler and an agitator waiting and anxious to strike a death blow to the Government whose guest he was and to whom his good offices were due. After reviewing all the facts as he understands them, Mr. Cleveland reasserts his conviction that the revolution of last winter was wrought by intrigue on the part of the American Minister with the support of American arms; and he holds it to be the duty of the United States to restore the deposed Queen.

All this is old straw threshed over. The real interest of the Message lies in the instructions to Minister Willis; and here the colossal assumption of the Administration is displayed. Mr. Willis was told to inform the Queen that President Cleveland wanted to assist her to again mount the throne, but that she must agree to grant general amnesty; in fact, to forget the past and to smother all animosities. This much accomplished, Mr. Willis was to explain the President's wishes to the members of the Provisional Government and to civilly invite them to step down and out of authority. In case Mr. Willis should be asked if he intended to enforce this policy with U. S. marines from the ships in harbor, he was to say that it was not for the President, but for Congress to employ armed force. It seems not to have occurred to Mr. Cleveland that he was dealing with men entirely grown up, having definite interests, views and plans of their own, and that his suggestions might be regarded as impertinent and rejected with contempt. He seems to have had a serious shock when informed by Mr. Willis that the Queen, whom he was attempting to serve, declined to accept his terms. His sensations upon hearing that the Provisional Government proposed to fight rather than surrender are not given, but may be inferred. At the end of the Message, Mr. Cleveland refers the whole matter to Congress, which he would much better have done four months ago. Up to this time (we write on Wednesday), Congress has taken no steps in the matter excepting to criticize the course of the President. Senator Hoar has given notice that he will at an early day review the whole matter in its constitutional aspects; while in the House Mr. Boutelle of Maine made a sensation and almost a row yesterday by referring to Cleveland as an usurper and to Gresham as a renegade. Extravagant and rude as this was, it met with such applause as showed that a large part of the House were in sympathy with the sentiments of the speaker.

As matters now stand, there is nothing to indicate what Congress will do. Under ordinary conditions, the majority might be expected to follow the lead of the President, but that cannot be done without flying in the face of the public judgment, and, we believe, will not be done. The situation in the islands is unchanged save that England is making advances through Canada and there is no telling what course may be taken by the Provisional Government in its weariness and disgust. The only clear fact in the whole situation is that Mr. Cleveland has acted with supreme assumption and supreme folly, and that he has made a sad mess of things.

The silver members of Congress met in conference during the week and determined not to organize a special silver party, but to support nobody for Congress who is not friendly to the silver cause. It is, however, the belief of those who attended the conference that a national

silver ticket will be put in the field in 1896; but that is a long way ahead, and any expression covering the silver policy at that time is, in the nature of things, mere guess work. One thing, however, is certain, namely, that the agitation for silver will not be allowed to flag.

The first practical move to bring the silver question again before the public was made last week by Senator Voorhees, who presented to the Senate his long-promised bill. It provides for the coinage of the silver seigniorage; for the purchase and coinage of \$2,000,000 worth of silver per month after the coinage of the seigniorage; for the retirement of paper currency of less denomination than \$10; for the retirement of all gold coins of less denomination than \$10, and for the appointment of an international monetary commission. In regard to the inference in some quarters that the Administration favored the bill, Voorhees said: "My bill is not the result of one word of consultation, and I certainly do not claim to represent the Administration in introducing it. I do desire, however, to help the treasury out of its deficiency." The anti-silver men will oppose this bill because, they say, the coinage of the seigniorage would weaken the security of the notes outstanding against the silver bullion as an entirety; while on the other hand the silver men are not pleased with the bill, Senator Stewart denouncing it as a sham and a fraud. Thus, opposed by both sides, Mr. Voorhees' measure has small chance of coming to anything.

There is to be a determined effort this winter to secure the admission of New Mexico, Arizona and Utah into the Union. The motive is as usual a political one; and to those who look at such matters from a partisan standpoint there would seem to be justification for the Democrats in this case, in the admission of Idaho, Montana and Wyoming by the Republicans. But two wrongs don't make a right, and the project now in hand would be no less an outrage because the admission of the three States named was an outrage. But there are in the case of Utah, Arizona and New Mexico some considerations wanting in the case of Idaho, Montana and Wyoming. Utah is the home of the Mormon power, New Mexico is still alien to American civilization, and Arizona is largely a desert without present or prospective qualification for Statehood. To take either of these Territories into the Union would, in our judgment, be simply to add three more to the list of national mistakes and embarrassments. One among the several legitimate grounds of protest, is the objection to the further free coinage of United States Senators.

President Cleveland has made another political sensation by appointing Wayne McVeagh of Pennsylvania Ambassador to Italy. Mr. McVeagh is a distinguished lawyer, and was Attorney-General in Garfield's Cabinet. For several years he has been a severe critic of Republican policy, and while still claiming to be a Republican in principle, came out during the last campaign for Cleveland. His position is identical with that of Secretary Gresham who was a life-long Republican and a former cabinet minister under Republican administration. There is no question as to McVeagh's qualification for the place, and while there will be a good deal of objection to him in the Senate, his confirmation is assured.

The Proposed State Fruit Exchange.

We are glad to note the wide interest in the coming meeting of the State Horticultural Society of December 29th, which will take the form of a general convention of fruit-producers in the interest of the proposed State Fruit Exchange. Local organizations are naming delegates, which is an excellent idea, though, of course, this will not exclude any who desire to come individually. It will be a perfectly free and popular gathering of all those in the producing interest.

At the Farmers' Institute at Visalia, last week, 12 delegates were named. At Fresno there was also a meeting held, which resulted in approval of the general object.

At a meeting held at Penryn, on Friday, of the Placer County Horticultural Society, a committee of three was appointed to attend the convention at San Francisco on the 29th inst., and other members of the society have also signified their intention of being in attendance. The committee appointed by the society are J. Parker Whitney of Rocklin, Capt. McCann of Auburn and P. W. Butler of Penryn. The duty of this committee is to get information at the convention and report to the local association before further action will be taken toward forming a county organization.

THE Northern California Horticultural Commissioners effected an organization at Marysville recently by electing H. P. Stabler of Sutter president and G. M. Gray of Chico secretary. The object is to formulate plans for inspecting fruit trees and fruit in the upper part of the State by joint action of the different Boards of County Commissioners.

The Necessity for Co-operation in Fruit Marketing.

TO THE EDITOR:—In response to your request for an article on State co-operation, I have to say as follows:

At present, outside of a few fortunate districts, but few orchards or vineyards in this State pay the living and working expenses of their owners, and interest on capital invested.

If a grower makes only living and working expenses and owns his farm clear, he only loses interest on capital and makes no profit; but if his farm is mortgaged, he loses his farm.

Under present conditions I see no prospect for better average returns and hence, as most farms are mortgaged—many excessively, I see nothing to be looked for, *unless conditions can be changed*, except wholesale foreclosures and a general liquidation in the fruit business.

I think no one will dispute my facts, or be able to give reasons for a more promising outlook, and if I am correct as to these there is no escape from my conclusion.

Widespread distress among fruit-growers will embarrass even those among them who are strongest. No railroad can pay interest on its capital while in competition with a bankrupt road which does not pretend to do so. Neither can any orchard pay interest in competition with bankrupt orchards.

There will be many to object to these statements, not because they are not true, but because they tend to hinder land sales or loans. But I believe we have reached a point where growers can make more money by forcing the situation and seeking a remedy, than by keeping still and trying to unload on the tenderfoot. In some districts of the State conditions are not yet so bad as I have indicated, because they are older and wealthier and can practice more of the economies of wealth, but the poorer districts are bound to drag them down.

And now, what is the remedy? For unless there is a remedy to propose there is no reason to publish our troubles.

The root of the trouble is lack of money. The growers who are making money now are those out of debt and with the capital necessary to produce the best fruit by the most economical methods. Great sums are annually wasted for lack of work done in orchards because it cannot be paid for, resulting in a poor quality of fruit which does not pay expenses. Other great sums are wasted in paying help not needed, but which cannot be discharged until paid off, and in payment to dawdling and ineffective hands who take liberties and "soger" because they know they cannot be discharged. Other waste occurs from lack of tools and appliances which there is no money to pay for. The greatest waste of all comes from the intense pressure to sell, during 60 or 90 days in autumn, products which require a full twelvemonth for consumption.

Some of these troubles cannot be directly reached by State co-operation. The last and greatest can. The grower cannot judge, in any season, what the value of his product for that year is. By State co-operation he can get the services of able men to study the conditions and inform him of the result, so that he will at least know what to ask. In years when the world's increasing product outruns the capacity of existing markets, the grower cannot intelligently spend money to explore and develop new outlets, for he does not know where to look for them or how to work them, and if he did he cannot afford to spend individual money in opening markets which others as well as himself stand ready to seize. But State co-operation will keep enterprising men *all the time* upon such work, at the general expense, for the general good.

The grower who must realize, in October or November, upon his dried product has no resource, after the legitimate fall market is supplied, but forced sales for whatever he can get. This is what is going on now. He gets large advances, dreaming that his commission-house will carry him till better times. He is promptly sold out. The commission-houses cannot carry him any more than he can carry himself. No matter what the agents promise, they simply can't do it, and don't try.

Local co-operation will enable him to get reasonable advances on his product in store here in the older districts where accumulated wealth supplies sufficient deposits to local banks. But in many, and I think most, of the fruit districts of the State the local banks have not themselves the resources to do this, and the money must come from financial centers. In these centers miscellaneous fruit paper can never be made available. The methods and circumstances of hundreds of local unions cannot be investigated; but a single uniform method of making fruit products available as security, under the inspection at least of a responsible central concern, can and would be investigated, and funds could be had. State co-operation based upon local co-operation, upon a uniform plan, can secure reasonable advances at current rates upon fruit products in store. Nothing else will or can except locally and in limited quantities.

Our present methods of sale are unnecessarily expensive. State co-operation will secure the services of able and experienced business men who will devise ways of simplifying sales and reducing their expense.

Incidentally, State co-operation will provide an agency through which any grower, or any local union, not otherwise conveniently served, may market his fruit.

How shall this all be insured through a State organization? Well, first, by selecting able men as directors; and secondly, by giving them a suitable income to work with. If we give abundant means to incapable directors they will waste them. If we get the best directors in the world, and do not supply them with money, they can do nothing.

In my judgment, we should endow a State Exchange with an income equal to one-half of one per cent upon our own sales, or so much thereof as is needed, with a suitable additional charge to those actually selling through the State Exchange.

Whatever sums we can save in marketing through co-

operation will be applied in reducing indebtedness, necessary and yet economical use of additional help and conveniences, and so indirectly improving conditions which co-operation does not directly reach.

Success involves the economic education of growers, the careful selection of directors and firm determination rather than transient enthusiasm in their support.

These are my individual views upon the matter.

EDWARD F. ADAMS.

The Projected Fruit Exchange.

A Report by Manager Outlines the Plan Upon Which It Must Operate.

The following report is made public for the information of all interested.—JOHN MARKLEY, President Cal F. Ex.

SAN FRANCISCO, Dec. 22, 1893.

Mr. John Markley, President California Fruit Exchange—SIR: Since assuming the duties of Manager, on Nov. 16th, I have devoted my entire time to the organization of the Exchange, with such results as may appear hereafter.

I have to report that great interest in our movement has been expressed by growers in all parts of the State, who seem almost without exception ready to support any well-considered effort to remove existing abuses in the fruit trade.

In my opinion, our measure of success in the present movement will be that of our good fortune in securing able and earnest men to serve as directors. They must be fruit-growers or they will have no interest in the matter. They must not themselves be buyers or their interest will be adverse. They must have had experience in business affairs or they will not know how to act. Many of our successful business men have large interests in fruit, and many who are now growers only have had large business experience. Among them there is abundant ability available.

Such a Board of Directors will be the best judges of how far and how fast we can go. Certainly we cannot do everything at once. Having a clearly defined policy, they will have no trouble in securing effective executive officers to carry it out, and with a wise policy and vigorous execution there is no fear of lack of support by growers. I think my experience qualifies me to say so much unreservedly. Growers desire above all things honest and able assistance in marketing. If they ever fail to support any co-operative movement it is because they doubt either the honesty or ability of its administration. There is absolutely nothing beyond this in the common notion that "farmers will not hang together."

It may be proper that I give my individual opinion of the proper functions of a State Exchange. The ultimate character of public institutions like this must be a matter of growth, but I think fruit-growers can do the following things for themselves from the start:

They can ascertain the condition of the markets and the value of their crops.

They can explore and open up new markets and stimulate old ones.

They can procure their own funds for necessary advances on crops, while retaining their sale in their own hands.

They can concentrate, grade and prepare their products for their final market.

Between our fruit thus concentrated and in store in California and the jobbing houses in distant cities, there must, for the present, be a go-between of some kind. Nothing but substantial uniformity of grading and packing, accompanied with clear definitions of grades, certainty that goods delivered will conform to them, and absence of severe competition, will enable us to escape this expense; whenever we have learned to produce those conditions the mail and the wire will be all the middle servants needed.

That at present necessary go-between may be with:

1. The jobber's agent, residing here and inspecting, buying and paying on the spot in behalf of his principal. This form is, of course, what we would wish.

2. Our own agents, upon salary and expenses, traveling among jobbers and making sales. If, however, we take our business from the brokers who now have it, they will all work foreign goods instead, and it becomes a mere question of dollars and cents whether we can get men who will sell our entire crop each year, against the competition of those who now sell it, at an aggregate expense below the aggregate of commissions which we could arrange for through brokers.

3. Brokers selling upon uniform commission at prices set by ourselves, the goods remaining in California until sold.

What methods to adopt may safely be left to the judgment of directors, but my own view is that our policy should be that which will induce the largest possible number of people to engage in finding customers to consume our fruit products, and that it should be known of all men that whoever will bring us a customer shall be paid for it, at a uniform rate.

Dried fruit can be concentrated, graded and packed by growers through local co-operative unions, and in no other way. In no other way, also, can it be put where the grower can obtain necessary advances upon it without parting with control of its sale.

I therefore think that the Exchange should actively promote the formation of such unions throughout the State, upon substantially uniform plans which shall provide for a uniform system of grading and packing, and for such inspection on the part of the State Exchange as may be found necessary to maintain uniformity.

Some local unions will prefer to sell their own fruit. Others, and most individuals, will desire to avail themselves of the facilities which the State Exchange will provide. I therefore recommend that the State Exchange act as selling agent for all who wish it. There is no doubt that great quantities of fruit will be placed in its hands for sale. Some local unions will be able to obtain advances through local banks and others will not. I therefore recommend that the State Exchange act as financial agent

for obtaining loans for such unions as desire it. I have given this subject careful study, and have reached the conclusion that the State Exchange will be able to secure all the funds needed to handle our fruit crops to be distributed through properly organized local unions. I will also say that I think this feature goes to the root of the whole matter. In my judgment, by the end of each calendar year two-thirds of the proceeds of the dried fruit and raisin product must be and now is in the hands of the growers, while the legitimate market will not by that time absorb more than two-fifths of it, which, if our total output amounts to \$10,000,000, would leave, say, \$2,500,000 to be supplied on advances, or by speculative purchases, by New Years, to be gradually repaid between that time and May 1st, as the market absorbs the goods.

So long as these necessary advances can practically be obtained only through commission houses, or by selling at low rates to speculators, so long other persons than the growers and consumers will control the market. Now, dried fruit in ordinary warehouses and uninspected is not a security available in the general money market on account of ignorance of its value and liability to spoil. It must be in expert hands guaranteeing its quality and responsible for its delivery in that condition.

In Santa Clara county we find that the guaranty of our co-operative societies answers all the requirements of our local banks, and that to the extent of their resources we can get funds on fruit. But in many localities the demands for advances, even in ordinary years, outruns the ability of the local banks, and it is necessary to make these securities available in the general market. This can be done by fulfilling the necessary conditions, and one chief duty of the State Exchange will be to teach local unions how to place their fruit so that the money market will recognize it as security, and to arrange for funds to be advanced upon it. It is my opinion, fortified by that of many able bankers with whom I have conversed, that a large part, if not the majority, of the money advanced on fruit by commission houses is simply the proceeds of other consigned fruit sold, but upon which returns are delayed to give the commission house the use thereof from 15 to 60 days. Whether this be true or not, what we need most is financial independence, which can only come through co-operation.

In establishing an Exchange the first thing is to provide for its support. In my opinion the Exchange can earn from and will be cheerfully paid by all local co-operative associations and large shippers, one-half of one per cent on their sales for general services on the lines laid down above. Those actually selling through the Exchange will of course pay an additional charge for such service. There are enough local organizations alone already existing to support an Exchange on that basis. With moderate success in forming new ones the charge to all will be much less than one-half of one per cent of their own sales; but I think the contracts should be for one-half of one per cent, or so much thereof as is necessary.

But the same organization, without any corresponding increase of expense, can act as selling agent for as many as desire it, charging therefor the additional cost.

A certain but not very large amount of capital is absolutely necessary, and the first step is to secure this. In my opinion \$20,000 will be ample. I think we should attempt no other work until \$10,000 is subscribed, and that when that is subscribed we proceed with the work of general organization, getting what more capital we need as we go on.

In regard to the uses for capital, I may say that a certain amount may be used for expenses of organization between now and say July 1st. This, in my opinion, should finally be restored to capital stock by a trifling special charge on the business, above active cost, continued until the whole amount is restored. A certain amount will be necessary for use in case of temporary deficiency in revenue, to be, of course, repaid as revenue accrues. The remainder is needed for the purchase of sacks and any other material required, to be collected again from unions and individuals consuming the material, at such an advance as will pay the interest on capital employed. Respectfully submitted,

EDWARD F. ADAMS, Manager.

A Flyer in the Wheat Trade.

The *Call* says a bald as well as bold attempt to manipulate the wheat market was brought to light on Tuesday. Alfred Bannister, manager for Starr & Co., the grain and flour firm, received from one of his country customers a forwarded circular with a query as to its value.

The circular was printed on pale blue paper and read:

Everybody hold your
WHEAT,
And you will strike a bonanza
Before wheat is threshed again.

Mr. Bannister exhibited the circular, which was unsigned and bore no address. He said it looked like an attempt to manipulate the wheat market. Wheat was low, December selling for \$1.09, and it might be that some persons who had bought heavily might be trying to prevent overloading. A similar dodge had been tried in the celebrated "Hold your wheat" circular of two years ago issued by an association. As a matter of fact the management of the association might have been selling its own wheat while restraining others from so doing. It was difficult to get at the reason of all these things. Anyhow, the present circular was notable as being an extraordinary means to influence the wheat market.

C. Beyfuss, the grain broker, corroborated this view. He said most people were interested in getting wheat out of the country. Prices were low and were declining. About 56,000 tons were piled up in warehouses in 100-ton lots, and the total amount held was something like 236,500 tons. One firm had been buying December largely, but to-day had ceased buying. Mr. Beyfuss was of the opinion that the circular was an attempt to influence farmers to hold their wheat in order that a certain firm may not be overloaded by excessive offerings.

Gleanings.

SANTA ANA has solved a social problem by putting tramps to digging stumps out of the river bed.

In the philosophy of the Placer Representative, the more a man gets wrapped up within himself, the chillier he gets.

UP at Oroville they are having hard times parties, the participants wearing rope neckties, clothes patched with bagging, shoes run down at the heels, etc. They are about the jolliest affairs ever gotten up in the town.

LIFE is a race where some have "grip,"
While others "colds" attend, sir;
But he whose self-respect is great
Has only "influenza."

—Stockton Mail.

A LECTURER recently asked dramatically: "Can any one in this room tell me of a perfect man?" There was silence for a moment. "Has any one," he continued, "heard of a perfect woman?" Then a patient little woman in a black dress rose from a back seat and answered: "There was one—I've often heard of her, but she is dead now. She was my husband's first wife."

DOWN in Colton, which is the big button on the citrus belt, says the Oakland Times, where refinement sits like a goose on a gatepost, "sassiness" has struck a new wrinkle in the way of "social event" effort. The duds and daises have inaugurated a new game, which they call the "onion lottery." In this game six young ladies stand in a row; and the fellows pay ten cents each to guess who bit it. The correct guessers kiss the other five girls, while it is unnecessary to state that the percentage in the game is in favor of the onion-chewer.

EVERY county in the State should have a farm—an irrigated farm—and whenever a man or woman came along out of work he or she should be given something to do on that farm and fed in return for labor. No wages should be paid, but simply fed until the party could get work. Those wanting help would go there to get it, and would take, of course, those who had done the best work for the county. The man who did not labor should be made to labor. There is no punishment in labor. The truly happy in this life are those who labor.—Colusa Sun.

THE Tulare Register thinks California needs a campaign of retrenchment, not for blatherskites to bawl themselves into office upon, but a campaign conducted by the best men and heaviest taxpayers in the State and with candidates for legislative positions pledged to the lopping off of every possible expenditure consistent with law and order. The tramp evil must be grappled with by the State, and a multitude of offices abolished. The offices retained should be loaded with all legitimate responsibilities to the end that responsibilities shall not be divided and obligations shirked. Half the courts should be abolished, and the county government bills need remodeling and pruning, and a simple and inexpensive system of incorporation for small cities should be devised.

State Floral Society.

At the meeting of the State Floral Society, last week, a letter from Emory E. Smith was read asking the co-operation of that body in making a floral exhibit worthy of this State at the forthcoming Midwinter Fair.

"We very much desire the hearty assistance of the society," the letter said, "and we suggest that a strong committee be appointed to work with us, the society having all due credit. At present the idea is to have a series of shows, such as pansies, roses, pelargoniums, carnations, etc., but the exact plan has not yet been definitely determined. Carl Purdy will conduct the wildflower exhibit, which will be kept up for three or four months. He will, of course, want donations of wild varieties for this."

By the unanimous desire of the members present, the letter was placed in the hands of E. J. Wickson, president of the society, with instructions to answer it as he saw fit.

Other business transacted at the meeting was the nomination of officers to be voted for at the January meeting. The following were nominated: For president, E. J. Wickson; vice-president, Mrs. Hodgkins; secretary, E. S. Aiken and Miss Bailey; treasurer, John Hinkle; accountant, Miss Bailey; board of directors—Mrs. Smythe, Mrs. Martin, Mrs. Babcock, Mrs. Rudolph and Misses Harris, Brandt, S. A. Miller, Kellner and McGowan.

A discussion upon ferns and roses followed. Mr. McGowan exhibited a variegated magnolia, stating that he had never heard of another such blossom. Bloom and fruit of a taxonia, or passion vine, were shown from a plant 19 months old, which had made a growth of 220 feet.

THE State Board of Horticulture has settled upon the style of its display at the Midwinter Fair. There are to be two booths, the second one smaller than that already planned and very probably of a somewhat different appearance. The principal booth is to be a wooden structure with a front of 48 and a depth of 58 feet. The sides will be 10 feet in height, and no roof will be placed on the building. The front is to be so divided as to provide for seven commodious entrances, and will sweep around in a graceful curve, forming a semi-circle. In front of the structure, and extending for its entire length, a table will be placed with cases for the display of products. The interior of the booth will consist of three apartments, an office in the center and on either side rooms handsomely shelved for all varieties of exhibits. These booths are to be placed in the upper part of the Horticultural building, and will have an excellent opportunity to make a striking display.

SAN DIEGO COUNTY is starting in on the road improvement line. The Supervisors have issued a call for a road convention, to be held in San Diego January 9th. Extensive road improvements are needed in the county, and as the work cannot be done by general taxation without unduly increasing the tax rate, it has been proposed to issue bonds.

A LOS GATOS MAN has invented a cutting apparatus for chopping grape prunings into small lengths for kindling wood. He slices them up rapidly, and at once obviates the need of hauling away and burning, while at the same time providing a nice lot of firewood.

HORTICULTURE.

What the Olive Did for an Arid Country.

Horticultural History of Almost Romantic Interest.

It will deeply interest all dwellers in semi-tropical arid regions to read of what was done by the olive tree in such a country at the beginning of the Christian era. *Garden and Forest* recently gave a review of recent investigations in Tunis which conveys striking lessons from ancient history to modern horticulturists. That portion of Tunis which is included between the two branches of the great south Algerian mountain range, which cross it from west to east, is a high arid plateau—a barren and inhospitable country, which affords meagre pasturage to a few miserable, half-starved flocks. That this region once supported a large and prosperous population, the ruins of cities like those of El Djem, the ancient Thysdrus, the principal city of Byzacene, with its noble amphitheatre, of Cillium and of Thelepte, with their populous suburbs, bear abundant witness. In this region, where hundreds of thousands of human beings once lived in plenty, now a few hundred shepherds are barely able to keep themselves from starving. The remarkable change in the character of this region has been explained by the nature of the Arabian occupation, which, in destroying the forests which have been supposed to have covered it at one time, prepared the way for the erosion of the soil and produced a radical change of climate. This has been the accepted view of travelers and historians who have discussed the physical conditions of Tunis. Monsieur Paul Bourde, in a learned and valuable report upon the cultivation of the olive tree in Tunis, which has lately appeared, takes a different view, however, and his conclusions are not only of great historical interest, but have a direct bearing upon the future of other warm arid regions like many parts of the Mediterranean basin, southern California, Lower California and northern Mexico. Here are some of his facts and inferences:

So far as concerns the forests, the fact appears to have escaped general attention that Tunis possesses only two trees of large size—the Cork Oak and the Zeen Oak—and that these trees, excessively particular as to the composition of the soil in which they grow, flourish in the sands of the north, but do not grow at all on the limestone mountains of the central and southern portions of the country. In these are found only species of small size, the Evergreen Oak, the Aleppo Pine, the Thuya and the Phœnician Juniper, which are rather large shrubs than trees, rarely growing to a greater height than twenty feet and rarely producing trunks. Unless we can suppose in ancient times the existence of other species of trees, since disappeared, it must be acknowledged that there has never been in the country high, continuous forests. With regard to water-supply, the irrigation works, still to be seen in most ruined cities, indicate what part they played in the ancient civilization of the country. At Thelepte, at Cillium and at Suffetula, for example, the capacity of these canals was calculated for the volumes of water which are practically the same as those which the actual springs yield at present. When springs have decreased in volume or disappeared it is because they had become choked up, as has been seen at Gafsa and at Ferriana, where they have been restored. Water is always in the ground, and there is every reason to suppose that there is no appreciable difference between the quantity of rain which fell formerly and that which falls to-day over this region.

Monsieur Bourde has reached the conclusion, and his readers, after they have examined the facts which he has collected, will be inclined to agree with him, that there has been no notable change of climate in Tunis since the time of the Romans. To the proof of direct observations he joins the testimony of Latin and Arab authors. The description which Sallust gives of the country between Thula and Gafsa is as true to-day as when it was written. The country is, as in the time of Sallust, dry, uninhabited and horrible. Nevertheless, between the desert traversed by Marius and the desert of to-day there has existed a period of successful cultivation and of great prosperity. In the eleventh century, El Hekir saw 200 flourishing villages in the neighborhood of Gafsa. What is the secret of a country uninhabited in the time of Sallust, covered with cities and villages at the time of the Arab invasion, and to-day again uncultivated and uninhabited? Monsieur Bourde is the first to answer these questions and has shown that this country, so barren in appearance, is eminently fit for the cultivation of fruit trees of the warm temperate zone—the olive, the grape, the fig and the almond. In no other part of the world does the olive so flourish or produce such crops. The soil being very loose, and the surface drying rapidly, it cannot support herbage, and is not suitable for the cultivation of annual crops, although the rain water is stored up in the subsoil, which is always cool and moist. If cereals are sown in this soil, four years out of five they will not find in the upper layer sufficient humidity to insure their ripening, while trees will send their roots down to reach the waters of the subsoil and flourish. The Romans seem to have understood this, and here is the secret of their colonization of this country—a secret which, up to this time, the savants, who have studied the matter, apparently have not hit upon. Monsieur Bourde states the matter tersely:

The cause of the contrast of extreme prosperity and of extreme misery which is found in the history of such a country is not doubtful. It is not necessary, in order to explain it, to suppose modifications of soil and climate—the truth is simpler. The country is exceptionally favorable for one kind of culture and is not at all suited to another. Before the Roman invasion this cultivation was unknown and the country a desert. The Romans introduced it toward the end of the first century, and became rich; the Arabs destroyed it in the eleventh century, and the country has become a desert again. The truth of this statement is

so striking, when the territory itself is examined, that it is possible to fix approximately in figures the results of the Roman colonization and the immensity of the catastrophe which has destroyed them. In central Tunis there are about 3,200,000 acres suitable for the cultivation of fruit trees. Abandoned to pasturage, this land is worth four francs an acre; planted in olive trees, it is worth at the very lowest estimate 320 francs an acre. So it would appear that the Roman colonization had improved the country from a condition where the land was worth about thirteen millions of francs to one where it was worth more than a thousand million francs, and that the Arab invasion has reduced it again to its former misery and poverty.

The condition of the country verifies the statement. From El Djem to L'Oued Rann, a distance of not more than fifty miles, may be seen on every side the indications of the existence of an ancient forest of olive trees. Trees sometimes gathered in little groups, sometimes scattered one by one, have survived neglect and systematic destruction. Deprived of all care since the Arab invasion, disfigured by the growth of parasites, mutilated by the teeth of animals, they still live, and in rainy seasons produce fruit. After eight centuries of neglect, the crop of 1890, a year of heavy rainfall, was sold for 170,000 francs. These trees are not wild olive trees, Zeboudj, as the Arabs say, but Zeitoun—that is, olive trees of cultivated varieties; they belong to plantations which evidently once formed a continuous forest in this region. The ruins of the oil-mills show that the Roman forest must have continued almost indefinitely. The stone bowls, where the pulp of the olive was removed, the stone uprights between which the bar of the press was inserted, and the stone tables upon which the olives were pressed, all remain to testify the importance of the oil industry of this region; and, finding these presses so near together, Monsieur Bourde was impressed with the fact that the cultivation of the olive was the principal industry of the region, of whose appearance in the time of the Romans it is easy to form an idea by comparing it with the orchard-covered Sahel of Soussa as it looks to-day.

The error which has, no doubt, given rise to the myth that Tunis was formerly a well-wooded country, is due to the fact that there has long existed a misunderstanding as to the word forest, as used by Arab historians. When the first Musselmans arrived in northern Africa they found a country so green that they called it El Khadra, "The Green." All the historians of the invasion—Ibn Assam, Ibn Chabat, En Noueri and El Kairouassi—declare that it was possible to travel from Tripoli to Tangiers under the shade of trees through an unbroken line of villages. The country was covered with a forest at that time, but it was not a forest of uncultivated trees. Sallust had not seen these forests; they had been planted two centuries after his time by the hand of man; they were orchards of fruit trees. Planted by man, they were destroyed by man also. The Arab shepherds, who had taken possession of Tunis, destroyed the orchards to procure the pasturage which they needed for their flocks. This destruction, begun in the seventh century, was finished in the thirteenth. The documents brought together by Monsieur Bourde allow us to follow its progress from century to century. The substitution of a nomad and pastoral population for a stationary and fruit-growing population was only effected at the cost of immense disasters. The conclusion reached by the author of the report is that to restore the ancient prosperity to central Tunis the administration of the protectorate need only do what succeeded so well with the Romans—plant olive trees. Whether this operation can be made personally profitable to the settlers who undertake it, will depend, of course, upon the amount of skill and intelligence they are able to devote to it. The demands for the product of the olive tree are fast increasing, and its cultivation under the most favorable conditions must always remain profitable.

Lemon-Curing at Florin.

A lemon-grower at Florin, Sacramento county, gives the *Bee* a sketch of his experience in lemon-growing and curing on a small scale. It differs considerably from the methods employed by the large producers of lemons of southern California, but it may be suggestive to other small growers.

Those who are acquainted with lemon culture know that the fruit does not ripen at the same time, but grows in size continuously for some months. Usually they commence to bloom in April and keep up forming fruit through the summer months, so that the tree bears fruit of various sizes in growth during the season.

In this valley the tree commences to blossom in April, and forms and matures fruit large enough in five months to pluck for curing purposes, and continues multiplying its number up to the winter months. Often in a mild winter blossoms are occasionally seen, and come to perfection when the spring season comes on for the tree to bloom. Thus throughout the year blossoms and fruit adorn the green branches, form a beautiful picture and fill the air with sweet aroma.

By September, and each following month, the lemon has sufficiently matured to be cut off. The size of the lemon attains the quarter in growth, say one and a half to two inches in diameter, which is a good size for market use.

To sever the fruit, use a hand pruning shears. Leave a short stem without a thorn. Plucking the fruit often severs the skin or mutilates it in some way, and destroys the perfect form for curing. Handle them carefully in a basket and carry them to your curing-room. The stem in a short time will dry up during the curing of the fruit, and when looking over the stem drops off the same as a prune stem in the same process.

Those who have a large number of trees, and make it a specialty, have houses made for the purpose, ventilated and kept at an even temperature. But for a few trees, boxes, bins or shelves are only required, keeping them in a dry and warm place.

Dry sand or cut straw is a good material for use. Lay

the lemons in layers without touching. Between the inter-sections of fruit place your sand or fine straw, and make the opening firm and compact. Lay a covering of the sand two inches in thickness or four inches of straw; then place your second layer in the same way till completed. Let them sweat for two weeks, and, when opened, if any imperfections are seen let them be removed, and place the perfect ones the same as at first, and in a few weeks they will show a beautiful yellow color, transformed to a ripe and perfect lemon for commerce.

While passing through this state do not rub them with your hands, as some contend it hastens the ripening. Nature perfects the form and color without being manipulated by man; he can be an agent only in an outside way. Nor do not let them come in contact with water to spot them, as it will blemish them when cured. When they become perfect in color, pulp soft, rind thin and waxy, wash them in clear water. Use a soft brush. Drain them thoroughly, wipe them dry, wrap and pack for shipping, and they will be equal to the commercial lemon of Sicily.

Three objects are gained by curings: They are brought sooner to a ripened state and perfect color; you save time and have them ready for early market; the pulp is soft and the rind thin, and they change so much quicker than when left to mature on the tree.

Lemon culture as well as the orange should make its way. The tree is easily grown and makes faster growth than the orange, and bears equally as well. In fact, I have picked off 2900 lemons from a tree of 12 years' growth.

Plant lemons in deep, loamy soil with sunny aspect, and give them protection from heavy winds.

THE FIELD.

Asparagus for Market.

The following account of the method used by Mr. A. Donald of Horseheads, N. Y., for growing asparagus is condensed from the *Rural New Yorker*. It may be suggestive of ways to use the field for inter-crops while the asparagus roots are taking hold; but of course such work in this country means the use of very moist soil or of irrigation water:

Mr. D. prefers a clay loam free from stones and well underdrained. A clover sod is plowed under deeply in the fall. After harrowing well, spread a heavy dressing of stable manure, or in lack of this, 1000 pounds of ground bone and 1000 pounds sylvinit (a potash salt) per acre. Harrow again in spring as soon as the land is dry enough. The furrows are made with a plow $3\frac{1}{2}$ feet apart, running four times in each row and then cleaning out the furrow with a shovel. To cross-mark the field, a light chain is drawn across the furrows $3\frac{1}{2}$ feet apart. Good one-year-old roots are selected with a good thick bud, rejecting all plants having a bunch of small buds, these latter producing small sprouts. One or two large buds in a plant are better than more and smaller buds. The plants are set in the bottom of the furrows and covered with about two inches of loam, after which he plants a hill of potatoes between the asparagus in the same row, and covered the same as the asparagus. As the plants grow, the ridges between the rows are worked down level. After digging the potatoes, all seed-bearing stems are cut out and burned. Cultivate well, leaving the stems having no seed upon them till spring. In fall or winter put on 2 tons of salt and 50 to 75 bushels slaked lime per acre, slaked on the ground, and another dressing of manure, or, in lack of manure, mulch the ground with any coarse litter that can be had.

In spring the mulch is harrowed in or raked between the rows where there is too much of it. Beans or squashes planted thinly are grown between the rows the second year. The third year the bed will bear moderate cutting. When cutting, cut every sprout, no matter how small, for if left the small stalks exhaust the root and prevent it from sending up better sprouts. Cultivate and hoe as often as weeds appear. Cutting below ground is not allowed because of the danger of injury to the growing buds concealed under the surface, and the part below ground is always tough and unfit to eat. A short knife is used for cutting, holding the sprout in the left hand. In warm weather he cuts twice a day, taking care always not to step near the hills, thereby crushing young sprouts just breaking ground. About the middle of October he cuts out all seed stems in order to prevent seeding the bed with a thicket of roots. The rest of the stems are left till spring. He had tried 200 pounds nitrate of soda per acre with 800 pounds sylvinit and 4500 pounds of salt, and cut 5500 pounds of grass, but it was of inferior quality. He objects to using manure in the furrow when setting roots, believing that there is danger of causing them to rot. He had used a dressing of gas lime two to four inches deep on a bed infested with twich grass. It killed the couch grass but not the asparagus. He markets his crop without bunching, by the pound. Last year's crop was about 4000 pounds per acre.

Germany Wants Flax Fiber.

In advance sheets of consular reports to the Department of State at Washington, D. C., Hon. Frank H. Mason, Consul General of the United States at Frankfort, reports the fact that Germany is waiting to find another source of spinning flax other than that of Russia, and has called attention of our government to the vast areas of flax raised in America for seed, as a means of supply of fiber. The *Prairie Farmer* remarks that Mr. Mason seems not to know that flax sown thinly for seed furnishes in its lint a staple only fit to be used in the manufacture of the coarsest grades of cloth, used principally for sacking and envelop-

bales, as cotton, etc. The raising of flax for fine fiber requires thick seeding, special cultivation and great labor in preparing the fiber for market. Nevertheless, the time seems ripe for the cultivation of flax for its fiber. For this reason we publish extracts from Mr. Mason's article as follows:

There prevails now among German flax-spinners a general and serious conviction that the future of their industry demand that Germany shall establish new relations which will emancipate them definitely from all dependence upon Russia as a source of supply, and remembering the promptness with which American wheat and rye came to the rescue when the Russian supply was suddenly cut off by the edict of 1891, they now turn to the United States for relief from a situation which is constantly becoming more embarrassing and perilous.

Germany imported in 1892 from all countries 60,691 tons of raw flax fiber, which was spun into yarns by thirteen large spinneries located in various parts of the Empire. Of this large import 55,459 tons—about eleven-twelfths of the entire amount—came from Russia, which also exports largely to England and Belgium. Russian statesmen know that the flax-spinners of Germany are dependent upon Russia for the great bulk of their raw material, and since Germany admits this material free, there is a prospect that Russia, in order to increase her own revenues and incidentally to make Germany feel the full weight of the present disagreement, will soon put an export duty upon raw flax sold to this country, which, if it be imposed, the German consumers of that staple will naturally have to pay. But, whether this anticipated export tax be imposed or not, the German spinners do not wish to be dependent upon Russia, and the present report is intended to embody their inquiry as to the practicability of finding new sources of supply in the United States.

It is known that in our country vast areas of flax are grown for the seed, the fibrous stalk being thrown away and rotted for manure. The question is whether the flax-seed-growers of the United States, when they know that a new and important market for flax fiber stands open and ready in Germany, will take the trouble to save and prepare it for export. The process is simple and known to most American farmers.

The market value of the fiber depends mainly upon four qualities, viz., its length, softness, silkiness of texture, and color, different qualities being required for the manufacture of the various grades of yarn. Whether the American fiber is as well adapted to the use of the German spinners as the Russian staple can be decided only by trial. At present Germany imports no raw flax from the United States; the only movement in that article during last year was the export of ten tons of prepared linen fiber from Germany to New York. Those who are best informed, however, are confident that American flax, if properly cured and prepared, will answer all purposes in this country. There need be no dealing through commission merchants; the principal German spinners wish to buy and import their raw material direct and on their own account.

It is probably now too late to increase through any new demand the amount of fiber that can be saved in our country from the flax crop of the present season, but it would seem to be important that the field should be thoroughly surveyed and the question of quality, prices and commercial conditions tested and settled without unnecessary delay.

THE DAIRY.

Quantity of Food for Cows.

The Pennsylvania State College Experiment Station has just published the results of an experiment to determine the quantity of food required by ordinary cows for the cheapest milk and butter, reported by H. J. Waters, W. H. Caldwell and R. J. Weld.

The trial covered 101 days, with ten grade Guernsey, Jersey and Shortborn cows, averaging 932 pounds weight; yearly product of milk, 4685 pounds; butter, 240 pounds. The feeds used were timothy hay and grain, composed of a mixture of 54.5 parts corn meal, 27.3 parts wheat bran and 18.2 parts linseed meal. At the beginning of the experiment, each animal was given 8 pounds of grain and 12 pounds of hay. This was gradually increased until the limit of the appetite of each animal was reached, on the 64th day, with a ration of 18 pounds of grain and 25 pounds of hay for a few of the heaviest feeders. The average daily consumption of food per cow for the ten animals for each period was:

Period I, 24 days.....	10.7 lbs. grain, 14.5 lbs. hay.
Period II, 21 days.....	13.0 lbs. grain, 15.9 lbs. hay.
Period III, 32 days.....	15.1 lbs. grain, 15.1 lbs. hay.
Period IV, 14 days.....	12.2 lbs. grain, 14.9 lbs. hay.
Period V, 10 days.....	8.5 lbs. grain, 12.8 lbs. hay.

The daily net profit returned by each animal, calculated upon the current market prices of the food consumed and butter produced, is computed, and averages for all animals:

Period.	Daily cost of food, cts.	Daily value of butter, cts.	Daily net profit, cts.
I.....	19.9	26.9	9.7
II.....	22.4	33.2	10.7
III.....	25.1	31.0	6.0
IV.....	20.1	29.6	9.5
V.....	17.1	20.4	3.2

The following conclusions are reached:

I. When the average cost of food consumed per cow per day was 19.9 cents, an increase of 2.5 cents in the cost of the ration produced an increase in the value of the butter product of 3.6 cents, or a net gain of 1.1 cents per cow, amounting to 27.2 cents per day for a herd of 25 cows, or \$72.50 per year.

II. A further increase of 2.7 cents per day, making the

ration cost 25.1 cents, showed no increase in the butter product, and was therefore fed at a loss.

III. At this point a reduction in the daily cost of the food consumed to 20.1 cents per cow showed a net gain in the daily profit returned of 3.5 cents over the period when the ration cost 25.1 cents; amounting to \$262.50 per year for a herd of 25 cows.

IV. A further reduction of 3 cents per day in the cost of the ration, making the average cost 17.1 cents, gave the smallest net profit of any period in the experiment, amounting to a loss of 6.3 cents per cow per day when compared with the ration costing 20 cents and 7.4 cents per day per cow in comparison with a ration costing 22.4 cents.

This means a yearly loss on 25 cows when compared with the ration costing 20.1 of \$472.50, and \$555 when compared with the ration costing 22.4 cents per day.

V. It does not appear to be profitable in the average case to increase the food of animals as long as they will continue to show an increase in the butter produced, for beyond a certain limit, which varies with different animals, the increased product is made at a greatly increased cost of food.

VI. While there is a danger of loss from overfeeding, as is shown by the results in period III, there is a very much greater probability of a loss occurring from underfeeding in ordinary practice, since the most profitable rations in our trials were nearly up to the limits of the appetites of the animals when the consumption of any considerable quantity of coarse fodder was required of them.

VII. Wide differences are shown in the yearly profit returned by animals producing approximately the same quantity of milk and butter. The extremes in the ten animals used in this trial are as 1 is to 1.95.

GRACK AND HARM.

The Trouble with the Horse Business.

Referring again to this theme upon which we recently commented editorially, we give the following from the *Breeders' Gazette*:

Everybody is asking, What is the matter with the horse business? It is true beyond a doubt that it is suffering a more serious depression than any other branch of livestock husbandry, and everybody seems to be wondering what has caused such a condition. The answer is not hard to find; it is contained in one word—*overproduction*. For 30 years past the horse industry has had a period of unbroken and unprecedented prosperity. During all that time it has not had a single setback—not a period of dullness or depression. While values of everything else were fluctuating—sometimes up and sometimes down—the horse business remained firm with but little change. It was the one thing that everybody could engage in without much danger of loss. The demand for the comparatively new breeds stimulated home production as well as importation, and a very much larger proportion of mares were bred than ever before in the history of this or any other country, and our home production was augmented by the importation of thousands upon thousands of Percherons, Clydesdales, Sires, Boulonnais, Belgians, Cleveland Bays, French and German Coaches, Hackneys, ponies, etc.

During this period the craze for trotting speed took possession of men of wealth and leisure everywhere, and immense breeding farms were established all over the country, and every doctor, lawyer, merchant and preacher that owned a fairly good mare became possessed of the idea that he could breed a Dexter, a Goldsmith Maid or a Maud S, and so between the rage for the European draft and coach breeds and the ambition to breed a phenomenal trotter from our home stock, everybody, doctors, lawyers, merchants, preachers, teachers, farmers and manufacturers turned to horse breeding, either on a large or small scale, and behold the result: Our country is full of horses—fuller, in proportion to its population, than any other civilized country on the face of the globe, and we have simply got to a point where the thing must stop for a while and wait for our human population to catch up with the equine supply, or until war, epidemic or natural cause shall have reduced it to a normal proportion.

I confess this is not a cheerful outlook, but I believe it is a plain, unvarnished statement of the conditions with which horse-breeders are now confronted. There is no good in attempting to deny the facts—and there you are. We have too many horses—that's the plain English of it. Of course those that are exceptionally well adapted to any use which business or pleasure or fashion may require will continue to find a market at more or less remunerative prices, but while so many are bred the range of selection will be so great that those who have only fairly good or inferior ones will have hard work to find a market. We can't eat them nor export them in large numbers and thus reduce our surplus, as we do with cattle, sheep and swine. We are shut up to just one thing—we must reduce the supply by ceasing to breed from any but the very best mares, and our breeding must be upon definite lines for a definite purpose, and directed by intelligence and a knowledge of how to breed to hit the market. It is no longer a question of how many foals can be raised, but how to breed a foal that will be worth the raising. The business will right itself after a while, but it is the part of wisdom to adapt ourselves as speedily as possible to existing conditions. There was a time when it paid to raise any sort of a horse, but that time has gone by and the present generation of breeders will not see it again.

The position is not without some compensating advantages. We have a good supply of the best specimens of all the desired breeds of the world, and now that we are compelled to go slow we shall find it a good thing to weed out and breed up with a definite purpose in view, and I predict that the next quarter of a century will witness as great an increase in the average quality of our horses as that just past has witnessed in numbers.

AGRICULTURAL ENGINEER.

Cost and Profits of Good Roads.

Now that there is an agitation throughout the State for better roads, and as at least one county (Sacramento) has taken steps to carry through a bonding proposition for road building, the following, which we glean from Eastern journals, will show that similar ideas are being urged in the older States: It seems that in Monroe county, New York, road supervisors, county commissioners and citizens were called together, and it was found that they could build an arterial system of county roads, radiating from the city in all directions to the bounds of the county, and connecting all considerable villages and towns with each other and with Rochester; that such a system could be built for just about one per cent of our valuation, which was then one hundred and thirty millions and is now one hundred and fifty, and for that amount—now one million, five hundred thousand—we could build a first-class telford road costing ten thousand a mile, to the extent of 150 miles. My idea was, said Mr. J. A. C. Wright of Rochester, that a board, composed by the supervisors, could, by filing a map in the county clerk's office, thereby make any road a county road; that they should secure a competent county engineer and should direct him to map out a system of county roads, which should include all the main roads of the county—first, for purposes of general care and repair; and, secondly, with a purpose of building these up into new-made telford roads, or as many of them as advisable, so soon as one such road was a success and approved. Such an idea was a revolution of our present system, and was a bold scheme, perhaps, in that we were unaccustomed to it, but one which would be found the most satisfactory and cheapest in the end. It showed that the cost of this system, 150 miles even of good telford road, if carried at four per cent would be a charge of 40 cents per thousand of assessed valuation, being \$2 per year upon a farm assessed as high as \$5000, and only 40 cents per year upon the owner of a small house assessed at \$1000 in the city.

Mr. Wright further stated that in his opinion every county should build permanent roadways at an initial cost, bonded, but for the present merely to carry the indebtedness, and the increased valuation and wealth brought in would be sufficient to establish a sinking fund, which would ultimately wipe out the principal. When built these roads should be put in immediate, single systematic supervision; divided into sections similar to railroad care and repair, but, unlike railroads, more elastic in the employment of local material and help. For example, the farmers could use the stone from their fields, their teams and their labor in the building, and when the roads were built an intelligent farmer could be selected as roadmaster of contiguous sections, his work telling when under the direction of an expert road-maker. In other words, the money raised by the community would be reimbursed to the community.

Major M. H. Crump of Bowling Green, Ky., speaks of the roads of that commonwealth, and he gives figures that are of the greatest interest and importance. I quote direct from him: "Kentucky, while it has some good roads, has many of the worst in the world, largely due to its miserable system of working them. Warren county, the seventh in the State in point of wealth, spends from \$12,000 to \$15,000 per year in labor and money on its roads and bridges. At least \$10,000 of this is absolutely thrown away. There are mud holes with 500 yards of rock in them, now two feet under the mud. A road convention met in Lexington, December 20, 1892, which considered the Sims road bill, now before the Legislature, and which radically changed the old and inadequate system, as it permits the counties to levy a tax not exceeding 25 cents on \$100, to be expended by a competent engineer, under the supervision of the fiscal court of the county.

"All roads are divided into three classes, and all work must be done by contract to the lowest and best bidder, and will be carefully inspected by the engineer in charge; all able-bodied delinquent tax-payers will be compelled to work out their taxes on the roads. By this law, and with the \$15,000 now expended, seven and one-half miles of superior telford road can be built, at a cost not exceeding \$2000 per mile, or 15 miles of good road at \$1000 per mile.

"In the last ten years I have constructed over \$200,000 worth of telford and gravel roads, at the above figures; and when good limestone can be had within one mile of the road, a sixteen-foot road with an eight-inch pavement and four inches of metal can be built easily. This includes everything, grading and all, on old roads, when the grades cannot be greatly changed.

"I usually estimate the cost of grading and shaping the roadbed (22 feet wide for a 16-foot roadway, and 24 for an 18-foot bed) at \$200 to \$500 per mile.

Telford paving costs per square rod:	
Stone paving eight inches deep, eight cubic yards put down at 50c.....	\$4 00
Metal paving four inches deep, four cubic yards put down at 50c.....	2 00
	\$6 00

18-foot roadbed:	
340 square rods per mile at \$6.....	\$2,040 00
Grading and shaping roadbed.....	200 00
	\$2,240 00

(Laborers usually negroes, at \$1 per day.)

16-foot roadbed:	
310 square rods per mile at \$6.....	\$1,860 00
Grading, etc.....	200 00
	\$2,060 00

Gravel roads, 16 feet, 2 inches ground.....	\$1,000 00
Grading, etc.....	200 00
	\$1,200 00

"Many miles of 18-foot stone roads have cost less than \$2000 per mile. Many miles of 16-foot stone roads have cost less than \$1600 per mile. These macadamized roads

were constructed by county aid, \$1000 per mile being allowed on each complete mile, when not less than three miles were assured. Bonds, thirty year, five per cent, sold at par and were taken by citizens of the county, so that not a dollar went beyond the limits of the county. Warren county has expended \$60,000 in this way, and the county levy has been decreased every year since the roads were completed."

POULTRY YARD.

Poultry in the Orchard.

At the recent meeting of the Southern California Farmers' Institute at Pomona, Mr. H. G. Keesling of San Jose, well known both as a fruit and poultry grower, gave a suggestive essay from which we take the following:

That there is money in chickens is as self-evident as that there is money in fruit, for in each case all depends on management.

The fruit-grower selects his land carefully, plants it with good judgment, and cultivates, prunes, sprays and cares for his trees with the best of his ability and with the advice of older heads who have been successful in growing fruit. He likes the business and succeeds, because he has determined so to do. If a fruit-grower has mistaken his calling, the sooner he disposes of his orchard the better for him and all other fruit-growers. The same is true of poultry-raising. To combine poultry with fruit-growing, and allow the latter to support the former, would be folly, and the partnership should be dissolved whenever a lively interest and proper care cannot be given to both.

It may be said of chickens that they respond promptly to the kind of care that will induce them to shell out, and the product, "fresh California ranch eggs," will bring the coin every time. When all securities and collateral fail to open the doors of the bank vaults such panicky years as this, fresh ranch eggs will do it every time. They are legal tender, sure enough.

As fruit-growers, we know that proper management will make the orchard profitable, and as poultry-raisers that there is money in chickens. Now if the conditions are right, as indicated above, does it not follow that a combination of these two industries will largely increase one's income?

On one hand, the chickens are beneficial in the orchard or anywhere else where a fertilizer will be of any advantage to the crop. With a flock of chickens ranging all over an orchard, picking up insects that are injurious to fruit, scratching and lightening the soil and distributing a valuable fertilizer where it will do the most good, the trees are benefited, with no item of loss charged on the poultry account. On the other hand, when a poultry business is established by itself, the use of the land is an item of expense that is eliminated where the orchard furnishes free range. The establishment of a poultry plant in an orchard takes up no room whatever in our mild California climate. Small buildings among the trees are no detriment. I have poultry roosts and runs among cherry and apricot trees that have not been plowed or disturbed for ten years, and yet the trees make good growth and bear well.

You can all readily see that the two businesses conducted on the same ground are reciprocal in action, and the question that must decide whether or not a flock of chickens will be located in the orchard is the capacity of the owner to oversee them or to secure competent help to properly care for them.

I might go somewhat into the necessary details of successful poultry-raising, but refrain because of the fact that with so many excellent poultry publications and departments in agricultural papers and the exercise of a little common sense, any one who is capable of caring for an orchard will rapidly discover how to care for poultry.

Oranges and poultry are a good combination, for, although an orange grove is not as good a location for poultry as an orchard of deciduous trees, it has one advantage—chickens will not eat oranges. You may take your choice of the 80 or more varieties of standard poultry, and none of them will do any harm to citrus fruits; but if you are raising cherries, apricots, peaches or other fruits that poultry will eat, then look out for the high-flyers, such as the Leghorns, Minorcas, Spanish and in fact all the lighter breeds.

To find a flock of chickens in the tops of your apricot trees making a feast of the golden-yellow fruit, and destroying more than they eat by biting here and there, will destroy at once all the romance of a poultry and fruit combination; but it is not necessary to select any of the high-flyers for profit in the poultry department.

The Langshans, some strains of Plymouth Rocks and Wyandottes will lay about as many eggs and distribute them more evenly throughout the year, thus really making more profit. Or, if fancy runs to heavier breeds, the Cochins and Brahmas may be made to pay well with proper management.

Now after deciding to try this poultry project, don't select a lot of low-priced stock to start with. We do not do that way when we plant our orchards, for poor trees, we would not plant if given to us, and we will pay an advanced price for selected stock. The same rule applies to the poultry business. And further than this, establish a flock of thoroughbred fowls. They are superior to mongrels in every way, and it is possible with a little extra work to build up a trade for eggs and fowls at fancy prices. Raising fine stock is in line with raising the best fruit.

In conclusion let me offer a little advice and ask a question or two. "Don't put all your eggs in one basket" and "Don't keep too many irons in the fire" are two sayings that every prospective fruit or poultry raiser should paste in his hat—yes, in all his hats, and particularly the one under which he plans for the most profitable development of his allotted acres of mother earth, be they few or many.

In the discussion which followed Mr. Keesling's essay, one speaker claimed that fowls do eat oranges, tearing the skin and consuming the pulp entirely.

THE KENNEL.

Educating the Dog.

One who seems to know writes interestingly for the *Country Gentleman* on the education of the house dog, as follows:

A puppy should not be taken from its mother under five weeks at the earliest—six weeks is better—and will be easier "house-broken" if taken directly to its future home instead of being allowed to run wild in a stable, or wherever it has been kept, for its mother teaches it habits of neatness, which it will not forget. Take it out of doors at regular hours, especially early in the morning, and the last moment before it is put to bed at night. If it is necessary to punish it for any fault, use a small switch, or, better still, a bit of whalebone—never your hand, which is heavy and liable to break the delicate little ribs. A slight blow is sufficient to let them know they are in disgrace. Study the disposition of your dog; there are as many different dispositions as there are animals. I have known some so sensitive that a sharp word would make them unhappy for hours, while others require energetic measures.

A pet dog should be fed entirely on bread and milk until it is six months old. After that age a very little well-cooked, coarse meat should be given once a day, mixed with rice, oatmeal or bread. In cases of sickness, where the strength is failing, beef tea can be used. It is better to give the principal meal at noon, and if the dog has a well-scraped bone at supper time it will amuse him and answer the purpose of a toothbrush. Care should be taken not to give soft bones, like chicken, as the fine splinters are apt to lacerate the bowels. The rib bones of beef are the best, although any hard ones will answer the purpose.

Many complain of the destructiveness of puppies. The trouble is caused not by pure love of mischief, but because they need something to bite on while teething; to relieve the soreness of the gums. Give your dog an old shoe or slipper, teach him that it belongs to him and he will soon learn to leave those belonging to other people alone. A puppy must not have hard rubber ball, as he will bite off particles which are very injurious if swallowed. A small worsted ball, stuffed with cotton, is an excellent plaything, and in the case of one of my own dogs a little roll of seal-skin fur, with a tag left for a tail, made a very successful mouse, which was always a favorite with the animal, although strangers were often startled by it.

The dog should not be allowed to drag his bed from place to place, although they often persist in doing so. In that case, give them a small bit of carpet, or cloth, which they can shake and worry.

The disease most fatal to puppies is worms. They can be detected by the dog's dragging himself along the ground. The small, thread-like worms form balls in the intestines, and cause fits in severe cases. The treatment is as follows: Make a small pill of Venice turpentine by dropping a little on flour and rolling it between the finger and thumb. It should be about the size of a small pea for dogs like pugs, black-and-tans, etc.; larger dogs will require a larger pill. Give the pill early one morning; the next morning administer from half to a teaspoonful of castor oil. After the oil it will be necessary to watch the dog closely, as the oil affects the bowels very quickly. Skip the third day, but, if necessary, recommence the treatment on the fourth day. Do not allow the dog's strength to be too much exhausted. Feed strong beef tea and nourishing food until cured.

Mange often gives a dog's owner much anxiety through ignorance of the proper treatment. Stir into rosin ointment sufficient powdered sulphur to make it very thick. Then thin it with oil of juniper until it is of proper consistency to rub into the dog's skin—it must be thoroughly rubbed into the skin itself, not upon the hair. To prevent the animal from licking it off, make a sort of coat, of old linen or cotton flannel, and tie around the body—a little care in fitting will make it comfortable. Leave the ointment on for 24 hours, then wash off with warm water, and again rub in the ointment. Repeat this three days, which will usually effect a cure. If the dog still shows symptoms of fever and itching, repeat the process after waiting a few days.

The greatest danger to which a pet dog is exposed, is that of over-feeding. Prevention being better than cure. The best plan is to keep him out of the dining-room entirely, for, once in, it is next to impossible to prevent tidbits being given to the pretty creature who begs in such a half-starved fashion, although you know he cannot be hungry. Paralysis is often caused by surfeit. The dog apparently suffers no pain, but the hind legs are entirely useless and his owner immediately imagines that the poor creature has been injured by a blow across the back. The whole trouble is caused by over-feeding. Put the dog on a very sparing diet and rub the back and legs frequently, until the vitality is restored, taking care to keep the bowels open. The disease yields readily to treatment on the first two attacks, but if the high living be persisted in, the dog will go from bad to worse, and at last be disposed of as incurable.

When it is necessary to give medicine, tell the dog very firmly that he must take it. If he has been taught proper obedience, the chances are he will take the dose much easier than if he is frightened at the beginning, by a struggle to force it down.

If he is to be taught tricks, remember that his stomach will help his intelligence. For instance, to teach him to roll over, coax him to lie down on the floor, roll him over with your hand, then praise him and call him a "good dog," and give him a wee bit of cake, or anything the dog is particularly fond of. He will have no idea at first what he has done, but after several attempts he will find out for himself what is required, and that is half the battle. They can be taught almost anything in this manner.

To conclude: Never lose patience with your dog. Make him your friend and companion, and you will be as-

tonished to find what almost human intelligence will develop, and what a store of love and devotion he will lavish upon you.

THE VETERINARIAN.

Veterinarians Discuss Glanders.

At a meeting of the California State Veterinarians' Association held last week in Sacramento there was an interesting discussion on glanders and its communication.

Dr. Orvis stated that he had experienced much trouble with glanders during his early practice. With increasing experience he was enabled to ameliorate and finally cure the disease in some cases. He believed the disease to be much milder in the interior counties than along the coast. He instanced several cases of the disease which were successfully treated in the foothill counties.

Human beings contract glanders by contagion much sooner than other animals, and dogs come next. Many eminent veterinarians hold that there is not such a thing as glanders known on this coast. He read an account of the inoculation of an animal with virus, and recapitulated the progressive results of the inoculations. He considered that if a horse recovered after treatment and stayed well for a year or two, he would be safe.

A number of questions were asked and various reasons given for different features of the cases coming under the observation of the members.

Dr. Archibald said he examined the horse from which it was stated Frank Murray contracted the glanders, and from which he died. He failed to find sufficient indications to convince him that the animal was affected. He killed the mare and found that the system seemed to be sound, and that the only place where he found any indications were some old ulcers which had healed in the nasal passages. It convinced him that the disease may leave its bad effects after it is apparently cured.

Dr. Spencer instanced a case of a handsome black horse brought to him for glanders. He found four well-defined ulcers. He injected mullein and went the next day to see him. He was told that the horse had shown much suffering since his treatment. They killed the horse and found the whole schneiderian membrane studded with nicers. In this case the horse was in the finest condition, with sleek, glossy coat.

Dr. Archibald thought that the fact that animals sometimes recover spontaneously from glanders did not justify allowing animals so afflicted to go without being quarantined. A great many people within the past year or two had died from glanders. The cases that were not well defined were, he thought, the most dangerous.

Dr. Spencer did not think it was wise to allow the impression to go out that horses recover from glanders, as it would result in spreading the disease through the State through ignorance of the great danger of the disease.

Dr. McCullom stated that he did not believe that an animal suffering from the disease was ever cured, although it may seem to be. He cited a case in this county of apparent cure, where a mare changed hands several times, but when he and Dr. Coster traced the matter up they found that she was responsible for the death of 17 horses and finally died of the disease herself. He did not believe it could ever be cured, as the seeds of disease lie dormant in the system, and spring into life under low condition of the system.

The president recited an experience in Santa Clara county, where an inspection of a large band led to killing 21 fine, healthy-looking horses, worth probably \$1000, and the thorough disinfection of all the stalls, fences, troughs, etc., on the place. He thought he had effectually stamped out the contagion. In three or four months, however, he was again called in and seven more were killed and the same thorough disinfection gone through with. In spite of the two careful inspections, almost a year from the first one a fine brood mare was taken down with glanders and died in five days.

Dr. Maclay thought the discussion had arrived at a point which showed the necessity of thorough, competent inspection, and not leave the matter to be decided, as it often is, by quacks, who are not competent to pronounce on the soundness or disease of a horse. There should be a State veterinarian to inspect and decide these things. It should be his special business to look after the disease constantly and carefully, and he should be paid by the State or county in which he is, in such a manner that he can afford to do his duty.

Dr. Archibald said that in this county it would be a difficult matter to do so. In some other counties the veterinary surgeon has a salary, but here each one gets a share of the county work. As a consequence, a horse is condemned by one, and another one says he is not diseased, and offers to cure him. As a consequence the horse lives for months to disseminate the disease. He would like the association to formulate a plan for the appointment of some competent officer to protect the community from such diseases. He had tried to interest the press and educate the community through them.

Dr. Pierce said that his experience had shown him that one mode of dissemination of glanders was through the gypsy horse traders. He found a case of glanders in one of the largest stables in Oakland, and on reporting it to the Board of Health and inspecting the stable they found three cases, and traced one to a gypsy horse trader's place, the doctor who owned it having tied his horse there while attending the trader, who died of glanders.

Dr. Maclay read a long and elaborate paper on "The Relation of Animal Diseases to the Public Health." He treated of trichiniasis, pleuro-pneumonia, anthrax, tuberculosis, foot and mouth disease and glanders, pointing out the ease of transmission and the danger to human beings from this source. He called attention earnestly to the need of municipal and county regulation.

THE HOME CIRCLE.

What Is a Gentleman?

WHAT is a gentleman? Is it a thing
Decked with a scarf-pin, a chain and a ring,
Dressed in a suit of immaculate style,
Sporting an eyeglass, a lisp and a smile?
Talking of operas, concerts and balls,
Evening assemblies and afternoon calls,
Stunning himself at "At Homes and bazaars,
Whistling mazurkas and smoking cigars?

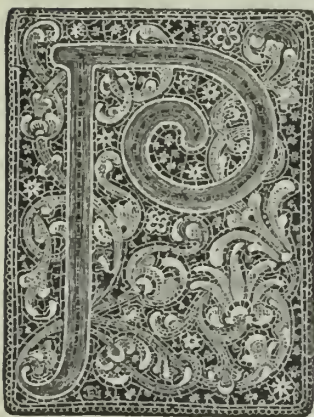
What is a gentleman? Say, is it one
Boasting of conquests and deeds he has done?
One who unblushingly glories to speak
Things which should call up a flush to his cheek?
One who, whilst railing at actions unjust,
Robs some young heart of its purity and trust;
Scorns to steal money or jewels or wealth,
Thinks it no crime to take honor by stealth?

What is a gentleman? Is it not one
Knowing instinctively what he should shun,
Speaking no word that can injure or pain,
Spreading no scandal and deep'ning no stain?
One who knows how to put each at his ease,
Striving instinctively always to please;
One who can tell by a glance at your cheek
When to be silent and when he should speak?

What is a gentleman? Is it not one
Honestly eating the bread he has won,
Living in uprightness, fearing his God,
Leaving no stain on the path he has trod,
Caring not whether his coat may be old,
Prizing sincerity far above gold;
Reckling not whether his hand may be hard,
Stretching it boldly to grasp its reward?

What is a gentleman? Say, is it birth
Makes a man noble, or adds to his worth?
Is there a family tree to be had
Spreading enough to conceal what is bad?
Seek out the man who has God for his guide,
Nothing to blush for and nothing to hide;
Be he a noble, or be he in trade,
This is the gentleman Nature has made.

A CHRISTMAS ANGEL.



PHIL, I never was so wholly at my wits' end as I am this Christmas. Mrs. K. Pringle said it to her cousin, much younger than herself, as she sat down by him, folding her

hands in comical despair.

"What's the trouble now, Kate?"

"Oh, so many to do for and so little to do with. My old struggle to make dimes do the work of dollars."

"You can do it, if anybody can."

"I used to think so. But I've scoured garret and closets trying to eke out some baskets to send to some poor souls who would be less warm and less cheery without them, and the pickings are getting barer every day. Now look here!"

"Curious old thing," said Phil, looking at the cloak she held up before him.

"Curious? Yes. See the rows of hand stitching on this wide collar."

"Where did it come from? And where is the piece of the claw?" asked Phil, examining with interest the fastening of the old cloak—a lion's head and forearm on each side, the outstretched claws of which had formed a clasp. But one claw was gone.

"I don't know. It was gone before I ever saw it. This was Mr. Pringle's great-uncle Christopher's cloak. He was a strange old man, very stern and hard-hearted, I had been told. So that I had felt a great dread of him, and was really frightened when he wanted to come and visit us. But I found him very different from what I had expected. He had had a great many troubles, the last being that his only grand-daughter, whom he had brought up, her parents being dead, ran away and married against his will.

"For a while, he hardened himself against her, and would not open any of her letters. Then he came here—a long journey—and had a severe and tedious illness, which left him much broken down. And then he longed for poor Alice till his heart seemed fairly breaking for her. But she had entirely disappeared, and all efforts to trace her were of no avail. When he died—it was three years ago—he took comfort in my promise to be kind to her, if I should ever find her.

"And now"—Mrs. Pringle's face changed its look of affectionate sympathy for one of earnest business calculation—"here's this old cloak. A real family relic, you see; and

I'd rather keep it. But it goes against my conscience to keep things hidden away, when they might be making some one comfortable. Poor old Keppel, who has potted about here gardening in summer and digging snow and such chores in winter, has the rheumatism; and, when I went to see him the other day, I found him really cold. Now, of course, I wouldn't show any disrespect to poor Uncle Christopher; but he is in his grave, and it can't concern him. And here is a person who is really suffering, his cloak—see how thick it is!—might just as well be keeping his poor old bones warm, eh, Phil?"

"I can't really keep track of you, cousin," said Phil with a smile. "Whose bones do you mean—Mr. Keppel's or your Uncle Christopher's?"

"Phil, you're an impudent rascal. Now, I'm going down to pack the baskets. So you can have a rest."

"Let me come, too. I like to see you when you're in a first-class tangle."

"No, you'd better save your strength." She flung an Afghan over him; and Phil, who had but recently recovered from a fever, and had come to his cousin's for rest and change, thought best to take the friendly advice.

"Mayn't we help, mamma? Please? Three pleading voices intercepted her, as, after a quick run upstairs, she came down with her arms full of flannels and other comforts. She hesitated, feeling that it would be much easier for her to be permitted to do the work in quiet. But it was not Mrs. Pringle's way to think of her own ease.

"Yes, if you will not make too much noise, and if you will try to do exactly what I tell you."

"We won't! We will!" came in an enthusiastic chorus.

"Now," said their mother, as the bright eyes delightedly took in all the indications of Christmas cheer spread about the kitchen, "you, Jamie and Ted, may put the candies in these nine bags, if you will not eat more than six pieces apiece. And, Edwin, you may cut six bits of that pasteboard, and write these addresses on them. Be sure you get them right. Stop, Teddy! That paper of raisins is for Mrs. McGinnis, and there are a great many children there. Just think of poor little Jimmie McGinnis hunting in his pudding for plums and finding them scarce!"

This pathetic picture of little Jimmy touched Ted to the extent of leading him to take his fingers from the paper and devote himself dutifully to the candy bags.

"Now," said Mrs. Pringle, after an hour's steady work, "you boys run up and get the toys you have picked out for the McGinnises and the two little Crumps. Yes, and a book for Sally Rickett, a little golden-haired girl I saw at Mrs. Gargle's."

"What a blessing to get some of the old toys out of the house before the new ones come in!" she said to herself, as she finished, packing the baskets, tied on the address, and set them back in a corner with a sigh of relief.

"May we stay down here and play awhile?" asked the boys.

"Yes, if Nora is willing."

With many cautions to her cousin about being careful of himself and the baskets, Mrs. Pringle allowed him to go in the afternoon, it being fine, to distribute them.

"So much off my mind!" she said, as she watched the piled-up cutter move away. The burden of good wishes it bore from her kindly heart did not add visible bulk to its load, but were fully as apparent both to those who were blessed by her self-sacrificing bounty and to him who has exalted our humble efforts by declaring, "Ye did it unto me."

"I'm a day late with my preparations," she said, as the family sat together after tea, her fingers busy with a bit of fancy work. "I had to put something I had intended for home folks into one of those baskets, so I am working hard to make up."

A message came that Mrs. McGinnis wanted to see her.

"Bring her up here," said Mrs. Pringle.

"An' it's sorry I am to be troublin' ye, ma'am," said that lady; "but—may the blessed Virgin an' all the saints bless ye for the kind doin's for us—there's a bit of a mishtake, maybe."

"How?" asked Mrs. Pringle, looking puzzled.

"The big pipe an' the tobaccy that was in it, ma'am; an' it's myself that niver does the bit o' smokin'. An' the ould cloak—a man's cloak, ma'am."

"Why, that was Mr. Keppel's basket!" said Mrs. Pringle. "Did it go to you?"

Phil looked hastily up.

"Could I have made such a mistake?" he said. "I don't see how I possibly could, Cousin Kate, after all your warnin's."

Mrs. McGinnis was dismissed with assur-

ances that the matter should be set right.

"I don't know what you'll say to us, mamma," said Edwin, climbing on the back of her chair, and looking ruefully round in her face. "but I'm afraid it was our fault."

"How could it be, dear?"

"When we stayed in the kitchen this morning, we took some chairs for a wagon and horses, and we played milkman; and Ted was the driver, and I was the milkman, and Jamie was the customers, and we took the addresses off the baskets and had them for milk tickets."

"What did you do with the addresses after you were done playing?" interrupted his mother, in dismay.

"The dinner bell rang, and we ran away to get ready for it. I'm so sorry, mamma."

Mrs. Pringle gave him a forgiving kiss, with the gentle suggestion—

"You see how much trouble it makes when boys take what they are not expected to take, and then are careless about putting them back."

"Then every basket must be gone wrong," said Phil.

"I suppose so. Nora must have tied on the addresses again without the least idea of what they meant. Dear me!"

"Don't look so overwhelmed, Kate. I'll go in the morning and straighten out the whole business."

"You can't," said Mrs. Pringle, despairingly. "No one can get those baskets right but myself."

"Yes, I can," persisted Phil. "You jot down something that will give me a hint. Like this, for instance: 'Billy Barlow, bundle of tracts, gross or tooth-picks, cake of ivory soap, picture of Washington crossing the Delaware.' 'Susan Jones, flannel night-cap, one dozen bottles Mrs. Winslow's soothing syrup, hair tonic'—"

"Be done, Phil!" commanded his cousin, sternly. "I don't know," she went on after a few minutes' thought, "whether I might not make use of you. I'll try to write some directions."

"They're all settled and everybody happy," cried Phil, making his appearance as the family were sitting down to dinner the next day. "I'm ready to hand in my report. I took notes, as I went along, so as to set your mind entirely at rest."

He took out a piece of paper and read:

"Johnny Boles. Number."

"Oh, yes," said Edwin, "that's papa's office boy that got his foot run over by a street-car. Johnny's a nice boy."

"Found Johnny cheerful," went on Phil, "over a baby's cloak, stockings and flannel things, two raw chickens, a jar of jam, a bottle of medicine and a picture book."

"Yes," said Mrs. Pringle. "Those were to go to Mrs. Gargle, who has a sick baby."

"Johnny didn't object when I asked for them. Went next to Mrs. McGinnis."

"Did you see Jimmy?" asked Ted.

"Yes, half a dozen of him. Found the big cloak and the meerschaum; but Jimmy & Co. were blowing bubbles with it, and wept and wailed when I claimed it. So I went and bought them a peck of clay pipes, and went on till I came to—let me see—Jane Peck's."

"She's a poor little dressmaker that comes here sometimes," said Mrs. Pringle.

"Found a roll of bandages, a new pocket-book, a bundle of illustrated papers, some fruit and jelly."

"Those were Johnny's," interrupted Jamie.

"Took them back to Johnny, and went to find Mrs. Gargle. Left her basket and recovered one which contained tops, whips, carts, trumpets, marbles, knives, toy dogs and horses without end; also raisins, six bags of candy, and sugar, tea, coffee, cranberries, rice, and all the other groceries you ever heard of."

"That went to Mrs. McGinnis, of course," said Mrs. Pringle, laughing.

"Yes; but on the way I found Mr. Keppel. Flew in with his basket, and found him holding up, with his poor, old, rheumatic hand a lace collar, with a ribbon bow, a thing like that"—he touched the shoulder cape worn by his cousin—"more fruits and jellies, and a great bundle of something or other."

"Sewing," said Mrs. Pringle.

"I would have liked to unpack his basket for him, but I hadn't time. So I left him—it would give him pleasing occupation for half the day—and dropped Mrs. McGinnis's miscellaneous treasures at her address. Then took the lace doings to the little seamstress, and found that the sixth basket, which belonged in the same building, had, for a wonder, gone right; and here I am."

"Good boy," said Mrs. Pringle. "You're a real treasure, Phil. I begin to see my way through now."

But, alas! In the same moment, Nora put her head into the room, saying—

"A body named Mr. Garragle would be wishin' to see you in the kitchen, ma'am."

"Mr. who?" asked Phil, looking up.

"Tell him I'll see him in a moment, Nora," said Mrs. Pringle, anxious to hide any further mistake which might have occurred. But Phil followed her to the kitchen, and listened while Mr. Gargle said:

"Sorry to trouble you, ma'am; but my wife's thinking there's some mistake about the things you sent, and thanks to you for the same, I'm sure. There's a big cloak, too big for the baby, she says, ma'am."

"For the baby, bless my heart!" laughed Mrs. Pringle.

"That everlasting old cloak!" groaned Phil, after Mr. Gargle had departed, with assurances that the matter would be set right. "I must have given it in at the Gargles when I got it from the McGinnis's. I'll go and see about it at once."

"No, Phil," said Mrs. Pringle, decidedly. "You are tired out already and must not go out again. And I've been feeling all day that it was my duty to go and see that baby."

With great vexation Phil lay down on the sofa, unable to deny that he needed rest, while Mrs. Pringle made her way to the tenement house in which the Gargles lived.

A little girl, whose blue eyes and golden hair Mrs. Pringle had before noticed, was playing with the baby as she went in. Mrs. Gargle held it with a look of general helplessness, which changed to one of relief at sight of her cheery-faced visitor.

"Baby no better?" she said, bending over it. "Oh, yes, he is. He's going to improve right along now, so as to let you have a merry Christmas. You'll be so glad and thankful. Too bad—the fuss there has been about your basket. I'll send it up at once. There's a chicken in it. Baby can have a little chicken broth to-morrow. Put in warm water and let it come slowly to a boil. And he musn't have cold feet. Put on a pair of the stockings in the basket as soon as it comes."

And while poor Mrs. Gargle vaguely wondered whether the baby or the chicken was to be put into warm water, and whether the stockings were to go on the chicken's feet or the baby's or her own, Mrs. Pringle turned to the basket, from which the contents had been partly taken.

The golden-haired child was looking at the broken lion claw on the old cloak; but Mrs. Pringle was too busy to hear her as she remarked—

"I have the piece that fits in there."

She disappeared from the room, and, returning in a moment, stayed the lady's movement as she folded the cloak.

And there, under the child's hand, Mrs. Pringle saw the missing piece of the clasp fitted into its old place; and the lion's claw was complete.

"Where did you get that? Who are you?" asked Mrs. Pringle, turning upon her a look of such excitement that she shrank back in half alarm, and made no answer.

"It's Sally Rickett, ma'am," said Mrs. Gargle. "Why don't you speak to the lady, Sally?"

"No; that isn't my exactly right name," said the child, slowly shaking her head, "not the name my mamma called me."

"Where is your mother?"

"Dear, dear, her mother's dead long ago," said Mrs. Gargle.

"Where did you get this?" repeated Mrs. Pringle, trying to subdue her own agitation, that she might reassure the little girl.

"In a box up in Mrs. Gray's room," she said.

"Mis' Gray knows all about her mother," said Mrs. Gargle. And a few hurried steps brought Mrs. Pringle to Mrs. Gray's room.

The child took from the drawer a small box, which she placed in Mrs. Pringle's hands, saying—

"The broken thing was in this."

It held a few trinkets of little value, under which lay a folded paper, which proved to be a marriage certificate of Alice Lyndon and Harvey Ricard. Mrs. Pringle read the names half aloud.

"Alice Ricard, Allie Ricard—that's my name!" said the child.

Even in her excitement, Mrs. Pringle could hardly repress a smile over the ludicrous change which had gradually come over the pretty name.

Under the paper was a likeness of a bright face, with eyes and hair like the child's—the poor girl who had so marred her life by one act of disobedience.

"Yes'm," said Mrs. Gray. "She come here from a city a great ways off, and took a room in the house. And the moment she come, I see she wasn't goin' to live long. Never heard her talk much about her husband; but to the day she died she kep' a cravin' to see her grandfather, and hear him say he forgive her and would take care of

the little one. But no letter never come, and Sally stayed right along of us. She's no burden to any one."

Mrs. Pringle's tears fell on the pretty face, as she heard the sad story, and thought of the longing hearts of the old man and his darling, never to be satisfied in this world, but satisfied now. How strange that he should have come to this very place, thus missing all the letters of tender pleading!

"Alice," she said, drawing the little girl closely to her, "I am your cousin—your mother's cousin. We have no little daughter, and I want you in my home. Will you come?"

The child looked into the earnest, loving eyes and said:

"Yes, I will go with you."

Mrs. Pringle always had her Christmas tree on the evening of Christmas Day.

"It works better," she said. If the boys have their things the night before, the novelty is all gone. They are tired of their toys and of themselves, and everybody is tired of them. But, if they are still in a state of pleasing expectation, it keeps them in a virtuous frame of mind, and everything goes quietly.

On this particular Christmas, however, the boys felt themselves abused. Mamma had always before spent the day with them, and made it seem like a fairy tale. But in the morning she shut herself into her room, and Jane Peck came—a sewing girl on Christmas Day!—and the boys were left to themselves.

Even the Christmas dinner did not make things much better; for mamma did not linger over it in the old way, but seemed in a hurry to get back to her room, giving, as she left them, a kiss to each boy, with a rapturous—

"If you knew!"

As mamma had lost so much time the day before, Cousin Phil had been deputed to hang the presents on the tree—a thing unheard of that any one but mamma should do it.

"What is it all about, Cousin Phil?" said Ted, as they wandered disconsolately about the house.

"Well, if you won't breathe a word, I don't mind just giving you a hint," said Phil. "Your mother has been getting an angel for the Christmas tree, and when it came it had to have some new clothes. So they're making them."

"We don't want an angel," insisted Ted. "Raver have mamma than a dozen of 'em." Jamie thought it was one of his cousin's jokes; but an air of reality was given to the thing by the finding of a dainty blue boot in the hall, over which solemn discussion was held. It was too small for any one but Ted, and Ted never wore such finicky things.

But the longest day has an end. Papa helped this one away by a sleigh-ride in the afternoon; and, as darkness settled down, the gas was brightly lighted, and mamma came with a radiant face for an old-time frolic, which lasted until the glorious moment when the parlor doors were thrown open.

But where was the angel? It was a white dove which hovered among the uppermost branches, and near it was a large doll, whose face wore a very intense waxy smile.

Did any one expect to fool them by calling that an angel? And who wanted dolls in a house where there were only boys?

But soon, away back under the shadows of the lower boughs, they saw something they had never before seen under a Christmas tree. Could it really be an angel which looked out at them with wistful blue eyes. Yes, it must be. There were the shining wings and the soft white robes. The lively chatter of the boys became subdued as they glanced shyly toward it, and a hush fell upon their merriment, in which they cast looks of appealing inquiry at their mother.

She watched until she could wait no longer, but with swift steps approached the tree. At a touch of her hand the wings and the white robes fell to the floor, and she led out among them a little golden-haired girl in a blue cashmere dress, with soft ruffles at throat and wrists.

"She's your sister, dears, your own little sister, to stay with you always, for you to love and to be kind to." And, quite overcome by her emotions, Mrs. Pringle laughed and cried in one breath.

When, in the course of an hour, the boys had made acquaintance with the new-comer, and Edwin distributed the fruit of the wonderful tree, the little Christmas angel might well have fancied herself in heaven, so bewilderingly were gifts and tenderness lavished upon her.

"I haven't thought about the Gargles' basket or poor old Keppel's till this moment," said Mrs. Pringle to her cousin and husband, as the three watched the younger ones in great content.

"What will they think of you?" said Phil.

"I don't know, I'm sure. I must go the first thing in the morning and see to them. But I shall bring home Uncle Christopher's old cloak. It shall never go out of the family. To think of its being the means of bringing home our Christmas angel!"

"I think," said Phil, hesitatingly, as he looked at his cousin, "I think"—

"What do you think?" she asked.

The big boy was not given to expressing himself freely, except when in his merry moods. And he could not have spoken one-tenth of the feeling which filled his heart in regard to the sweet-faced woman whose every thought and act was spent in the blessing of others.

"I think," he said, "that if there is a Christmas angel about, it is you."—Sydney Dayre.

Gems of Thought.

The most certain sign of wisdom is a continual cheerfulness.—Montaigne.

Mankind in the gross is a gaping monster that loves to be deceived and has seldom been disappointed.—Mackenzie.

If you want knowledge, you must toil for it; if food, you must toil for it; toil is the law.—Ruskin.

Exact justice is commonly more merciful in the long run than pity; for it tends to foster in men those stronger qualities which make them good citizens.—Lowell.

To be happy at home is the ultimate result of all ambition; the end to which every enterprise and labor tends and of which every desire prompts the prosecution.—Dr. Johnson.

If a man should register all his opinions upon love, politics, religion, literature, etc., beginning from his youth, and so go on to old age, what bundle of inconsistencies and contradictions would appear at last.—Swift.

The importance of this powerful agent—public opinion—for the prevention of injurious acts is too obvious to need to be illustrated. If sufficiently at command it would almost supersede the use of other means.—James Mill.

Look at Nature with science as a lens. The rock swarms, the cloud dances; the mineral is but the vegetable stepping down, and the animal an ascending plant; the man, a beast extended; and the angel a developed human soul.—Bartol.

Every want, not of a low kind, physical as well as moral, which the human breast feels, and which brutes do not feel, and cannot feel, raises man by so much in the scale of existence, and is a clear proof and a direct instance of the favor of God toward His so-much favored human off spring.—Daniel Webster.

"Enlarge not thy destiny; endeavor not to do more than is given thee in charge." The one prudence in life is concentration. You must elect your work; you shall take what your brain can, and drop all the rest. Only so can that amount of vital force accumulate which can make the step from knowing to doing.—Emerson.

At the same time that I think discretion the most useful talent that man can be master of I look upon cunning to be the accomplishment of little, mean, ungenerous minds. Discretion points out the noblest ends to us, and pursues the most proper and laudable methods of attaining them. Cunning has only private, selfish aims, and sticks at nothing which may make them succeed. Discretion has large and extend views, and, like a well-formed eye, commands a whole horizon. Cunning is a kind of short-sightedness that discovers the minutest objects which are near at hand, but is not able to discern things at a distance.—Addison.

The Thrifty Japanese.

What is the reason that Japan has no poverty problem? One reason is probably to be found in the land system, which has given to every worker a holding and encouraged him to supply his wants by his own labor. Another reason lies in the national taste for country beauty. Nowhere else are parties formed to visit the blossom trees, and nowhere else are pilgrimages simply for the sake of natural beauty. A country life has, therefore, its own interest, and men do not crowd the cities for the sake of excitement. There is, too, in Japan, a curious absence of ostentatious luxury. The habits of living are in all classes much the same, and the rich do not outshine the poor by carriage, palaces and jewelry, the rich spend their money on curios, which, if costly are limited. Rich and poor are alike courteous. It is not possible to distinguish employer from laborer by their behavior; all are clean, all are easy, all are restrained.—Fortnightly Review.

The Billville Christmas Tree.

YES, we were all as happy as the Lord would have us be, Till we took up a subscription for the Billville Christmas tree; An' then the trouble come around an' swamped us left an' right, An' there won't be any Christmas tree in Billville Christmas night.

First, Parson Jones, he made a reach an' grabbed a pair of hoots, Likewise two linen dusters an' three stavin' Sunday suits; An' Deacon Brown—he pranced aroun' an' said he'd go to prison, But the parson brought him to the groun' an' swore the boots was his'n!

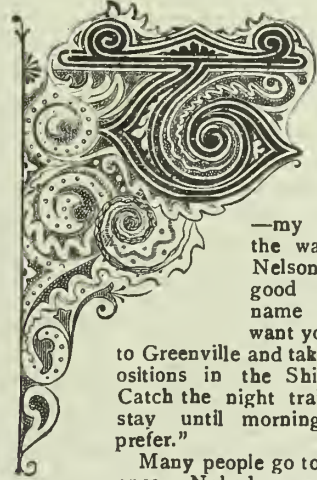
Then Sister Jinkins grabbed a dress an' started on the run, But Sister Brown was in the town, an' kinder stopped the fun; "Because," said she, "'twas meant for me—that dress, as well as more." An' then the two went rollin' like Jordan on the floor.

Then Sister Spriggins said her gal deserved the biggest doll, Then Deacon Scott said he guessed not—she'd not get none at all; Then Sister Spriggins went for him an' whacked him side the neck, Until he stood, worse than the boy upon the burnin' deck!

There never was a time like that; they fought all over town, Until they dragged that Christmas tree from Billville clean to Brown; An' that's jes' how the trouble come, an' swamped us left an' right, An' there won't be any Christmas tree in Billville Christmas night.

—Frank L. Stanton.

A GHOST STORY.



HE head of our firm one morning remarked: "Mr. Nelson,"

—my name, by the way, is John Nelson, and a very good and bold name it is—"I want you to go up

to Greenville and take these depositions in the Shindler case. Catch the night train back or stay until morning, as you prefer."

Many people go to Greenville once. Nobody goes a second time if he can help it. I remembered in a vague sort of way that Greenville had come into notoriety for a day or two a few years before through reason of a hotel fire in which at least one man had perished so successfully as to justify the newspaper use of the word "holocaust." However, this need not alarm me, as I intended to return on the night-express. I like to travel at night. There is such a comforting, ghost-dispelling sound in the snores of my fellow-passengers.

Fate was against me. My business indeed was quickly and easily dispatched, and at 9 o'clock I was at the station, only to learn that a serious washout was reported up the road and that all trains had been abandoned for the night. There was no help for it, and back I went to the hotel, which, suggestively enough, was called the Phoenix. The landlord took a cheerful view of the situation, as was perhaps natural. He gave me the best drink at the bar, which was bad enough, and the best room in the house, which was not so bad.

I am a light sleeper—another result of a nervous organization—and the circumstances under which I was sleeping in a strange bed in a strange town were not likely to deaden my slumbers. What awoke me I cannot say, but my first recollection is that of sitting up in bed, holding my pistol in my hand and looking with considerable astonishment at the dim outline of a man apparently stowing away clothing in great haste in an ordinary gripsack. That the man was a burglar, and that he was taking unwarrantable liberties with my possessions, I had not the slightest doubt. My calmness under such trying conditions surprised me. I remember experiencing actual pleasure in cocking and aiming my revolver. The click of the lock alarmed him. He turned hastily and said in a tone so thin that it seemed to come from a great distance:

"Here, don't shoot, please!"

Enough light came through the window from a lamp across the street to enable me to see the fellow more closely as he turned. He was appallingly thin—the merest

shadow, in fact—with sunken cheeks and the glowing spectral eyes that Lena had told me about thirty years before. I saw that he was no match for me physically, and it was plain that he was unarmed. So I said facetiously:

"You are not built for your calling, my friend. You would do better as a ghost than a burglar."

And the reply came mournfully and hollow, "I am a ghost."

"You'll excuse me," said the ghost, "if I go right on with my packing—but time flies."

"Pardon the bluntness of the question," I answered, feeling under the pillow for my watch, "but in the pressure of time are you packing up any of my things by mistake?"

"If you knew anything at all about spirits," said the ghost, carefully brushing and folding a coat, "you would know that they are strictly and invariably honest and were never known to appropriate any article not belonging to them."

"Thanks," said I, considerably relieved by the assurance. "Now may I ask who you are and to what am I indebted for this unexpected pleasure?"

The ghost glided over to the washstand, gathered up a toothbrush and a cake of soap and tossed them into the bag. Then he answered:

"It doesn't matter who I am. I was Richard Barnard, and all of me that was mortal was burned in the fire that destroyed the Metropolitan hotel on this spot four years ago. You may have heard of me. I see that you have. Pardon me if I keep on with my work."

And to my amazement he picked up a typewriter and threw it out of the window. I listened for the crash, and, hearing nothing, said:

"I have heard of you, Richard, in a desultory and unsatisfactory way and should like to hear more of you. Could you favor me with the particulars which escaped the newspapers? You'll find a cigarette, if you smoke, in that case on the bureau. How happens it," I asked, "that you return to earth in this systematic way?"

"That's the disagreeable part of it. You see that after all my care in looking after my property I entirely forgot my accident insurance policy and left it on the bureau—you see it there. Of course it was burned up, and my family had nothing in the way of compensation for my death. For this outrageous carelessness I am compelled to return night after night to go over the harrowing scenes of my combustion."

"But why don't you take the policy at once, now that it is in plain sight, and make off and end the matter and go back to your tibia and parietal bone like a well-ordered corpse?"

"That's just it. I can't. Even with my spiritual discernment I must work out the stupid instincts of mortality. Don't you suppose that a spirit with my keen perceptions recognizes the idiocy of pitching a typewriter out of the window? Do you think that a ghost, a thing purely of mind, unimpeded by matter, has not the sense to see the crying folly of stooping to crease trousers in a moment like this? It is not that I do not know better now. That is where my punishment comes in. I recognize the stupidity of mortality without the present power to change it. Every night I go just so far. The difference is that now I am conscious of the policy on the bureau, but must go on pitching out typewriter and creasing trousers, only to fall in a volume of flame and smoke on the threshold as the clock strikes 1."

"Richard," said I, "your argument is quite remarkable, but I am still puzzled. If you are incorporeal, and I perceive on closer inspection that you are, how can you talk? Where are your vocal chords, your trachea, your muscles of expiration? How can you hear me? I examine you closely, and I note the absence of the usual auditory apparatus."

"You are wrong," replied the ghost. "You deceive yourself. I do not talk; I do not hear. I communicate with you and you with me by sympathetic expression. As I told you, you have rare mediumistic qualities, but your spirituality is so insufficiently developed that you cannot distinguish between spiritual communication and moral interchange of thought. I beg your pardon. I am charmed to have met you"—here the ghost suddenly picked up his gripsack—"but I have just time to get to that door. I don't wish to alarm you, but I am sure I smell something burning!"

And so did I. There was no doubt of it. I saw the ghost look laughingly at the paper on the bureau and run swiftly across the room. And I'll swear that I saw him throw open the door and fall in the volume of flame that poured into the chamber. And all the time there was a tremendous singing

in my ears, with the sound of the banging of doors and the shouting of men. And I heard a voice:

"Mr. Nelson! Mr. Nelson! Get up quick! Come down the back way! It's on fire, the house!"

I, John Nelson, am a lawyer and a man of unimpeachable veracity. It is true that I was the guest of the Phoenix hotel in Greenville, Sept. 10th, the night it burned to the ground. It is true that the porter called me at precisely 1 o'clock in the morning, and that I escaped in very scant attire, securing my watch, pocket-book and legal papers. It is also true that an accident policy which I had taken out before leaving the city was forgotten and burned in the flames. All these are facts heretofore unrevealed, as I have dreaded the notoriety attending the revelation of a sensational press. I disclose them now, not in the interest of spiritualists and the fanatical element of the promoters of psychical research, but merely to dispel a very popular delusion concerning ghosts, and to calm the fears of the superimaginative and the superstitious.

For myself, let me say that if I have never seen a ghost since that night of adventure it is because I have not desired it.

I have sought out country graveyards on tempestuous nights and sat alone on marble slabs as the clock tolled 12. Over a table in my study hangs a grinning skull, and many a time between the hours of 12 and 1 I have turned down the light and stood before the hideous emblem of mortality and called on Azrael or Barnaid, as the humor might suggest. But all in vain. No ghost rises at my bidding. Alone I can accomplish nothing with the supernatural. I think I shall marry.—Exchange.

Boys, Read This.

Chauncy Depew, against whom no one would think of charging Puritanic spirit, speaks as follows on the temperance question: "Twenty-five years ago I knew every man, woman and child in Peekskill. And it has been a study with me to mark the boys who started in every grade of life with myself, to see what has become of them. I was up last fall, and began to count them over, and it was an instructive exhibit. Some of them became clerks, merchants, manufacturers, lawyers and doctors. It is remarkable that every one of those that drank is dead; not one living of my age. Barring a few who were taken by sickness, every one who proved a wreck and wrecked his family, did it from rum, and no other cause. Of those who were church-going people, who were steady, who were frugal and thrifty, every single one of them, without an exception, owns the house in which he lives, and has something laid by, the interest of which, with his house, would carry him through many a rainy day. When a man becomes debased with gambling, rum or drink, he does not care; all his finer feelings are crowded out. The poor women at home are the ones who suffer—suffer in their tenderest emotions, suffer in their affections for those whom they love better than life."

It will be a great blessing if boys will not only read this, but will determine that with God's help, they will never drink the first glass.—Newport Mercury.

Origin of the Fan.

The origin of the fan in China is said to have sprung from the following incident: A royal princess, very beautiful, was assisting at the feast of lanterns, her face covered with a mask, as was usual. The excessive heat compelled her to remove it, and in order to guard her features from the common gaze, she moved it quickly to and fro in front of her face, thus simultaneously hiding her charms and cooling her brow. The idea was at once adopted throughout the kingdom. Catherine de Medici carried the first fan from Italy ever seen in France, and in the time of Louis XIV the fan, covered with jewels, was worth a small fortune.

A Caution.

One should always have close beside the bed at night a candle and a box of matches. If there is occasion to take in the night a dose of medicine—nervine, an opiate or a tonic—never take it in the dark. One may be perfectly certain mentally of the place where the bottle or the box was located when his attention was last called upon the thing, but in the meantime a maid intent upon clearing up or the mistress herself may have made a change. It is not safe to snatch at freedom from pain in the dark, and cases not a few are on record where people have made irremediable blunders, finding out too late that what they supposed an innocent remedy was a deadly poison.

"Mary Christmas."

DON'T fink it is fair,"
Said Jamie to Ben,
With a pout; "I don't care.
I don't think it's fair.

"If but once in a while,"
Said Jamie to Ben,
"Twas a boy, 'twould be fair;
Don't you fink so, Clare?"

"Oh, it's Christmas, you know,"
From Jamie and Ben;
"It's a shame to be so:
A girl always I bo, bo!"

"But you don't mean to say,
Wee Jamie and Ben,
You think Christmas that way?"
"But we do mean to say—"

"It's always that way,"
Said Jamie and Ben;
"Mary Christmas," they say;
Was it named after May?"

"Can't we have it a boy?"
Begged Jamie and Ben;
"Santa Claus brings the toys,
'N' 'Billy Christmas' for boys.

"Just sometimes, would be fair,"
Vowed Jamie and Ben
"And this year would ma care
If we said so, dear Clare?"

"Oh, mamma dear, and May,
Hear Jamie and Ben!
'Merry Christmas,' they say,
Is a girl, and that they

"Don't think it is fair,
Poor Jamie and Ben!
Shall I tell them," said Clare,
"He's a boy, since they care?"

"No, our Christmas, dear lads,
Mamma's little men,
Isn't 'Mary,' but glad;
Happy Christmas, not sad.

"Jolly Christmas, my boys,
My Jamie, my Ben;
Time of dolls, games and toys,
Christmas girls, Christmas boys."

—Myra V. Norry.

The Sense of Taste.

Strictly speaking, with the tip of the tongue one can't really taste at all, says the *World's Progress*. If you put a small drop of honey or of bitter almonds on that part of the mouth, you will find, no doubt to your great surprise, that it produced no effect of any sort; you only taste it when it begins slowly to diffuse itself, and reached the true tasting region in the middle distance. But if you put a little cayenne or mustard on the same part, you will find that it bites you immediately—the experiment should be tried sparingly—while if you put it lower down in the mouth you will swallow it almost without noticing the pungency of the stimulant. The reason is that the tip of the tongue is supplied only with nerves which are really nerves of touch, not nerves of taste, proper; they belong to a totally different main branch, and they go to a different center in the brain, together with the very similar threads which supply the nerves of smell for mustard and pepper. That is the way the smell and taste of these pungent substances are so much alike, as everybody must have noticed; a good sniff at a mustard pot producing almost the same irritating effects as an incautious mouthful. When one is trying deliberate experiments on the subject, in order to test the varying sensitiveness of the different parts to different substances, it is necessary to keep the tongue quite dry, in order to isolate the thing you are experimenting with, and prevent its spreading to all parts of the mouth together. In actual practice this result is obtained in a rather ludicrous manner, by blowing upon the tongue between each experiment with a pair of bellows. To such undignified experiments does the pursuit of science lead the ardent modern psychologist.

Six Months' Food for Paris.

The French Commissariat and the Minister of War have been figuring on another siege of Paris and the amount of food that would necessarily have to be laid in for man and beast. Here are the figures: Breadstuffs, 243,000 tons; meat, 118,100 tons; salt, 14,793 tons; dry vegetables, 34,440 tons; potatoes, 295,260 tons; milk, 6,602,900 cubic meters; coal, 1,000,000 tons; hay, 688,940 tons; oats, 50,052 tons; straw, 68,894 tons.

The above are given as the very lowest estimates on a six months' food supply for the 3,000,000 human beings and the 2,750,000 domestic animals now within what is known as the outer defense lines. Such a supply would cost \$100,000,000.—St. Louis Republic.

Narrowness of mind is often the cause of obstinacy; we do not easily believe beyond what we can see.—Rochefoucauld.

Freaks of Memory.

There are on record many remarkable cases of loss and subsequent recovery of memory, says the *World's Progress*. Dr. Abercromby records the case of a four-year-old boy who was injured in the head and underwent trepanning. On recovery the boy absolutely forgot all about the accident and the operation, and when he had reached the age of fifteen had a fever, during which he gave his mother an exact description of the operation and of every one who was in the room at the time, even to the very clothes they wore. In the intervening ten years the subject had never been referred to by the boy, even in the slightest way.

The story is well known of the aristocratic English boy, Montague, who, stolen when a child, was brought up as a chimney sweep, and, being one day employed to sweep the chimneys of his ancestral halls, descended through the flue into his own former nursery, recognized everything in the room, and made remarks which led to the restoration of his birthright.

After Sir Walter Scott had completed the "Bride of Lammermoor" he had an illness, and on recovery he was given a printed copy of the work. "Why," said he, "who can have written this? I had intended to handle this subject myself." Nor could he recognize any paragraph in the story.

An office-holder, whose position was practically a sinecure, his entire duty being to sign his name, happened on one occasion to have to sign so many documents that toward the end of the task he literally forgot his name, and could not for the life of him continue to write it.

An attache of the German army at St. Petersburg went out one morning to make a round of social calls, and on his going into a house where the servant, not knowing him, asked for his name in order to announce it, the diplomat forgot it, and had to turn to another visitor for aid. This ludicrous predicament had something of a parallel in the case of Sir Henry Holland, who spent several hours exploring a mine in the Hartz mountains, and, getting faint from fatigue, forgot every word of German, in which he had been conversing with his guide. Sir Henry could not recollect enough German to make the request that he be taken out of the mine, and not until he came to the surface and enjoyed a good lunch did he recover his command of the language.

Dr. Dwight tells of a girl who preached a sermon while asleep, and mentioned a date when she would deliver another discourse. On awakening she knew nothing about it, yet upon the exact date she had fixed she again preached in her sleep.

The familiar instance of Mezzofanti, who, after a long illness, forgot everything except the use of his native language, is another remarkable example.

Sir Walter Scott's hero, Guy Mannering, came back, as we know, to the scenes of his early boyhood, and was so reminded by what he saw of a forgotten past that he said things which caused his recognition as the long-lost heir.

To turn to the lower animals, a story is told by Sir Robert Clayton, who put out to grass at Knavesmire, in Yorkshire, an entire troop of cavalry horses, part of a regiment disbanded after its return from the continental wars, intending to let the animals pass their remaining days in peace. One day a violent storm came up, and loud peals and vivid flashes rent the air. The old war horses ranged themselves side by side with the same ranks they should have formed had the scene been the battlefield and their masters in the saddle ready for the fray.

The people of the United States expend each year \$25,000,000 to be born, \$300,000,000 to be married, \$75,000,000 to be buried, and \$900,000,000 to get drunk on.

The word "dandy" was first used in England in a poem by Galway, published in 1780.

DOMESTIC ECONOMY.

SOUTHERN FRIED CHICKEN.—Joint the chicken and roll in cornmeal; have a pan with half an inch of very hot lard; lay in the chicken, cover and fry slowly until done; pour off the lard, add a tablespoonful of butter and when melted a heaping tablespoonful of flour; when very smooth and of a gold color, add a half pint of hot water; season and pour over the chicken.

DELICATE PUDDING.—Dissolve half an ounce of gelatine in half a pint of cold milk; let it come to a boil gradually. When hot but not boiling, add the well-beaten yolks of three eggs, stir constantly. Sweeten to taste and set aside to cool. When cold, stir in a pint of whipped cream, flavor with lemon or vanilla, and the last thing stir in the whites of the three eggs beaten to stiff froth. Serve with cake or fruit.

CAKE PUDDING.—One-fourth cupful butter, two tablespoonfuls sugar, one egg, one small cupful milk, two and one-half cupfuls flour, two teaspoonfuls baking powder. Spread one-half inch thick in a shallow baking-pan. Pare, core and cut in eighths four tart apples and press into the dough, sharp edge down. Sprinkle thickly with sugar and cinnamon and bake one-half hour in a hot oven. Serve with liquid sauce flavored with stick cinnamon.

FRENCH PIE CRUST.—Measure and sift with a teaspoon of salt, a quart of flour; chop through this a cupful of butter and one of lard, using a knife and mixing to a soft dough with ice water; roll out a quarter of an inch thick, take half a cupful of butter and put one-third of it over the crust in bits; roll out, folding toward you; dot with butter and roll out twice more. This will keep on ice for a week or more.

PUMPKIN PIE.—This is the receipt of a New England woman: Cut a good-sized pumpkin in two, take out the seeds and bake until soft in the oven; then scoop out the inside and mash through a colander. To a heaping pint of the squash add the yolks of four eggs, a teaspoonful each of ginger and cinnamon and half a spoonful each of mace and allspice, three-fourths of a cupful each of molasses and sugar, and quart of new milk. Line a dish with crust, pour in the mixture and bake. Enough for two pies.

Christmas Puddings.

This is the recipe by which we have just made our Christmas puddings, six in number, which are intended to last on into six months or so of 1894:

Ingredients.—Four pounds of raisins, stoned; four pounds of currants, picked, washed and dried; one pound of mixed peel cut into short strips; one pound of dried prunes; two pounds of bread crumbs; two pounds of beef suet, finely chopped; one pound of flour; four pounds of moist sugar; three pounds of apples, peeled, cored and quartered; sixteen eggs, one pound of almonds, blanched, and cut in long, thin strips; the grated rind of a lemon; a pint of old ale and half a pint of Liquid Sunshine rum. Mix the flour and suet first, and the bread crumbs, the grated rind of a lemon, the sugar and then the fruit. When all is thoroughly amalgamated add the eggs, the old ale and the rum and mix again.

This quantity makes six puddings, each weighing about two pounds.—London Truth.

Do Ants Talk?

A writer in the *Magazine of Natural History* asks whether ants talk, and relates that he saw a drove of small black ants moving apparently to new quarters. Every time two met they put their heads together as though they were chatting. To investigate the matter he killed one, and the eye-witnesses of the murder hastened away and laid their heads together with every ant they met. The latter immediately turned back and fled.

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder
ABSOLUTELY PURE

DIAMONDS!

GENUINE AND FIRST QUALITY.
Warranted Pure White and Perfect, and of
Extreme Brilliancy.

This diagram shows the approximate sizes of the stones

1/8	1/4	3/8	1/2	5/8	3/4	7/8	1 K
1-16 carat.....\$4 00	1-16 carat.....\$8 00	1-16 carat.....\$15 00					
1-16 carat.....25 00	1-16 carat.....35 00	1-16 carat.....50 00					
1-16 carat.....70 00	1-16 carat.....90 00	1-16 carat.....110 00					

I will retail these stones at the above wholesale prices and mount them in the latest styles in Rings, Pins, Studs, Ear Screws, Combination sets, etc., at cost of gold and labor.

Diamond Engagement Rings a Specialty.

DIAMONDS, WATCHES and FINE JEWELRY sent C. O. D., with privilege of examination, on receipt of \$1.00 to guarantee charges, or sent express or post paid if cash accompanies order.

Correspondence solicited. Particular attention paid to mail orders.

Jewelry of every description in stock and made to order. Strictly First-Class work. No Imitation Goods.

JOHN H. DRUMGOLD,

Manufacturing Jeweler, Watches and Diamonds

Room 113, Phelan Building, S. F.

GRANGERS' BANK OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 187



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 500,000
Dividends paid to Stockholders.... 720,000

OFFICERS.

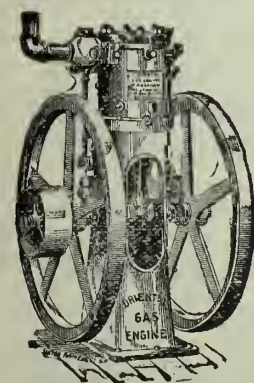
A. D. LOGAN.....President
I. O. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK MCMULLEN.....Secretary

General Banking. Deposits received, Gold and Silver.
Bills of Exchange bought and sold.
Loans on wheat and country produce a specialty.

January 1, 1893.

A. MONTPELLIER, Manager

THE ORIENTAL GAS ENGINE



IS THE BEST, because it combines simplicity of construction with power and economy in space. It can be run with natural or manufactured gas or gasoline at a cost of 20 to 25 cents per horse power per day.

It can be used for pumping purposes, as well as for all purposes where a perfect engine is required, with the advantage of lessening the risk of explosions. No licensed engineer at a high salary needed to operate it.

Send for circulars and prices if a good safe engine is what you need.

The Oriental Launch is Perfection.

M. A. GRAHAM,

Inventor and Manufacturer,

105 BEAL STREET, SAN FRANCISCO.

A SEAL SKIN COAT FREE.

Send 25 cents for particulars, including sample cake of SEAL'S SKIN SOAP, for Complexion and Toilet.

A. J. McKNIGHT,

1125 Mission St., San Francisco, Calif.

A LOT FOR \$1 A WEEK

A dollar a week for sixty weeks, buys a lot 25x125 feet east of Chicago Heights, the great manufacturing suburb of Chicago. Sixteen factories, streets paved, stone sidewalk, beautiful shade trees, schools, churches, etc. No doubt these lots will treble in value within one year.

No such bargain was ever offered in Chicago Real Estate. These lots are now on the Belt Line where factories are now in successful operation, employing over 50,000 people. Business transacted for non-residents. Address, DeForrest Land Co., Unity Building, Chicago.

California Inventors

Should consult DEWEY & CO. AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists and large practice as Patent attorneys enables them to offer Pacific Coast Inventors far better service than they can obtain elsewhere. Send for free circulars of information. No 220 Market St., San Francisco Cal.

CALIFORNIA PRODUCTS.

P & B

ROOFING.

BUILDING PAPER.

ROOF PAINTS.

First Prizes at the World's Columbian Exposition, 1893.

PARAFFINE PAINT CO., - 116 Battery Street,

SAN FRANCISCO.

E. G. JUDAH, Agent, - 221 South Broadway, LOS ANGELES.

RED SEAL GRANULATED 98% LYE

HAS NO EQUAL

FOR DESTROYING SCALE BUGS AND OTHER INSECT PESTS ON TREES AND PLANTS.

FOR TREE WASH!

—USE—

One pound to 5 gallons of water.

Thousands of Orchardists testify to its value, using it in preference to all other preparations. Where the Red Seal is applied it kills the insects and at the same time forms a coating through which others cannot penetrate. When used in the above proportions, it is a

GREAT BENEFIT TO THE TREES.

Put up in SIFTING-TOP CANS, so that any quantity may be used and the balance preserved unimpaired.

MANSFIELD LOVELL,

124 California St., San Francisco.



MADE IN PHILADELPHIA

SOLE

—BY—

ALL GROCERS.

FOR HOUSEHOLD PURPOSES

The Red Seal Lye is Indispensable.

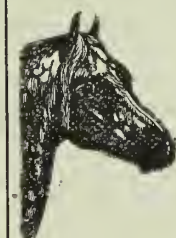
USED AS DIRECTED it will take the place, and at 75% less cost, of all other alkaline preparations, soaps, etc., now on the market. ONE CAN will make 10 to 12 lbs of Hard Soap, or 200 lbs. of Soft Soap. See directions in can.

It cleans floors, kills roaches and bugs of all kinds, cleans milk vessels, tin or wood; keeps farming implements bright and free from rust; is a perfect disinfectant; softens water, washes dishes and clothes; and can be put to a thousand uses in place of soap or other preparations.

P. C. TOMSON & CO.,

Manufacturers, Philadelphia, Pa.

ONLY 25 YEARS OLD AND A GIANT!



THE H. H. H. LINIMENT

HAS STOOD THE TEST OF TWENTY-FIVE YEARS' USE AND TO-DAY IS BETTER KNOWN AND MORE EXTENSIVELY USED THAN ANY OTHER LINIMENT.

Some reasons why you should keep H. H. H. Liniment:

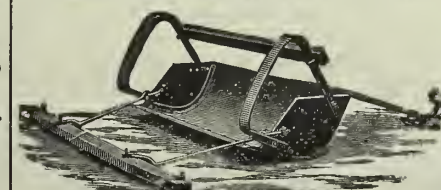
- 1st—Because it is the best for Man or Beast.
- 2d—Because it is the Cheapest. One bottle mixed with double its quantity of oil is then as strong as most liniments.
- 3d—Because you don't have to wait for it. You can buy it anywhere.
- 4th—Because it ALWAYS GIVES SATISFACTION.

H. H. MOORE & SONS, Druggists,

SOLE PROPRIETORS.....STOCKTON, CAL.

Porteous Improved Scraper

Patented April 8, 1883. Patented April 17, 1883.



Manufactured by G. LISSENDEN.

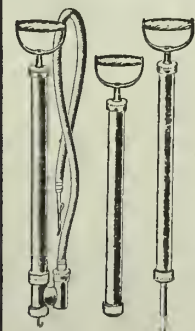
The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making, etc. This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

This Scraper is all steel—the only one manufactured in the State. Price, all Steel, four-horse, \$40; Steel two-horse, \$31 Address all orders to G. LISSENDEN, Stockton California.

The BEST POULTRY JOURNAL.

Teaches How to Make Money with A Few Hens. Sent on Trial Six Months for ONLY 25 CENTS. It is well worth \$1.00. Send stamps. Sample free. Address, FARM-POULTRY, I. S. Johnson & Co., Boston, Mass.

\$15 SPRAY PUMP FOR \$7 EXPRESS PAID.



THIS CUT SHOWS THE THREE MACHINES MADE BY THE NEW WONDER SPRAY PUMP

Makes Three Complete Brass Machines.

WILL SPRAY TEN ACRES PER DAY.

Endorsed by the Leading Entomologist of the United States.

Satisfaction guaranteed or money refunded. A valuable illustrated book on our insect pests given to each purchaser.

We will put this pump in competition with any other pump made, costing \$15 or less. Address

F. G. WORDEN, 2715 Mission St., S. F. Only General Agent of the Pacific Coast.

TREE WASH.

OLIVE DIP.

"Greenbank" Powdered Caustic Soda and Pure Potash.

T. W. JACKSON & CO..

Sole Agents,

No 5 Market Street, San Francisco, Cal.

CALIFORNIA

If you want to know about California and the Pacific States, send for the PACIFIC RURAL PRESS, the best illustrated and leading Farming and Horticultural Weekly of the Far West. Trial, 50c for 3 mos. Two sample copies, 10 cents. Established 1870. DEWEY PUBLISHING CO., 220 Market St., San Francisco.

THIS IS THE BLANKET

all tattered and torn, Which was bought last Winter; you see how its worn. It was sold by a man with a smooth, easy way, Who said "That's as good as any 5/A."

There is a lesson in this for every man who wants a new horse blanket—bright men profit by the experience of others. If you don't care how long a blanket wears, or how it looks, the "just as good" kind will probably suit you. But if you want a blanket that will last for years, and always be a credit to you and your horse, you can only be suited with a genuine 5/A. This mark is on every blanket. It is an absolute guarantee of value.



Sold everywhere. Made only by WM. AYRES & SONS, Philadelphia.

Guano Fertilizer!

PLAIN AND NITROGENOUS SUPERPHOSPHATES.

GUANO FLOUR.

Complete and Special Fertilizers

FOR ALL KINDS OF

Fruit, Grain, Sugar Beets, Vegetables, Etc.

MANUFACTURED BY THE

MEXICAN PHOSPHATE & SULPHUR CO.

For circulars and other information address

H. M. NEWHALL & CO., Agents,

309 & 311 SANSOME STREET,

San Francisco.

Deep Well Pumps.



The valves and working parts of the Fulton Pump can be removed, repaired and replaced without taking the pump out of the well.

Pumps fitted up for all depths of wells, ready to put in.

Send for illustrated circulars and price list to

A. T. Ames, GALT, CAL.

Manufacturer of Pumps and Windmills.

AGENTS WANTED

FOR DR. JOHN HENRY BARROW'S Great History of the

WORLD'S PARLIAMENT OF RELIGIONS.

SELLS ON SIGHT. For territory and terms apply to

THE KING PUBLISHING CO.,

132 Market Street, San Francisco, Cal.

The Berlin Sewage Farms.

The city of Berlin is absolutely cholera-proof, writes Mr. Poultney Bigelow in the *Cosmopolitan*. Beside that, she disposes of all the sewage within her borders at a profit of two per cent. The city of Berlin, nearly 20 years ago, purchased some thousands of acres of flat sand-wastes adjacent to her boundaries. With these she began the experiment of utilizing sewage. The city was divided into districts. In each district the sewage flows into an immense cesspool. Thence it is removed by powerful pumping machinery to the fields of the sand-wastes and spread upon them.

There are no "barnacle politicians" in Berlin to hang on and ruin the workings of the municipal Government, Mr. Bigelow says. The administration of the sewage farms is in the hands of citizens of the highest respectability, and under their management the result has grown to be an object lesson to all the cities of the earth. The pumps work night and day. The lands irrigated by the sewage ditches are cultivated in grain and vegetables. The product is the finest by far that appears in the Berlin markets, and is the most in demand. Land about Berlin in its natural state, before the sewage irrigation was applied to it, was worth \$182 per acre. As soon as it is put under the operation of the gigantic pumping works, however, it immediately rises in value to \$400.

Why Ice Cream is Sometimes Poisonous.

Not long since I was conversing with one of the largest manufacturers of glue and gelatine in the country, when, in illustrating and explaining another matter, he chanced to make an interesting statement in relation to sickness occasioned by eating ice cream, says the *Sanitary News*. I believe that I shall violate no confidence in repeating the substance of what he said, which was, that much, if not most, of the sickness referred to was caused by the use of glue containing some form of antiseptic. The use of gelatine to prevent ice cream from losing form and melting down rapidly is desirable, and even necessary, and were good gelatine, such as is prepared for food purposes, employed, no objection could be raised. But close competition and the greed of gain tempt manufacturers of the cream to buy glue at a less price as a substitute for gelatine. The cream makers are usually ignorant that antiseptics (which are nearly all poisonous) are frequently employed by glue manufacturers to prevent decomposition of the very perishable materials from which the glue is made. The cream maker does not usually state that he wants the glue for making into ice cream, and so the seller has no opportunity to warn or advise, and the cream maker uses the glue and wonders it makes people sick.

Seasoning Oak.

Oak is one of the timbers that requires extra care in seasoning, as its sap ferments and heats more quickly than the sap of any other wood, says the *American Cabinet Maker*. The logs should be sawed as quickly as possible after being cut, or at least after warm weather sets in. It has been noticed that the sap exudes to a considerable extent after the planks are sawed, and that it dries, forming a gummy surface, which, to a considerable extent, prevents the action of the air upon the interior sap.

To overcome this, experiments have been made by putting the planks into swinging crates and sinking them in running water so they are entirely submerged. After they have been in the water two days they are removed and stood upon end under a shed, where they are well protected from the sun and rain, and where there is a good circulation. In this position they dry without warping, and much more quickly than when piled up in the customary manner, and when seasoned the color is uniform.

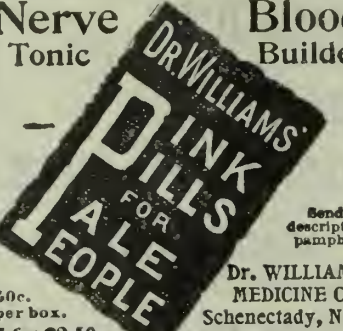
No tenable explanation of the manner in which the pyramids were built has ever been given.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm. West & Traux, Wholesale Druggists, Toledo, O. Wallding, Kinnin & Marvin, Wholesale Druggists, Toledo, O. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75c per bottle. Sold by all Druggists. Testimonials free.

Nerve Tonic **Blood Builder**



Send for descriptive pamphlet

Dr. WILLIAMS' MEDICINE CO.,
Schenectady, N.Y.
and Brockville, Ont.

50c. per box.
\$ for \$2.50.

CHOPPERS
ATTENTION!

ASK FOR THIS AXE.
USE NO OTHER.

Wood-choppers, try the **Kelly Perfect Axe**
It will cut more wood than any other axe.

The scoop in the blade keeps it from sticking in the wood, and makes it cut deeper than any other axe. Ask your dealer for it. Send us his name if he don't keep it. It is the Anti-Trust Axe.

Kelly Axe Mfg. Co.,
LOUISVILLE, KY.

WE GUARANTEE
That one tablespoonful of
GOMBAULT'S CAUSTIC BALSAM
will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made. It is therefore the cheapest (as well as safest and best) external applicant known for man or beast.

THE LAWRENCE WILLIAMS CO., CLEVELAND, OHIO.

Buy Land NOW, While Cheap!

I offer for sale the following:

\$9000—40 ACRES ADJOINING TOWN OF LOS Gatos, 20 minutes walk from station; 18 acres fruit; small house and barn; a charming place.

\$1400—80 ACRES, SANTA CRUZ MOUNTAINS, 5 miles from Alma; small house; 5 acres fruit; climate unexcelled; plenty of wood.

\$1000—160 ACRES, SAN LUIS OBISPO COUNTY; with good spring.

\$2500—35 ACRES, NEAR SONOMA; HOUSE AND barn; abundance of fruit and grape vines in bearing and a fine place for poultry; this is a good and very cheap property.

\$250 EACH—9 LOTS AT COLMA STATION, 25x 120.

JOHN F. BYXBEE,

32 Market Street, San Francisco.

VALUABLE

Information relating to orchard tree planting and care of orchards, together with a complete catalogue of the

RANCHO CHICO

NURSERIES, will be sent FREE, postage paid, to any address, upon application to

JOHN BIDWELL,

Chico, Butte County, California.

RANCHO CHICO ORCHARDS EMBRACE OVER 10,000 ACRES IN FULL BEARING.

Burlington "Stay-On"

STABLE BLANKET fits like a tailor-made coat. Ask your dealer for the "BURLINGTON." Write for handsome illustrated catalogue—sent free. BURLINGTON BLANKET CO., Burlington, Wis.

Sure Way to Make \$100

Send 25 cents for particulars, including sample cake of **SEAL'S SKIN SOAP** for Complexion and Toilet.

A. J. MCKNIGHT,

1195 Mission Street, San Francisco Cal.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering.

Surveying, Architecture, Drawing and Assaying.
728 MARKET ST., SAN FRANCISCO, CAL
Open All Year.

A. VAN DER NAILLEN, President.

Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. ESTABLISHED 1864. Send for circular.

GRANGERS' BUSINESS ASSOCIATION, GENERAL COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

T. R. BALLINGER, Grain Salesman.



FARMERS ARE HAPPY
WHO USE THE LATEST AND MOST IMPROVED MACHINERY
CLARK'S CUTAWAY HARROW
HAS IMPROVEMENTS PECULIAR TO ITS SELF
Just send for Circular and see what it will do FOR YOU
IT'S MONEY IN YOUR POCKET.

ADDRESS
THE CUTAWAY HARROW CO HIGGANUM, CONN. NEW YORK OFFICE 18 CLIFF STREET

A. T. DEWEY.

W. B. EWER.

G. H. STRONG.

DEWEY & CO.'S

Scientific Press



Patent Agency.

ESTABLISHED 1863.

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class Agency. We have able and trustworthy Associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 220 Market St. S. F.

HAYWARD'S SHEEP DIPS

Hayward's famous Paste and Liquid Dips received the Highest Award at the World's Columbian Exposition, also the Prize Medal at the California State Fair. Dips from all over the world were exhibited at Chicago and practical sheep men pronounced Hayward's the best and most effective medicine for the cure of scab and general benefit to wool.

CHRISTY & WISE,

General and Sole Agents for the Pacific Coast,
Office—Fifth and Townsend Streets,
San Francisco.

CANCER CURED

WITH SOOTHING BALMY OILS.

WE SUCCESSFULLY TREAT

Cancer, Tumor, Catarrh, Piles, Fistula, Eczema and all Skin and Womb Diseases.

CANCER of the nose, eye, lip, ear, neck, breast, stomach or womb; in fact, all diseased internal and external organs or tissues, successfully treated, without the knife or burning caustic plasters, but with soothing, balmy magnetite oils. Beware of imitations as there are those who hope to profit by advertising an oil cure for these diseases. We are the originators of this system, all others are frauds. Correspondence solicited. Consultation free. Testimonials furnished. Address

DR. EUGENE BUELL,

Cancer Institute,

ROOM 57, SUPREME COURT BUILDING,

Cor. McAllister and Larkin Sts., San Francisco, Cal.

DOUBLE BREECH-LOADER \$6.00.
RIFLES \$2.00.
WATCHES

BICYCLES \$15
All kinds cheaper than elsewhere. Before you buy, send stamp for catalogue to **POWELL & CLEMENT CO.,** 166 Main St., Cincinnati, O.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular

E. FOUGERA & CO.,

30 North William Street, New York

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos. A. Cary of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St. San Francisco.

CANCER.

THE KOEHLER CANCER CURE CO.,
1428 Market St., San Francisco.

CANCER, Tumors or Malignant Growths removed without knife or caustic. A GUARANTEED CURE a specialty. Call or send for circular. Over 300 cancers preserved in alcohol in our office. Consultation free.

PHILIP KOEHLER, Manager.

The American Bee Journal.

(Established 1861.)

It is the Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in America. 32 pages, \$1.00 a year. Send for Free Sample. \$1.00 PER-BOOK FIVE

420 W. YORK & CO., 14 Fifth Ave., Chicago, Ill.

Distribution of Seeds and Plants.

University Experiment Station Bulletin No. 103.

Interest in the distribution feature of our field and garden work constantly increases, and evidence of the value of some of the growths thus disseminated is abundant. In issuing another announcement, however, we desire to remind all correspondents that they assume an obligation to report to us the results of their experience with the plants received, and that the records of their observation are often of great value to us. As we have now a report in preparation, we are especially desirous to hear of the behavior of all growths which we have hitherto distributed. We trust all correspondents will remember this as they make their choice from the things offered in this Bulletin.

This distribution from the station is for the purpose of securing wide trial of growths new to the State, and does not include common trees, plants and seeds, which can be had from dealers. For this reason, we do not invite applications for general supplies of garden seeds or fruit trees. We cannot furnish them.

We cannot undertake distribution to citizens of other States, except where desirable exchanges are offered.

Terms.—Our experience has demonstrated that requiring a small contribution insures the applicant's interest and relieves us from the profitless work of supplying the throng of people who always carelessly send for what costs them nothing, and who, as a rule, give no attention to the trial of the material sent them, and therefore do not report results. For this reason, applicants are requested to send the amount specified in connection with each description below to meet the expenses of packing and postage. If they desire seeds sent by express, applicants need not send the amounts specified for postage, but all orders for seeds by express must be accompanied by a remittance of 25 cents to pay for packing. Express charges are paid by the recipient. Applications may be made for one or more kinds of seeds, but an applicant should not order more than one package of a kind. In case any kind of seed become exhausted, the money sent will be returned, unless a second choice is mentioned by the sender. Postal notes are requested instead of stamps whenever practicable. Any surplus left after filling orders will, as far as possible, be returned to the senders, deducting letter postage.

CEREALS.

Although the interest in experiments with new varieties of cereals has been greatly reduced by the low market values of these grains, we still find some growers awake to the chance of improvement through the growth of superior varieties. It is an interesting fact that the notable collections of cereals in variety which were displayed by some counties in the California Building at the World's Fair were grown from seed furnished from this station. We offer this year several varieties new to California.

Carter's New Cross-bred Wheats.—We have grown for two years and determined the desirability for further local trial by wheat-growers, a collection of cross-bred wheats produced by hybridization by James Carter & Co., High Holborn, London, England. The chief aims of the originators of these wheats were to secure early maturity, prime milling quality, heavy bearing and good straw. We believe that wherever these varieties are adapted to the climate they will be found to be strikingly fine in comparison with varieties now largely grown here. We trust they will attract the attention of wheat-growers:

Queen.—Straw medium, stout, bright; chaff velvety; grain excellent; resists rust.
Prince of Wales.—Early; straw long and white; grain good milling; heavy bearer.
Earliest of All.—Believed to be the earliest wheat in cultivation; straw medium thin but stiff; very productive; amber grain.
Miller's Delight.—Straw upright, very bright colored; grain white; plant strong in growth and dark green.
Pearl.—Straw long and stout; ear close-set and lightly bearded; grain roundish, amber white; resists rust.
Holborn Wonder.—Straw stout and strong; ear long and close-set; very productive; grain pale brown.
Hundredfold.—Early; straw medium and not disposed to lodge; ears long and well filled; grain pale brownish-red; free from rust.
Stand-up.—Straw very short, erect and not lodged by wind; grain firmly set and not easily shaken out; pale amber color; resists rust.
Flourball.—Very early; straw long, ears medium length; grain varied in color from deep amber to pale red.
Pride of the Market.—Early, but late in showing ears; straw long, ears close set; grain not easily shelled out; pale amber color.
Birdproof.—Named because of pointed awn, which repels birds; straw, long, stout and

strong; grain pale amber, plump and handsome.

Anglo-Canadian.—Bearded, hardy, very early; straw strong and long; grain pale red, plump and even.

Hessian Fly Wheats.—Although we have for several years offered wheats not liable to injury by Hessian fly, much demand for them has not arisen until last winter, when we were not able to fill all orders. We have grown another supply of seed. Although the wheats are rather dark in color for the market, the value of the varieties for hay purposes in regions infested by Hessian fly is very clear, and we hope they will be generally tried for this purpose. They are bearded wheats, but early cutting will reduce this evil somewhat. We offer four varieties: (1) Russian Red, (2) Volo, (3) Petali, (4) Atlanti.

Rice.—To assist correspondents having lands subject to overflow or flooding, who have manifested a desire to experiment with rice, we have secured a supply of seed of the best Louisiana variety. Land for rice should be so situated that the application of water can be regulated. Prepare the land as for grain, sow in drills and cover with two to three inches of soil. Admit the water until it stands 12 to 18 inches deep. The water is allowed to remain for three to six days, for the seed to germinate. The water is then drawn off and the surface allowed to dry until the plant has secured good rooting. Water is admitted again when the plants have put out two leaves, and is allowed to stand on the ground while the plant is making its growth; the water being drawn off to allow the rice stalk to gain strength and the ground to dry for the convenience of the reapers. There is some variation in the practice of rice-growers in the different rice countries, and probably local methods will arise here if the crop seems suited to local conditions.

Terms for Cereals.—Applicants for seeds of the cereals named above may order a single package of any one or of all varieties, but we cannot furnish more than a single package of one variety—15c. for each variety in 1-lb. sacks, postage paid.

TABLE GRAPES FROM PERSIA.

The grapes of the table lands of Persia have won praise from all travelers who have eaten them. These vines are of the *Vitis vinifera*, but the fruit has quite a distinctive character when compared with the varieties chiefly grown in the west of Europe. Prof. H. E. Van Deman, ex-Pomologist of the Department of Agriculture, secured through the kindly aid of our Minister at Teheran, Hon. E. Spencer Pratt, an importation of the best Persian varieties. These vines were in part entrusted to this station and we have propagated enough to offer a small supply to our correspondents this year. Those varieties which we have fruited ripen very early, about with the Sweetwater, and as they are much firmer fleshed and tougher skinned than that variety they may prove of high value for early shipping. The berries of the varieties we have fruited thus far are of large size, long-oval form and good quality. We offer the following varieties this year; the descriptions are imperfect, as some have not yet fruited here:

- 1—**Paykaynee Razukee:** Bright red, large, long, few seeds.
- 2—**Dizmar:** Light yellow, very sweet, long and tapering.
- 3—**Khalillee:** Said to be the earliest in Persia.
- 4—**Askaree:** Widely grown in Persia and used both for table and drying; black, resembling Cornichon but considerably earlier.
- 5—**Rish Baba:** Also a leading variety in the Orient for table and drying and said to keep until spring.
- 6—**Hutab:** A large, sweet grape.
- 7—**Shiraz:** Named for one of the most important grape regions of Persia, where it is a leading sort.
- 8—**Alhakee:** Red, said to be suited for long keeping.
- 9—**Chavoooshee:** Green, a rare variety in Persia.
- 10—**White Shahane:** Large, oblong, light color.

Our supply is small; so far as it goes we will send one vine of each kind at the rate of five cents for each variety ordered, by mail, postpaid.

ITALIAN WINE GRAPES.

We have now propagated sufficiently for distribution an important collection of valuable Italian grape varieties imported in 1891 by this station through the kindness of Count G. di Rovasenda of Turin, the well-known Italian ampelographer. The peculiarities that make these grapes very valuable for culture in California, whose climate is so similar to that of Italy, is their remarkably high acidity conjointly with a good proportion of sugar; they are likely also to reach an unusually high percentage of sugar while still maintaining a good proportion of acidity. Besides, they are quite astringent, and yield wines of deep color. In general they produce wines which are in large demand, both in Italian and foreign markets, on account of their remarkably good keeping qualities, their deep color, very pronounced vinosity and agreeable acidity; by aging, their astringency is reduced, and then they are very delicate, and can be considered as first-class dry wines, of as good quality as those of the Bordeaux type. The following varieties are ready for distribution:

1. Pelarerga.
2. Gioreto.
3. Colutam cucco bitondo.
4. Malvasia Rovasenda.
5. Fankio.
6. Negro amuro.
7. Favorita.
8. Tadone.
9. Torok goher.
10. Bernestia violacea.
11. Crostio Moretto.
12. Chien noir.
13. Zinzilosa.
14. Malvasia di Brollo.
15. Quagliano.
16. Uipro nero.
17. Cenanese nero.
18. Corbeau.
19. Crostio.
20. Barborossa di Finala.
21. Bolgino.
22. Erbalus di Caluso.
23. Monica.
24. Nebbiolo di Dronero.
25. Vernaccia Sarda.
26. Nefretta.
27. Danugo.
28. Trivioti.
29. Negro dolce.
30. Orotina.
31. Malvasia de la Cartuja.
32. Ostaratu a la porta.
33. Mammolo Toscano.
34. Follette de Cadenet.
35. Aspiran noir.
36. Bergan or Persan.
37. Crejidero.
38. Picpoule.
39. Nefretta de Colucellio.
40. Gfria di Piemonte.
41. Negrette de Gattinara.
42. Paga debito.
43. Ocra di Bove.

We will send the above rooted vines by mail at the rate of 5c per vine, or by express at 25c per dozen; express charges to be paid by receiver. Of the varieties marked with a star (*) six vines each may be ordered if the applicant desires; of varieties not starred, not more than two vines to each applicant. The varieties marked with a dagger (†) are desirable for table use.

SHADE TREES FOR PUBLIC GROUNDS.

A part of the property placed in our charge by the act of the Legislature, which made the University the legatee of the discontinued Board of Forestry Commissioners, consisted of a nursery of seedling forest trees. All of these trees in excess of what are needed at our stations we desire to make of public benefit, and, to escape interference with the business of nurserymen, we offer the trees for planting on public grounds surrounding all State and county buildings and in city and village parks. We hope there will be a general desire to plant them on school grounds. The following will be furnished for the purposes named:

- Douglas Spruce—*Pseudotsuga Douglasii*.
 Western Arbor Vitae—*Thuja gigantea*.
 Austrian Pine—*Pinus Austrica*.
 Drooping Cypress—*Cupressus macrocarpa*, *pendula glauca*.
 White Pine—*Pinus strobus*.
 Lawson Cypress—*Cupressus Lawsoniana*.
 Black Wattle—*Acacia decurrens*.
 Lemon Scented Gum—*Eucalyptus citriodora*.
 Kentucky Coffee Tree—*Gymnocladus canadensis*.
 Eastern Black Walnut—*Juglans nigra*.
 Carolina Poplar—*Populus monilifera*.
 Hackberry—*Celtis occidentalis*.
 Black Ash—*Fraxinus sp.*
 Pawlonia—*Pawlonia imperialis*.
 Catalpa—*Catalpa, sp.*
 California Maple—*Acer macrophyllum*.
 English Oak—*Quercus robur*.

These trees will be furnished in lots of one dozen assorted varieties at 50c per lot, for digging and packing; freight or express to be paid by recipient.

Acorns of English Oak.—This is exceedingly satisfactory as a rapid-growing hard wood and shade tree in the coast region of California at least, and deserves wide planting. As there is some difficulty in transplanting, we will send acorns to those who desire to start trees in permanent place. Small packages of acorns, 5c each by mail, postpaid.

THE LOGAN BERRY.

This fruit, which appears to be a cross between a cultivated red raspberry and the Aughinbaugh (a variety of the California wild blackberry), was grown by Judge J. H. Logan, of Santa Cruz, from seed in 1884. He had the berries named above in adjacent rows, and took his seed from such association. The result is a berry of unique and striking characteristics. The fruit is sometimes an inch and one-quarter long, dark red, with the shape of a blackberry, the color of a raspberry, and a combination of the flavors of both. It is a great acquisition to the berries on the market, hard and a good shipper, and has been successfully marketed in quantity by James Waters of Watsonville. It has fruited on the experiment grounds three years. The foliage seems to be rust-proof, and no disease has been noticed on the plant. We can only send one plant to each applicant; 10c each by mail, postpaid.

THE HENNA PLANT—*Lawsonia alba*.

We are indebted to Prof. Thomas Meehan, of Philadelphia, for the seed from which we have grown a few plants of this interesting and historic oriental shrub. It is described as a small, handsome and sweetly scented bush, first grown on the borders of Persia, and thence its use and cultivation probably spread westward into Africa and eastward to the several provinces of India. The use of the dye prepared from its leaves, pounded with catechu or lime, as a cosmetic is evidently of Mahomedan origin, being chiefly used by the women of that race for staining the hands, fingers, nails and feet. The simple decoction of the leaves also is frequently used in dyeing cloth and handkerchiefs; color produced is a shade of yellowish or reddish-brown or red. The leaves are also said to have marked healing properties. We anticipate its chief value in California will be as a handsome, fragrant shrub with an interesting history. One plant to each applicant; 10c each by mail, postpaid.

SUGAR CANE.

True sugar cane (*Saccharum officinarum*) is being successfully grown on a small scale on moist or irrigated valley lands in this State. There is considerable inquiry for the seed cane. Col. W. C. Stubbs, of the Louisiana Experiment Station, has furnished us a supply of the three varieties found best in his investigations, viz: "Louisiana purple," "Louisiana striped" and "Tibboo Merd." We shall endeavor, so far as possible, to furnish a cutting of each to each applicant. The cuttings should be laid horizontally and wholly covered with about three inches of soil. In locations free from frost, and where the soil is well drained and warm

enough to admit of planting of tender vegetables during the winter, the cuttings may be planted as described above as soon as received. Where there is danger of frost or likelihood of cold, water-soaked ground for some time, the cuttings should be stored in damp sand and planted out when the soil is in good condition in the spring. As cane is heavy the charge will be 25c per package by mail.

GRASSES AND FORAGE PLANTS.

Wonderful Cow Pea.—In view of the great industrial value of the cow pea in the Southern States there is a wide disposition to try it in California. We are fortunate in receiving from D. M. Dimmick, Esq., of Carpinteria, Santa Barbara county, a supply of seed of the new cow pea "Wonderful," which is believed to be the best of its kind. It yielded a very large amount of forage and peas for Mr. Dimmick and keeps green on his land until destroyed by frost. The pods are very long and carry as many as 18 peas to the pod. It is not likely that it will do so well away from the coast, except perhaps on moist or irrigated land, but it is worth a trial everywhere. Mr. Dimmick says the plant is about as tender as the Lima bean and should be planted about the same time, as it is liable to rot in the ground if planted too early. Put two peas in a hill, the hills 18 inches apart in rows three feet wide. Seeds sent in small packets, 3c each, by mail, postpaid.

The Flat Pea.—Further trial both upon our own grounds and by our correspondents leads us to commend wider distribution of the "Flat Pea" (*Lathyrus sylvestris*). This is a perennial legume having much the style of growth of the "everlasting pea." It forms a dense mat of banim or vine which completely covers the ground, the stems reaching a length of four feet or more. It keeps green all summer without irrigation in this locality, and is readily eaten by animals. After cutting, a second growth starts at once. Analysis of the plant made at this station gives it high nutritive value. As the plant has not borne seed with us as yet, we distribute it by means of root sets. A part at least of the root sets of the flat pea should be carefully planted in the garden or field corner where they can be watched and protected the first year. If the growth be satisfactory, the roots can be distributed here and there in waste places the following year. We will send a small package of roots postpaid for 10c.

Texas Blue Grass (*Poa arachnifera*).—This grass can now be recommended as especially valuable in many parts of the State. We furnish root-sets in 8-oz. packages for 8c each, by mail. By planting a small plot, the grower will soon have roots to plant a large area if the grass commends itself.

Tall Oatgrass (*Arrhenatherum avenaceum*).—This grass is showing surprising adaptation to arid conditions. Mr. Thomas Anderson of Shasta county writes of it: "It grows like bunch grass with a turf and is always green and sweet. Stock are very fond of it. The seeds drop from the head while the base of the plant is still green. It starts early and stays green all through the summer and fall." Other growers in arid situations speak of it in similar terms. Four-ounce packages by mail postpaid for 5c.

Tagasaste (*Cytisus proliferus albus*).—The publication of reports of the success of this plant in Australia has renewed interest in it here. It is a leguminous shrub which grows in dry soil and furnishes "browse" for stock. Pour boiling water on the seed and allow it to soak over night. Sow in boxes, and transplant when the plants are a few inches high. It is very difficult to start the seed, but the plant bears transplanting well. Seed by mail postpaid for 3c per packet.

MISCELLANEOUS.

Canaigre.—The growth of this native plant (*Rumex hymenosepalus*) has reached large amounts in New Mexico, where an extract is made from the root for shipping abroad for tanners' use. The business is said to be profitable and can probably be considerably extended, as the world's supply of tannin-yielding barks is running low. Seed in 2-oz. packets for 5c each, postpaid.

New Zealand Spinach (*Tetragonia expansa*).—Described by Von Mueller as a good culinary herb and as useful for restraining drifting sands; growing even during severest heat and drought. Our correspondents speak of it in the highest terms as a table vegetable. Mr. Robert Hsatie of Contra Costa county writes: "It grows all summer in very dry land and holds a beautiful dark green until frost comes, and the growth starts again the next year from the root. As an ornamental plant, where water is scarce and for the table, it has no superior."

Melde's Perennial Bean.—A handsome, large, white bean, with a perennial root, from which climbing runners start each year. Seed 3c. per package, postpaid.

Irvine's Hybrid Perennial Bean.—Originated on the Station grounds and believed to be a cross between the Painted Lady and the Lima. It is larger than Melde's bean, plump, pure white. The vine shows a disposition to bear two crops, as the same plants which yielded the seed we offer are now loaded with a crop suitable for cooking. Seed 3c. per package, postpaid.

New Short White Carrot.—Introduced by Steele Bros. & Co., Toronto, Canada; a large, short carrot, heavy at the shoulder and easily pulled from the ground; flesh solid, crisp and sweet; should be tried by all carrot-growers. Small packet of seed, postpaid, 3c.

Application for seeds and plants should be made as soon as this announcement is received. We expect to send our seeds about January 1, and plants about February 1.

E. J. WICKSON,
Berkeley, Cal.

December 15, 1893.

PATRONS OF HUSBANDRY.

Editorial Observations.

It is with special pleasure that we print this week the first of a series of letters from Mr. S. Goodenough, lecturer of the State Grange. Mr. Goodenough presents to the granges of the State a plan which will give a motive for grange meetings, set the members to studying and thinking and do a world of good in the way of spreading education upon the leading economic and political questions of the time. We commend this plan as one founded in good purpose and supported by good sense; and we hope to see it accepted by every subordinate grange in California.

North Butte Grange has done a fine thing in putting a lot of new timber to the front in its official list for 1894. This is a rule that works in two ways—it gives the war-horses a rest which they well merit and it gives the grange the advantage of new blood and new enthusiasm.

Miss Carrie Carleton, who has been the faithful and efficient correspondent of New Hope Grange during 1893, informs us that her grange has determined to pass the honors around and commission one member after another to write for the *RURAL*. We are naturally sorry to lose the help of so good a correspondent as Miss Carleton, but if the new plan results in the development of new talent, there will be no reason to complain. It should be the effort of each grange to put duties upon its members, especially the younger ones, as a means of bringing them to the front and developing latent talent. In this matter of correspondence, however, it cannot, it seems, be said too often that the columns of the *RURAL* are open to the general membership as well as to the special correspondent.

Secretary Root of Stockton writes us that the worthy lecturer of the State Grange is expected to be present on the first Saturday in January to assist in the installation of the new-elected officers.

Random Thoughts.

By A. P. ROACHE, W. M. S. G. of California.

Greatness or grandeur is only a name,
That dies and is buried with loftiest fame.

The World's Fair has come and gone, and as an educator of humanity stands the peer of all recorded efforts.

Our own Midwinter Fair portends vast good to the State. Let all Californians do their whole duty in support of this unparalleled undertaking, for be it remembered we are scarcely known beyond the Rockies.

The National Grange did its duty squarely and well, in almost unanimously voting to accord the "elective franchise" to women. One by one are the barriers broken down, and woman will ere long regain the place where God left her, by man's side and not under his feet.

The State master and wife arrived home on the 13th inst., battered and bruised and icily used, and desire to tender their most sincere thanks to the officers and members of the National Grange, the members of Syracuse Grange, and Bro. B. F. Walton of the California Executive Committee, for many kind and thoughtful acts during their protracted illness.

The new A. W. is ready for all entitled to receive it for the new year. So have a little talk with your secretary sisters and brothers, that your newly-installed master may be able to give this passport to every member of his or her grange.

Do Pomona granges desire an annual word for the fifth degree? Let us hear from you on the subject.

Every grange in California is respectfully requested to forward at once the name of some wide-awake sister or brother who will act as county deputy in their section. Select some one with energy and push, who will build up granges, and charity shall hold no place in their reward.

How about that picnic ground? Discuss it, patrons, in the *RURAL*. Its none too soon to commence, for should you determine to hold either a State or inter-State picnic Oregon and Washington will need time to arrange their programmes in accord with ours.

Lecturer's Notes.

Topics Suggested for Discussion in Subordinate Granges.

As lecturer of the State Grange of California I desire to submit for consideration to the Patrons of Husbandry in this jurisdiction the subjects outlined below, one for each month. The selection is purposely of general interest. Special farm, domestic and social topics will naturally be presented by the lecturers and members of subordinate granges. While not underrating the importance of such consideration, it is desirable that discussion and inquiry should take a much wider range.

The interests of farmers, while special in some respects, are, in all others, broadly identical with the interests of all the people. Farmers should aim to have exact and comprehensive information concerning all the great social, economic and political questions of the hour. Their great numbers (one-half the population) will enable them to exercise a determining influence whenever they choose to bring their united strength to bear. There need never be any legislation, or social and economic conditions inimical to the interests of agriculture if farmers decide and arrange to act with intelligent concert. The first step toward this judicious and salutary exercise of power is a thorough knowledge of the questions at issue. Let them first be subjected to careful investigation and exhaustive discussion in the grange. Make the grange what it was intended to be—an educator along broad lines. The accurate information, readiness and confidence thus acquired would prepare farmers to act with promptness and effect in the discharge of their duty as citizens. They need not be "silent partners" in State and National affairs.

It is suggested further that each subordinate grange embody the result of the discussion of each topic in a carefully worded resolution or concise report, and transmit the same by its secretary to the address given below, to enable your lecturer to present a clear and comprehensive view of grange sentiment and opinion in his annual report to the State Grange; also for publication in the *RURAL PRESS* from time to time.

The following list includes but a few of the many questions that demand the attention and action of farmers, both in their own interest and in the interest of the whole people. Let them be approached in a broad-minded endeavor to get at the bottom facts and find the just basis of action.

It is also suggested that some member of each grange be appointed, a reasonable time in advance of the date for consideration of the respective topics, to prepare and present an essay or an address to open the discussion. When practicable, some person outside the grange, known to have special fitness to give needed instruction, might be invited to deliver an address under the auspices of the grange.

TOPICS.

January—Does industry need protection?

February—Free coinage of gold and silver, and the duty of Government to furnish an ample legal-tender medium of exchange.

March—Transportation. Are charges oppressive? and how may relief be secured?

April—The cause and cure of the tramp nuisance.

May—Would it be advisable to reduce the hours of daily labor in order that there might be work for all?

June—Would it be advisable to limit production in order to realize better prices and more satisfactory returns for labor?

July—How to deal both justly and effectively with monopolies, with the aim to limit their expansion and diminish their power.

August—What checks should be put upon immigration?

September—With what qualifications should suffrage be guarded?

October—Has Government patronage reached dangerous proportions, and to what extent should it be restored to the people and left to their choice by ballot?

November—Equitable taxation.

December—What special educational facilities might be adopted in the grange with advantage—such as the Chautauqua course, lectures, etc.?

Final suggestion—All partisan feelings should be eliminated from the discussions. It is facts that we want. For instance, with reference to the January topic, it is its misfortune that it has become a party football. It is purely an economic question, and should be approached in a dispassionate spirit and studied with an unselfish purpose to ascertain the truth, in order that we may act with justice. It will not be settled quickly. As the game of football has become dangerous to the players, so in this party game some are fanned to get hurt. It

should be lifted out of the political depths in which it is sunk. It is a question for statesmen and political economists and not for politicians. It will never be settled until it is given the dispassionate and unprejudiced consideration which its importance demands. Let farmers lead the way and formulate opinions, forgetting that they are Democrats, Republicans or Populists, remembering only that they are American citizens.

S. GOODENOUGH,
Lecturer S. G. C.

1533 Franklin St., Oakland.

The Grangers' Bank.

Affairs pertaining to the close of the year are now receiving attention at the Grangers' Bank. Our advertising columns show that the annual meeting of stockholders will be held Jan. 9th. Aside from the financial view of the year, which cannot be given until after the meeting, there are other matters of interest. The stockholders will be called upon to fill the vacancy in the Board of Directors occasioned by the death of J. W. Mitchell of Merced county, who has been a stockholder in the bank since its beginning and a director for several years past. The meeting will no doubt also express its tribute to the memory of Mr. Mitchell, who was a man of wonderful success in agriculture and probably the second largest land-owner in the State. He was also held in high esteem for his generous deeds and kindly spirit—which cannot always be said of millionaires.

In view of the important features of the wheat situation, Mr. Montpelier, Cashier and Manager of the Bank, has just issued a circular which will interest all wheat-holders. We quote as follows:

The California wheat fleet since July 1, 1893, numbered 124 vessels to date, carrying (including flour) 350,000 tons. In addition, there are 23 ships of last season's fleet still on passage, now arriving and will continue to arrive at ports of destination during the coming five months.

The wheat remaining in the State December 1, 1893, as published by the Produce Exchange, is reported to have been 712,000 tons, besides 99,000 barrels of flour, making nearly three-quarters of a million tons.

Taking into consideration that 150,000 tons will be required for seed and home consumption until next harvest, there remains an available balance for shipment of 600,000 tons. This surplus will require over 200 vessels against which I do not think there are more than 80 available for wheat, judging by the lists of ships on passage to San Francisco, as published in the *Commercial News*. Since harvest time the price of wheat has been unprecedentedly low in our local market, in keeping with the markets of the consuming countries, where business has been confined to purchases for immediate wants, owing to the large stocks held in English and French ports, and the very heavy supplies on passage to the United Kingdom and Continent, of which California shipments, as already mentioned, form a very important quantity.

The financial crisis extending over the past six months, and which is not quite over yet, has undoubtedly had some bearing on the depression in the wheat trade, but the main cause at present seems to be oversupply.

Judging from a review of the best information available at present, the future is a perplexity and there seems but little prospect of an immediate improvement in prices, unless some unexpected events should occur in Europe or something unforeseen happen to crop prospects this coming spring, but this is mere speculation.

There is a flurry in the local market at present, which is probably due to the shorts covering the December options, but it will be of short duration.

The above information is written in the interest of the farmers for their consideration, and in the hope that it will assist them to act judiciously in disposing of their wheat under the existing circumstances.

Mr. Montpelier thinks that it would, in many cases at least, be advisable to dispose of the wheat of the 1892 crop which is still held. If this had been done sooner, it would have added considerably to the California money supply, and even now it looks reasonable that it ought to be cleared out of the way of the last and the coming crop.

From Tulare Grange.

The grange held its regular semi-monthly meeting at its hall on Saturday, Dec. 16th, and elected officers for the ensuing year. (See Grange Elections.)

A letter from Hon. W. W. Bowers was read acknowledging receipt of grange resolutions on inheritance and income tax and expressing approval of the last paragraph, which reads as follows:

"We therefore ask that, should Congress enact an income tax, the profits on all investments, already paying a tax to support a State and county government, be exempt from the operations of the act."

The resolutions in effect approved an inheritance tax on incomes derived from high salaries and fees for professional services.

Bertha Ingham, A. J. Wood and J. W. Mackie were appointed a committee to draw up resolutions on the death of Bro. B. F. Moore.

Consideration of the future wheat market deferred until next meeting. J. T.

Secretary's Column.

Potter Valley Grange, No. 115, celebrated the anniversary of the order Dec. 2, 1893. A Harvest Feast was served, and a good time was enjoyed by all.

This office is in receipt of the first quarterly report of December quarter, cash accompanying same, of Magnolia Grange, No. 261.

This office has received the announcement of the death of Benjamin Franklin Moore of Tulare Grange, aged 62 years, 1 month and 7 days. Bro. Moore was an old, true and faithful member of Tulare Grange, and well known throughout the State. The funeral services were held from the Methodist Episcopal church on Wednesday, Dec. 13th, at two o'clock P. M. Olive Branch Lodge, F. & A. M., took charge of the remains at the church.

The Farmers' Institute held at Visalia the 11th, we are informed by the worthy steward of the State Grange, was a decided success. The programme was well carried out, and Bro. Goodenough's address was well received. Twenty-six names have been secured for the organizing of a new grange at Visalia. It was concluded on the 11th inst. to postpone the organization until the third of January, 1894, when it is expected that another new grange will be added to the list from Tulare county. Several parties are interested in the movement, and they believe they will meet with success.

Bros. Shoemaker and Goodenough visited Selma Grange on the 12th inst. Bro. Goodenough spoke about an hour on the good of the order, at Selma, and exemplified the unwritten work in a creditable manner. A nice programme was furnished by the grange, and a short talk by Bro. Shoemaker, who reports that too much praise cannot be given those zealous patrons of Selma Grange for their zeal and courage in this work. Bro. Shoemaker promises to meet with this grange in the near future.

Address all communications for California State Grange to Don Mills, Santa Rosa, Cal.

Notes.

Temescal Grange has accepted the invitation of Eden Grange to install officers at Haywards on the second Saturday in January.

Worthy Master and Mrs. Roache are again at home. Mr. R. is rapidly recovering from his recent illness and is able this week, for the first time since the National Grange meeting, to address the order through the columns of the *RURAL*. He promises to be a weekly contributor from this time forth.

Temescal Grange recently appointed a committee to confer with the Executive Committee relating to making a Midwinter Fair exhibit by the grange, as follows: A. T. Dewey, M. Woodhams and Nellie G. Babcock. A resolution was also adopted favoring the grange taking part in the exposition, in the hope that it would prove of much good to the order through the opportunity afforded for greeting patrons from our own and other States, and disseminating information of the beneficial and social features of the order, pledging support from Temescal Grange if the State Grange will lead with a suitable appropriation.

From New Hope.

Miss Carrie Carleton of New Hope writes:

The entertainment given by our grange on Monday evening, Dec. 4th, was not attended by half as large an audience as was looked for, the roads being bad. However, those who did attend enjoyed it, and it was well rendered by those who took part, and everything passed off nicely. Two members of Woodbridge Grange went to Lodi and attended the exercises there in the afternoon, and then drove to New Hope to attend here in the evening, which proved without a doubt they were true grangers, to say the least.

About our usual members attend our meetings this winter. The farmers are busy plowing and seeding. A committee has been appointed, mostly members of our grange, to raise funds to aid the Midwinter Fair. They have a very short time to act in the matter, but have set the 29th for an entertainment and dance.

From North Butte Grange.

E. M. B., the official correspondent of North Butte, writes to report the reception of four new members on the 9th inst. The ceremonies of initiation were performed by the worthy master with the assistance of Mr. B. F. Frisbie, of Yuba City, whose presence lent special interest to the occasion. The usual feast followed and was up to the

Continued on page 438.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

Alvarado letter: Each day the Alameda Refinery of this place consumes 210 tons of sugar beets. The beets require no attention after they have once been planted, and the price paid the farmers is such as to make their growing and marketing profitable. Besides there is an assured sale for all the beets that can be grown. The bounty that the Alameda Sugar Company will collect for the season's run will amount to \$120,000. The factory has turned out over 1,300,000 pounds of sugar in a little more than a month's time. The daily average is about 55,000 pounds, and fully 6,000,000 pounds will have been turned out before the factory closes. A Deputy Internal Revenue Inspector is kept on duty constantly to watch the output, on which the Government pays a bounty. The factory will probably shut down the latter part of this month, but it is expected that after the commencement of next season the refinery will have a longer run, as the supply of beets will be larger than it was this year.

Butte.

In an invoice of peach trees brought into Butte county last week from Oregon the Horticultural Commissioner discovered the Eastern peach horer. The seller of the trees denied that they were affected and the matter was referred to the State Entomologist, who, after careful examination, found that the Commissioner was correct. The trees were, accordingly, condemned.

Fresno.

Shipments from Selma this season are reported as follows: Of raisins in boxes shipped East there were 1,751,035 pounds; in sacks, 3,388,345 pounds; 256 cars in all. There were also shipped to local points in California 96,250 pounds of raisins. 439,665 pounds of dried fruits were shipped East, and 307,585 pounds of green fruit. 72,000 pounds of green fruit were shipped to local points. A car containing 24,600 pounds of melons was shipped to Vancouver, B. C. 39,645 pounds of extracted honey and 96,275 pounds of comb honey went east from Selma. Besides these items the completed report will include grain, wool, live stock, eggs and poultry. Over 300 carloads of these products have been shipped from Selma, and Kingsburg and Fowler, within five miles on either side of us, have sent out as much more. All this from a section that ten years ago produced not a pound of the articles named for shipment.

Humboldt.

Arcata Union: The necessity for a new creamery in the vicinity of Arcata is paramount. The receipts of milk at the present creamery have been so large that it will be impossible for it to handle much more without increasing the plant. At the same time the acreage devoted to dairying is so rapidly increasing that it is only a question of a short time when it will be impossible for it to dispose of all the milk that will be brought.

Inyo.

The Register reports that a meeting of the Inyo County Bee-Keepers' Association was held last week at Pine Ridge. One of the reports read shows that there are now between 3000 and 3500 stands of bees in the valley—a gain over last year. The following officers were chosen for the ensuing year: H. Trickey, president; F. K. Andrews, vice-president; Wm. Muth-Rasmussen, secretary and treasurer. The next meeting will be held at Independence. One object of the meeting this week was to arrange for purchasing in one lot all the supplies needed by the bee-keepers of the valley during the coming year, but no arrangement was made.

Kern.

Bakersfield Californian: There are three pecan trees at Stockdale which have by no means as yet attained their full size, but which yielded this season very nearly if not quite half a ton of nuts. They are large and of fine flavor, and demonstrate most effectually that this is a good tree to plant in this section.

Californian: The Los Angeles Herald denies that the interests of California wool-growers will be injuriously affected by the Wilson tariff bill if it shall become a law. The Herald ought to interview a few of the sheepmen of its own vicinage, and it will at least learn the opinion of those in the best situation to know. It might also learn something from the unanimous action of the National Wool-Growers' Association, which, without regard to the partisan affiliations of its members, has protested against the wool schedule of the new tariff bill. It is certainly to be supposed that these men have some slight knowledge of their own business. If a wool-producer, Democrat or Republican, can be found who is in favor of the removal of the duty on foreign wool, he has not yet been heard from.

Kern Echo: The sheepmen of the county are becoming worried over the absence of rain up to date, and the lessening of prospects for good natural feed this winter. The past season has not been a profitable one for this industry, owing to the low price of wool, and the probability that large quantities of hay will be required to winter the hands is not encouraging.

Los Angeles.

The Los Angeles Herald estimates the orange crop of the present year in the southern counties at not much less than 10,000 carloads. Two years ago 4000 carloads was considered a large crop. This year three stations of Riverside alone will fill up 2800 cars.

Monterey.

Salinas Index: The men who are making the cattle business a study feel more hopeful and have more faith in the business than they have had for several years.

Orange.

Anaheim Gazette: Geo. D. Carleton has sold the west 20 acres of his 40-acre walnut orchard to a Minneapolis gentleman for \$10,000. The orchard was planted in the spring of 1889, and is situated one mile east of Fullerton. This is at the rate of \$500 per acre, and is one of the notable sales of the year.

The Santa Ana Produce Company has made a

trial shipment of green peas and persimmons to Chicago in a refrigerator car. If this shipment goes through all right, a larger one will be made in time to reach the East for Christmas dinners. If it is demonstrated that these vegetables can be transported in good condition through the medium of refrigerator cars, the growing of vegetables in Orange county will no doubt receive a greater impetus than it ever has before.

Garden Grove letter in Santa Ana Blade: Our creamery is no longer in the prospective, but has developed into a neat, substantial, building with machinery in place for immediate use. In fact, work has already begun on a small scale, and will increase as farmers are able to add to their stock of cows.

Tustin letter: Strenuous efforts are being made to effect an organization among the orange-growers of this vicinity. Meetings were held last Saturday, and Monday and Wednesday evenings, and, while nothing positive was done, still there is a strong prospect of accomplishing something. There is every need of doing something in this line, for, from all we can hear from the East, the commission men are all combined, and will not buy, but, if the producers will not consign, they will be compelled to.

Sacramento.

A County Road Convention held at Sacramento last week passed a resolution recommending that the county be bonded in the sum of \$500,000 for the making of a first-class road system. Thomas McConnell made a motion that 80 per cent of the half-million of money be applied to the following trunk roads: First, River road; second, Lower Stockton road; third, Upper Stockton road; fourth, Jackson road; fifth, north of the American river; that \$50,000 be applied on the road from Perkins to Folsom, and \$50,000 from Hangtown Crossing toward the county line. The matter was referred to the Executive Committee.

San Bernardino.

Eagle Rock Valley letter: The summer crop of tomatoes is not yet exhausted, and many have realized already \$110 per acre from them; and yet people say that such land, within five miles of the city, is too high at \$200 per acre. There is a larger acreage of winter peas planted this year than ever before. Last winter they paid over \$100 per acre. Those that were sent to Chicago in February sold at 20 cents per pound.

Ontario Record: The Ontario Fruit Exchange will probably make some shipments of Navels within a week. The directors have experienced difficulty in securing money for boxes, wrappers and other expenses preliminary to sales, except on short time. It will be necessary to ship some oranges to put money in the treasury to start things moving. Growers mustn't expect fancy prices for these early shipments; it is important to get the crop moving and secure money for necessary expenses. The best returns possible will be obtained, but the directors propose to sell some fruit for holiday trade even if prices don't rule high. In general, we believe that the members of the Exchange should put confidence in the directors and not hamper their management in any way. Good men have been elected, and it is our business to trust their ability and judgment.

Record: E. M. Hatch went last week to Yuma at the request of a number of a syndicate there to initiate them into the mysteries of picking and curing the lemon, and advise them in regard to planting.

San Diego.

Escondido Advocate: Stevenson Bros. have shipped nine carloads of raisins so far and have three more that will go out in a few days, making 12 carloads that they will ship this season, while Dickson and Calloway will ship 11 cars, making a total of 23 cars of raisins that will be shipped from Escondido this year.

The Chula Vista Fruit Association, comprising Chula Vista and all territory south to the line, is now thoroughly organized with the following gentlemen as officers: Judge A. Haines, president; J. Montgomery, vice-president; Roht. S. Paton, secretary; C. H. Whittemore, treasurer. Messrs. Boal, Funk, Gulick, Brown and Madison were named as an executive committee and A. G. Stender as manager.

Deputy Tree Inspector Charles McDougall reports that during last month he inspected the following number of trees in and around Escondido, according to the Times: Oranges, 5125; deciduous trees, 16,696; olives, 1211. Out of this number he found 780 orange trees, 297 deciduous and 58 olives infected with scale. He also inspected about 4000 trees in the nursery, devoting in all 17 days to the work. Where infected trees were found the fumigating apparatus was applied, and he will continue in his good work until all scale pests in his district are thoroughly eradicated.

Santa Cruz.

Pajaronian: To date over 1000 acres in this valley have been contracted for beets for the coming season. At least 5000 acres are assured in the Salinas valley.

Sonoma.

Santa Rosa Democrat: James Lyman of Blucher valley, incited by our notice of Blucher valley potatoes in last week's paper, determined not to be out-

done and brought to this office 15 specimens weighing nearly 30 pounds, which is a good weight for the Burbank variety. They fairly represent a crop of 50 acres which Mr. Lyman has just harvested.

Four hundred of the \$500 promised by Petaluma for premiums for the State Poultry Show in February has already been subscribed.

Santa Rosa Democrat: Among our well-informed fruit men the opinion is becoming a conviction that unless the grower finds some way of protecting himself against the sharp practice of the commission men, the returns will be no more satisfactory. Apropos of this is an incident related by a prune-grower who lives not far from Santa Rosa. He shipped a carload of prunes to Chicago. A friend of his who was going about the same time was asked to kind of look after the consignment of fruit when it reached Chicago. The friend complied with the letter of the request. He saw the car unloaded and saw the prunes taken to the commission firm's warehouse. He afterward saw the prunes sold at auction and saw a representative of the firm bid them in at 5 1/2 cents. Not contented at that, he kept track of the prunes and saw the same lot sold at 7 cents. The firm charged the grower a commission for selling them at the auction for 5 1/2 cents, and then pocketed the additional profit between 5 1/2 and 7 cents. Tom Proctor had a similar experience. He shipped the first carload which arrived in Omaha at a cost here of about \$1200. Before shipping and while the car was in transit he kept receiving advices that the market was up and going "upper." He lost \$150 on the shipment. Such incidents emphatically illustrate the text.

Tulare.

Visalia Times: A number of good sound horses were sold in town for prices ranging from \$20 to \$60. Horse flesh is cheap.

The Porterville Enterprise says 350 St. Michael oranges were taken off a three-year-old tree on R. H. McDonald's ranch a few days ago.

Ventura.

Venturian: "Don't you know," said J. C. Daly the other day, "that there are enough Lima beans on hand in this county this fall to supply the actual demand for the next two years? It is a fact." He went on to say that farmers should realize this question. "Why," said he, "do you suppose the man who ran a mill would continue to keep on grinding when he had enough flour on hand to last two years? Or do you suppose the business man would conduct his business that way? These are the reasons why the farmers are the ones who suffer the most from low prices, but the low prices are brought on largely by themselves." He thought that they ought to get together more often and have a few exchanges of ideas on this and kindred subjects. They ought, as a matter of profit to themselves, stop raising Lima beans for one year and put their land into other products.

Venturian: At the November meeting of the Horticultural Commissioners, local inspectors were ordered to make a complete inspection of all orchards in their respective districts. This work is nearly completed, and the Board will have a complete record of every orchard in the county. No new scale has become established in the county, and the yellow scale found upon Shepherd's trees at Rincon will be treated by gas. S. B. Bognall has been appointed local inspector at Simi.

Yolo.

Guinda letter: L. P. Everett has been offered enough for the product of 150 prune trees to pay the charges of picking and curing the prunes and leaving a net profit of \$410. Estimating 90 trees to the acre, this would be equal to one and two-thirds acres.

Cor. Woodland Democrat: There ought to be more alfalfa farmers in this neighborhood, but that seems impracticable until the Yolo farmers conclude to utilize the waste waters of Cache creek, and from present indications, I am inclined to think that will never be until a new generation comes upon the field of action. But I started in to say that the alfalfa farmers seem to be doing well all over the State.

Dunnigan letter: The farmers are infusing a great deal of energy into their agricultural operations. They do not seem to be dismayed by the low price of wheat and the uncertain prospects for remuneration for their labor, but are working with as much vim as if they expected to realize a cent and a half a pound for their wheat.

Yuba.

In a talk with the editor of the Wheatland Four Corners a few days ago, Mr. G. W. Harney, Horticultural Commissioner of Yuba county, said: "In some of the older orchards around Wheatland, there are some very badly scale-infested trees, and I propose to see that steps are taken to have the scale eradicated. These old infested trees are a standing menace to the fruit and nursery business, and I cannot understand why the people who own them do not have them sprayed or cut out. It is an easy matter to get rid of the San Jose scale now. A few thorough sprayings with the lime, sulphur and salt remedy soon causes their disappearance. In the course of a few days I intend to make another inspection."

WAKELEE'S

THE BEST

—IS THE—

CHEAPEST.



Squirrel and Gopher Exterminator!

IN 1-LB. and 5-LB. CANS.

DON'T BUY

AN

INFERIOR

ARTICLE

Because it is more profitable to some one else.



STAR PLOWS.



— MADE BY —

BENICIA AGRICULTURAL WORKS.

GOOD PLOWS

NO BETTER MADE

HUNDREDS

SOLD YEARLY

AS LOW-PRICED AS

ANY GOOD PLOWS

ARE BETTER THAN

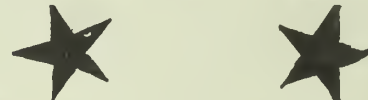
MOST GOOD PLOWS

Workmanship and Material GUARANTEED.

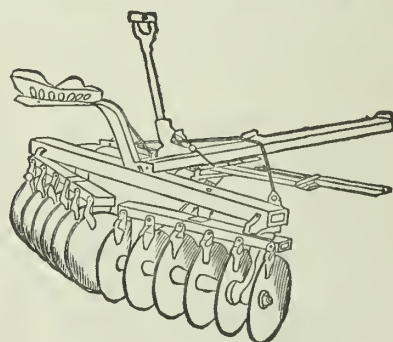
Your local dealer probably has them. If he hasn't and won't get them for you, write direct to us.

BAKER & HAMILTON

SAN FRANCISCO and SACRAMENTO.

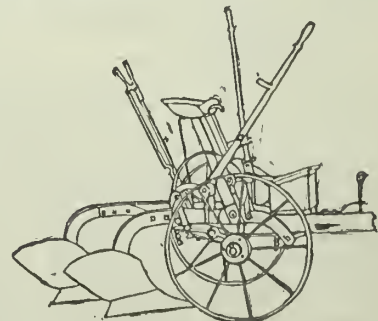


CLIMAX DISC HARROWS.



EUREKA

GANG PLOWS.



The ONLY Gang Plow That will work in all soils And under all conditions Without trouble and breakage.

Many styles and sizes. Different bottoms For different soils.

We Make them, We Guarantee them.

Used on the largest farms in the state: Wkness—the "Glenn Estate," Gov. Stanford's Ranch, Millor & Lux, Jno. Finnell, and many others.

BAKER & HAMILTON,

SAN FRANCISCO and SACRAMENTO.



SWINE YARD.

Charcoal and Ashes for Hogs.

Prof. W. A. Henry gives the *Breeders' Gazette* an article on condiments for hogs, which may help our readers to maintain health among their swine. Those who grow corn can easily make their own charcoal from corncobs, but this information is, of course, not so available here as in States where more corn is grown. We can, however, almost everywhere, make wood charcoal of willow or other cheap wood. Prof. Henry writes as follows:

Every close observer of the habits of swine has noted and been struck with the fact that from piggood to the last day of the fattening period the hog has a craving for such articles as earth, ashes, charcoal, rotten wood, mortar, soft stone, soft brick, etc. Only a very few insist that there is no need of these articles, the craving for them being abnormal, somewhat like the school girl gnawing slate pencils or chalk. The large majority of hog-feeders will agree with me, I think, that after all the hog knows pretty well what he wants and does not search for and consume these substances for no good end.

Most hogs have rings in their noses and never get the opportunity to root in the soil as well as if not thus prevented. In his wild state, and even when left to himself on our farms, the hog must take a large amount of earthy, gritty matter into his stomach, which condition is held in abeyance when the ring is introduced and the animal confined to small yards or on wood floors.

At this station we keep all our swine on the ground at all times of the year. In the summer time the hog-house is entirely vacated, all going out to the fields as soon as the weather will permit. Those that must be confined are kept in movable pens with the natural earth as a floor. When they come back to the hog-house in the fall they are still kept on the ground, having a straw bed resting directly on the earth. Only when let into the "dining-room" do they stand on board floors. Of course we must keep rings in their noses, otherwise they would root too much in the fields in summer and dig great holes in their apartments in winter. Under this liberal treatment, where we keep as close to nature as we can, we find that our hogs still have an intense craving for something which for a better term I have called a "condiment." With us hard-coal ashes are easily obtained and at times we have used as much as a one-horse wagon load thrown into the summer pens of swine on experiments and to those in the open fields. I frequently watch the hogs working at the pile of ashes, where individuals will stand for half an hour at a time crunching the cinders with every evidence of extreme satisfaction and perfect contentment. I have sometimes wondered if the hogs did not eat too much of this material, yet the growth is satisfactory and the gains from the feed consumed excellent.

My good friend Theodore Louis of Dunn county, Wisconsin, is the closest student of hog nature in all my list of acquaintances. For many years past Mr. Louis has not only been a successful raiser of Poland-Chinas but has been a close student of the habits, disposition and needs of this important farm animal. All of this study and observation on his part have made me respect his opinions and counsel most highly in all matters pertaining to swine management. Mr. Louis is a firm believer in supplying these condiments liberally to hogs. There is soft sandstone in his vicinity which his hogs eat freely. From its appearance I suspected this stone might contain phosphoric acid in quantity, and perhaps it was for this important substance that the hogs ate the stone so freely. An analysis of the stone here at the station failed to show the phosphate in any marked quantity, so that we were forced to give up that theory. At any rate Mr. Louis continues to feed the soft stone and in addition charcoal together with copperas and wood ashes.

I notice that Mr. Louis has recently described his method of making charcoal and also a compound condiment very satisfactory to swine, and am sure it will be read with interest by members of "The Feeder's Corner," especially those residing in the corn belt. Mr. Louis reports his methods as follows:

"To make corncob charcoal dig a hole four or five feet in diameter and as deep as is required to hold the necessary amount of cobs; better burn thirty to fifty bushels at a time if possible. Start a fire in the bottom of the pit and then fill it with cobs. Cover the hole tightly, preferably with a sheet-iron cover, after the fire gets well started. Only

so much air must be admitted as will admit of very slow combustion. Charcoal burnt in an open fire is not charcoal in its true sense; it contains little or no carbon, and carbon is what the pigs require. By confining the heat and smoke you get charcoal, and besides there is no danger of fire, which is quite an item. A little experience will soon teach any one how. After burning, store in barrels or other dry place. Then make a large box, cut out six inches on one side and form a low trough in front, preserve the cover, put in your cob charcoal; then to sixteen quarts of wood ashes put seven quarts of salt and mix them while dry. Then dissolve in a large pail of water one and one-half pounds of green copperas and sprinkle the mixture of ashes and salt with the copperas water, and keep mixing as you sprinkle; it is more convenient to do this upon a floor and afterward place in the box. Set the box in a dry place, inclined slightly forward so that in storms the water will only get into the trough; have your cover tight. The pigs to have access at will to the box; they will eat only when and in the quantity that their condition requires. This is one of the best health preservatives known, and if accompanied with a changing and varied diet sick hogs will be a rarity with you."

In the corn belt corncobs accumulate in large quantities in the vicinity of railroad stations and even on many farms where the corn is shelled for shipping. The cobs should all be carefully saved and either converted into cob charcoal after the manner described by Mr. Louis or burned and the ashes placed where they can be reached by swine. The ashes from corncobs contain a large amount of potash and in nowise should be wasted.

An Important Link.

A railroad to connect the eastern coast of Mexico with her Pacific seaboard, over the Isthmus of Tehuantepec, may soon be an accomplished fact, now that a contract to build the remaining 35 miles of road has been signed by the well-known English capitalist and builder of American railway lines, Chandos Stanhope. The new route will tap the rich coffee-growing country on the southern and western slope of the Mexican Cordilleras. At the present time freights on the coffee of southern Mexico are cheaper to London than they are to New Orleans. The new line will bring the product almost to our doors; steamers will be enabled to load on the eastern coast, whence it is scarcely a day's sail to Galveston, and but little more to New Orleans, and those cities will then become great points of distribution. Besides a possible cut in the price of coffee in the American market, the new road will have a further important effect in breaking down the monopoly of the Panama railroad.

The Earth's Interior.

The idea of M. Rateau, as expressed recently to the French Academy of Sciences, is that the phenomena of the earth's crust are well explained by considering that the planet's interior is molten, and that a layer of gaseous matter separates it from the portion of the crust forming the continents, whereas the sea-beds sink. The gradual escape of the gases, imprisoned under high pressure, will in time exceed the production of new supplies, when the pressure will diminish and the continents fall in, giving rise to more or less crateriform configuration. This is the state in which the moon now appears. Assuming the crust to be 18½ miles thick, the pressure of the gases should be 650 atmospheres, their temperature 900° C., and their density nearly equal to that of water. This theory makes it clear why volcanoes have successively receded inland where the sea has encroached.

The Suez canal, the greatest work of marine engineering, is 38 miles long and reduces the distance from England to India from 11,379 miles to 7628 miles.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE, 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

JERSEYS AND HOLSTEINS, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. Wm. Niles & Co., Los Angeles, Cal., Breeders and Exporters. Established in 1876.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm. B. Collier.

PETER SAKS & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS—The best A. J. C. C. Registered Prize Herds owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

WM. NILES & CO., Los Angeles, Cal., Breeders of nearly all varieties of Poultry, Dairy Cattle and Hogs.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

R. H. ORANF, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

SWINE.

H. J. PHILPOTT, Niles, Cal., Importer and breeder of Tecumseh and other choice strains of Registered Poland-China Hogs.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine, Small Yorkshire Victoria, Essex and Poland-China. Superior Stock, new Prices.

BERKSHIRES & POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. Wm. Niles & Co. Los Angeles, Cal. Established 1876.

P. H. MURPHY, Perkins, Sao, Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

T. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.

CHAS. A. STOWE, Stockton, Regist'd Berkshires.

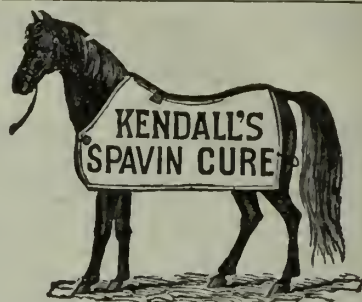
In These Dull Times
You Can Largely Increase
Your income by buying an incubator and engaging in the chicken business. Send stamp for our catalogue of incubators, wire netting, blooded fowls and poultry appliances generally. Remember, the best is the cheapest. PACIFIC INCUBATOR CO. 1317 Castro St., Oakland, Cal.

BEE-KEEPERS' SUPPLIES.

Dovetailed Hives, Sections, Comb Foundation, Foundation Machines, Extractors, Smokers, Honey Knives, Alley's Traps, Perforated Zinc Honey Boards, Shipping Cases, Cans and Cases for Extracted Honey, Bee Tents, ROOT'S GOODS, and everything required by the trade, wholesale and retail.

WM. STYAN, San Mateo, Cal.

—THE—
HALSTED INCUBATOR
COMPANY,
1312 Myrtle Street, Oakland, Cal.
Send Stamp for Circular



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STAR, LANE CO., OREGON, Feb. 8th, 1892.
DR. B. J. KENDALL CO.,

Dear Sirs:—I have used your KENDALL'S SPAVIN CURE for the last twelve years, ever being without it but a few weeks in that time and I have made several wonderful cures with it. I cured a Carh of long standing. Then I had a four year old colt badly spavined; tried every thing without any benefit, so I tried your liniment, and in a few weeks he was well and his shoulder acted up as right, and the other, a four year old that had a Thoroughbred and Blood Spavin on the same joint, and to-day no one can tell which leg it was on. These statements can be proven, if necessary; the four year olds are now seven and can be seen any day at Cottage Grove, Or. S. Z. FAYTON.

Price \$1.00 per bottle.

DR. B. J. KENDALL CO.,

Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

Short-Horn BULLS

Calves, Yearlings and 2-year-olds FOR SALE.

ROBERT ASHBURNER, Jaden Station, San Mateo County, Cal. The cars of the S. F. and San Mateo Electric Road pass the place.

FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank.)

Importer, Breeder, Exporter.

S. C. White Leghorn
S. C. Brown Leghorn
Barred Plymouth Rock
Black Minorcas,

Eggs, \$3 per 13. Send for circular.

\$100 for the Best Advertisement

For SEAL'S SKIN SOAP for Complexion and Toilet.

All advertisements must be in by January 1st, 1894.

Send 25 cents for sample cake and full particulars to

A. J. MCKNIGHT,

1125 Mission Street, San Francisco, Cal.

HEALD'S

BUSINESS COLLEGE.

24 POST STREET.....SAN FRANCISCO.
FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Book keeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR. E. P. HEALD, Pres. C. S. HALKY, Sec.

\$1000 WORTH OF LAW

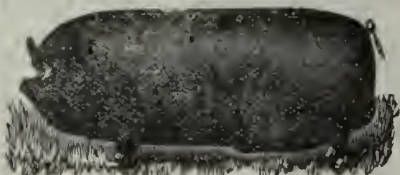
FOR \$1.50.



"How to Be Your Own Lawyer" is the title of a book of over 600 pages, adapted for use in every State and Territory in the Union, and is by far the best and most complete work of the kind ever published. It gives instruction on all the most important law points which a Farmer, Mechanic, Merchant or anybody else would want to know about, and if carefully studied and kept at hand for consultation when needed will save any man, in the course of an ordinary business career, hundreds, if not thousands of dollars. It is a lawyer whose retainer fee (the price of the book, \$1.50) has to be paid but once in a lifetime. Plans and concise directions are given and forms furnished for the transaction of all kinds of business, and the preparation of every description of legal document in common use. A copy of this valuable work, handsomely bound in extra cloth, with ink slide-stamp, will be mailed to any address on receipt of \$1.50.

Address THE DEWEY PUBLISHING CO., 220 Market St., San Francisco, Cal.

ST. JACOBS OIL Perfect Cure of BURNS, BRUISES, SCALDS, CUTS AND WOUNDS.



BERKSHIRE SWINE.

Prize Herd of Southern California.

PIGS OF ALL AGES FOR SALE.

SESSIONS & CO., Los Angeles, Cal.

P. O. Box 886.

S. H. MARKET REPORT

Market Review.

WEDNESDAY MORNING, Dec. 20, 1893.

Trade in wheat has been featureless but fairly active during the week. Prices are not firm, and few exporters are disposed to pay top figures, even for a select article. In speculative circles business has been rather slow this week, with prices softer. Quotable at \$1.03 3/4 to 1.05 1/2 c. for No. 1 shipping and \$1.06 1/2 for choice. Milling wheat sells at a range of \$1.07 1/2 to 1.10 1/2 lb. The following tables show the range of the speculative markets during the week:

LIVERPOOL.

(Per cental.)	Dec.	Jan.	Feb.	Mar.	Apr.	May.
Thursday.....	503 3/4	504 1/4	505 1/4	506 1/4	507 1/4	508 1/4
Friday.....	503 3/4	504 1/4	505 1/4	506 1/4	507 1/4	508 1/4
Saturday.....	503 3/4	504 1/4	505 1/4	506 1/4	507 1/4	508 1/4
Monday.....	503 3/4	504 1/4	505 1/4	506 1/4	507 1/4	508 1/4
Tuesday.....	503 3/4	504 1/4	505 1/4	506 1/4	507 1/4	508 1/4

To-day's cablegram is as follows:

LIVERPOOL, Dec. 20.—Wheat—Quiet but steady. California spot lots, 5s 5 1/2; off coast, 2s 9d; just shipped, 28s; nearly due, 2s 6d; Walla Walla spot lots, 3s 3d; off coast, 26s; present and following months, 26s 3d; Australian off coast, 28s; present and following months to U. K., 28s 3d; cargoes off coast and on passage, quiet but steady; Mark Lane wheat, quiet; foreign, steady; Mark Lane English and American flour, slow; wheat in Paris, quiet; flour, firmer.

NEW YORK.

Day.	(Per bushel.)	Dec.	Jan.	May.
Thursday.....	67 1/2	68 1/2	69 1/2	70 1/2
Friday.....	67 1/2	68 1/2	69 1/2	70 1/2
Saturday.....	67 1/2	68 1/2	69 1/2	70 1/2
Monday.....	67 1/2	68 1/2	69 1/2	70 1/2
Tuesday.....	67 1/2	68 1/2	69 1/2	70 1/2

The following is to-day's telegram—per bushel:

NEW YORK, Dec. 20.—December, 67; May, 72.

CHICAGO.

Day.	(Per bushel.)	Dec.	May.
Thursday.....	61 1/2	62 1/2	63 1/2
Friday.....	61 1/2	62 1/2	63 1/2
Saturday.....	61 1/2	62 1/2	63 1/2
Monday.....	61 1/2	62 1/2	63 1/2
Tuesday.....	61 1/2	62 1/2	63 1/2

The following is to-day's telegram—per bushel:

CHICAGO, Dec. 20.—December, 61 1/2; May, 67.

SAN FRANCISCO.

Thursday, high st.	Dec.	May.
lowest.....	1 11 1/2	1 12 1/2
Friday, highest.....	1 11 1/2	1 12 1/2
lowest.....	1 11 1/2	1 12 1/2
Saturday, highest.....	1 11 1/2	1 12 1/2
lowest.....	1 11 1/2	1 12 1/2
Monday, highest.....	1 09 1/2	1 10 1/2
lowest.....	1 09 1/2	1 10 1/2
Tuesday, highest.....	1 09 1/2	1 10 1/2
lowest.....	1 09 1/2	1 10 1/2

The following are to-day's recorded sales on Oat:

Morning—Informal Session—May, 100 tons, \$1.19 1/2; 200 \$1.19 1/2; 300, \$1.20 1/2 c. l.

Regular Session—May, 100 tons, \$1.20; 200, \$1.20 1/2; 300, \$1.20 1/2 c. l.

December, season's storage paid—100 tons, \$1.14 1/2; 200, \$1.14 1/2; 300, \$1.14 1/2 c. l.

Afternoon Session—May, 900 tons, \$1.20 1/2; 200, \$1.20 1/2 c. l.

December, season's storage paid—100 tons, \$1.10 1/2 per c. l.

Barley.

In the barley market there has been a little improvement. Although stocks are known to be large, there is no great quantity being pressed on the market, and this paucity of offerings has probably helped to strengthen the situation. Anyhow, there is a much better feeling in barley circles, and the outlook is considered fairly promising. We quote as follows:

Feed, 7 1/2 to 7 5/8 c. per c. l. for fair to good quality; 7 1/2 to 7 3/4 c. for choice bright; brewing, 8 1/2 to 9 1/2 c. per c. l.

The following are to-day's recorded sales on Oat:

Regular Session—May, 200 tons, 84c; 300, 84c per c. l.

Dried Fruits.

Choice apricots and peaches are not very plentiful and prices for these two kinds show moderate firmness. All other descriptions are weak. Trade is not active. We quote as follows: Apples, 3 1/2 to 4 1/4 c. per lb. for quartered, 3 1/4 to 4 1/4 c. for sliced, and 7 to 7 1/2 c. for evaporated; Pears, 5 to 6 c. per lb. for bleached halves, and 4 to 5 c. for quarters; bleached Peaches, 5 to 7 c.; sun-dried Peaches, 4 to 5 c.; Apricots, Moorpark, 11 1/2 to 12 1/2 c.; do Royals, 11 to 11 1/2 c. for bleached and 6 to 7 1/2 c. for sun-dried; Prunes, 4 1/2 to 4 3/4 c. per lb. for the four sizes and 3 to 4 c. for ungraded; Piums, 4 1/2 to 5 c. for pitted and 1 1/2 to 2 c. for unpitted; Figs, 3 to 4 c. for pressed and 1 1/2 to 2 1/2 c. for unpressed; White Nectarines, 6 to 7 c.; Red Nectarines, 4 to 6 c. per lb.

RAISINS—Prices are altogether favorable to buyers. We quote as follows: London Layers, \$1 @ 1 1/2; loose Muscates, in boxes, 75c @ 1; clusters, \$1.50 @ 1 75; loose Muscates, in sacks, 2 1/2 to 3 1/2 c. per lb. for three-crown, 2 to 2 1/2 c. for two-crown; dried Grapes, 1 1/2 to 2 c. per lb.

General Produce Market.

FLOUR—We quote: Net cash prices for Family Extras, \$3.50 to \$3.60 per bbl.; Bakers' Extras, \$3.40 to \$3.50; Superfine, \$2.40 to \$2.60.

OATS—There has been no further advance in values. Arrivals have not been particularly heavy of late, while the demand has been good and occasionally brisk, making some little inroad on stocks and decreasing the quantity on hand. Taken altogether the situation may be considered as improving. We quote: Milling, \$1.12 1/2 @ 1.20; Surprise, \$1.20 @ 1.30; fancy feed, \$1.17 1/2 @ 1.20; good to choice, \$1.10 @ 1.15; common to fair, 97c @ \$1.07 1/2; Black, 85c @ \$1.22 1/2; Red, \$1 @ \$1.15; Gray, \$1 @ \$1.10 c. l.

CORN—The attention given to offerings is anything but general, and business is dull in consequence. Quotable at 80 @ 85 c. l. for large Yellow, 90 @ 92 1/2 c. for small Yellow, and 87 1/2 @ 92 1/2 c. for White.

CRACKED CORN—Quotable at \$20.50 @ 21.50 per ton.

CORNMEAL—Millers quote feed at \$20 to \$21 per ton; fine kinds for the table, in large and small packages, 2 1/2 @ 3 1/2 c. per pound.

OILCAKE MEAL—Quotable at \$35 per ton from the mill.

SEEDS—We quote: Mustard, brown, \$3 @ 3.25; Yellow, \$3.50 @ 3.75; Canary, imported, \$4 @ 4.25; do, California, —; Hemp, 3 1/2 c. per lb.; Rape, 1 1/2 @ 2 1/2; Timothy, 6 1/2 c. per lb.; Alfalfa, 8 1/2 @ 9 c. per lb.; Flax, \$2.25 @ 2.50 per c. l.

CHOPPED FEED—Quotable at \$17.50 @ 18.50 per ton.

MIDDLINGS—Quotable at \$18 @ 21 per ton.
MILLSTUFFS—We quote: Rye Flour, 3 1/2 c.; Rye Meal, 3c; Graham Flour, 3c; Oatmeal, 4 1/2 c.; Oat Groats, 5c; Cracked Wheat, 3 1/2 c.; Buckwheat Flour, 5 @ 5 1/2 c.; Pearl Barley, 4 @ 4 1/2 c. per lb.; Normal Nutrient, \$3 per case of 1 dozen cans; Breakfast Delight, \$3.25 per case of 2 dozen packages.

BRAN—Quotable at \$16 @ 17 per ton.

HAY—The market is not an active one, and the tendency of prices is in favor of buyers, though receipts are not heavy. Wire-bound hay sells at \$1 @ 2 per ton less than rope-bound hay. Following are wholesale city prices for rope-bound Hay: Wheat, \$10 to \$13.50; Wheat and Oat, \$10 @ 13; Wild Oat, \$10 @ 12; Alfalfa, \$10 @ 10.50; Clover, \$10 @ 11; Barley, \$9 @ 11; Compressed, \$11 @ 13; Stock, \$7 @ 8 per ton.

STRAW—Quotable at 50 @ 55 c. per bale.

HOPS—Business is dull, and no improvement is probable this side of the New Year. Quotable at 16 @ 18 c. per lb.

RYE—Not quite so firm in price. Quotable at \$1 @ 1.02 1/2 c. l.

BUCKWHEAT—Quotable at \$1.25 @ \$1.40 c. l.

GROUND BARLEY—Quotable at \$16.50 @ 17.50 per ton.

POTATOES—Offerings of Early Rose and River Reds are moderate only, while of other kinds the supply is liberal. We quote as follows: Garnet Chiles, 50 @ 60c; Early Rose, 50 @ 55c; River Burbanks, 35 @ 45c; River Red, 50 @ 55c; Salinas Burbanks, 70 @ 85c c. l.

ONIONS—Receipts are somewhat free, but there has been fair shipping custom and prices remain steady. Quotable at 75c @ \$1.15 c. l.

DRIED PEAS—We quote: Green, \$1.50 @ 1.65; Blackeye \$1 5/8 @ 1.75; Niles, \$1.50 @ 1.60 c. l.

BEANS—For a perfect article the market shows steadier tone, but defective qualities are as weak as ever. We quote: Bayos, \$1.60 @ 1.85; Butter, \$1.65 @ 1.75 for small and \$1.85 @ 2 for large; Pink, \$1.30 @ 1.65; Red, \$1.65 @ 1.90; Lima, \$1.90 @ 2.10; Pea, \$2 @ 2.10; Small White, \$1.50 @ 1.90; Large White, \$1.50 @ 1.90 c. l.

VEGETABLES—Supplies are rather limited.

We quote jobbing lots as follows: Asparagus, 15 @ 16 c. per lb.; Mushrooms, 10 @ 20c per lb.; Green Peas, 4 @ 6c; String Beans, 8 @ 10c; Marrowfat Squash, \$7 @ 8 per ton; Green Peppers, 8 @ 10c per lb.; Tomatoes, 25 @ 50c per box; Turnips, 75c per c. l.; Beets, 75c @ 1 per c. l.; Parsnips, \$1.25 per c. l.; Carrots, 40 @ 50c; Cabbage, 50 @ 55c; Garlic, 1/2 @ 1c per lb.; Cauliflower, 60 @ 70c per dozen; Dry Peppers, 5 @ 7c per lb.; Dry Okra, 12 1/2 @ 15c per lb.

FRESH FRUIT—Choice Apples are in demand at steady prices, but defective stock is hard to sell. Offerings of Pears are light, while trade is slow, as really good stock is scarce. We quote as follows: Apples, 75c @ 1.25 per b. x for good to choice, and 25 @ 55c for common to fair; Lady Apples, \$1.25 @ 1.50 per box; Pears, 25 @ 50c per box for common and 75c @ 1.25 for choice; Persimmons, 40 @ 75c per box; Cranberries, Eastern, \$6 @ 8.50 per bbl.; do Coos Bay, \$3.25 @ 3.75 per box. GRAPES—Quotable at 25 @ 50c per box.

CITRUS FRUIT—Receipts of Oranges are increasing and prices are weaker in consequence. Lemons and Limes of good quality hold up steadily in price. We quote: Fair to choice Navels, \$2 @ 3 per box; Seedlings, \$1 @ 2; Vacaville Oranges, small boxes, 50 @ 65c; Mandarin Oranges, \$1 @ 1.25 per box; Mexican Oranges, \$2.50 @ 2.75 per box; Mexican Limes, \$4.50 @ 5 per box; Lemons, Sicily, \$4 to \$5; California Lemons, \$1 @ 2.50 for common and \$2.75 @ 3.50 for good to choice; Bananas, \$1.50 @ 2.50 per bunch; Hawaiian Pineapples, \$2.50 @ 3; Mexican Pineapples, \$3.50 @ 4.50 per dozen.

NUTS—Moderate demand for the holiday trade. We quote as follows: Chestnuts, 8 @ 10c per lb.; Walnuts, 6 1/2 @ 7 1/2 c. for hard shell, 8 @ 8 1/2 c. for soft shell and — @ — c. for paper shell; Chile Walnuts, 8 @ 9c; California Almonds, 11 @ 12c for soft shell, 5 @ 6c for hard shell and 12 1/2 @ 13 1/2 c. for paper shell; Peanuts, 4 @ 4 1/2 c.; Hickory Nuts, 5 @ 6c; Filberts, 10 @ 10 1/2 c.; Pecan, 8 @ 9c for rough and 11c for polished; Brazil Nuts, 10 @ 11 1/2 c.; Coconuts, \$4 @ 5 per 100.

HONEY—Market quiet. Offerings are fairly large. We quote: Comb, 10 1/2 @ 11c per lb. for bright, and 8 @ 10 for dark to light amber; light amber, extracted, 4 1/2 @ 5c; dark, 4 1/2 @ 4 3/4 c.; water white, extracted, 5 @ 5 1/2 c. per lb.

BEEWAX—Quotable at 22 @ 23c per lb.

BUTTER—Stocks are large and prices have a downward tendency. We quote as follows: Creamery, 31 @ 33c; fancy dairy, 27 1/2 @ 29c; good to choice, 24 @ 26c; common grades, 18 @ 24c per lb.; pickled roll, 20 @ 22c; firkin, 18 @ 23c; Eastern ladle-packed, 17 @ 18c per lb.

CHEESE—Buyers have the advantage, stocks being liberal. We quote: Choice to fancy new, 11 1/2 @ 12 1/2 c.; fair to good, 9 @ 10 1/2 c.; Eastern, ordinary to fine, 11 @ 14c per lb.

EGGS—Trade is not lively, while prices are shaping against the selling interest. We quote: California ranch, 35 @ 37 1/2 c.; store lots, 25 @ 32 1/2 c.; Eastern Eggs, 22 @ 24 for ordinary and 25 @ 27 1/2 c. per dozen for good stock.

POULTRY—The market is in unsatisfactory shape. Domestic consignments are liberal, while Eastern imports still come along freely. We quote: Live Turkeys—Gobblers, 13 @ 14c per lb.; Hens, 13 @ 14c; dressed Turkeys, 14 @ 15c; Roosters, \$4 @ 4.50 for old and \$3.50 @ 4.50 for young; Fryers, \$4 @ 4.50; Broilers, \$3 @ 4; Hens, \$4.50 @ 5.50; Ducks, \$3.50 @ 5; Geese, \$1.50 @ 1.75 per pair; Pigeons, \$1 @ 1.50 per doz.

GAME—Receipts are large, sales slow and prices easy. We quote: Quail, \$1 per doz; Canvasbacks, \$3 @ 6; Mallard, \$2.75 @ 3; Widgeon, \$1 @ 1.25; Teal, \$1; Sprig, \$1.50 @ 1.75; Small Ducks, 75c @ 1; Gray Geese, \$1.75 @ 2; White Geese, \$1 @ 1.25; Brant, \$1 @ 1.25; English Snipe, \$1.50 @ 2; Common Snipe, 75c @ 1; Hare, 75c @ 1; Rabbits, \$1 @ 1.50 per doz.

PROVISIONS—We quote as follows: Eastern hams 12 @ 15 1/2 c. lb.; California hams, 11 @ 12c; Bacon, Eastern, extra light, 15 1/2 @ 16 1/2 c.; medium, 11 @ 11 1/2 c.; do, light, 12c; do, light, clear, 13 @ 13 1/2 c.; light, medium, boneless, 12 1/2 c.; Pork, extra prime \$13 @ 13.50; do, prime mess, \$14 @ 15; do, mess, \$21 @ 22; do, clear, \$20 @ 20.50; do, extra clear, \$21 per bbl; Pigs' Feet, \$12.50 per bbl; Beef, mess, bbls, \$7.50 @ 8; do, extra mess, bbls, \$8.50 @ 9; do, family, \$9.50 @ 10; extra do, \$11 @ 11.50 per bbl; do, smoked, 10 @ 10 1/2 c.; Eastern lard, tierces, 8 @ 8 1/2 c.; do, prime steam, 10 1/2 c.; Eastern pure, 10-lb pails, 11 1/2 c.

5-lb pails 11 1/2 c.; 3-lb, 11 1/2 c.; California, 10-lb tins, 10 1/2 c.; do, 5-lb, 11c; do, kegs, 11 1/2 @ 12c; do, 20-lb buckets, 11c; compound, 8c for tierces and 8 1/2 c. for b. hbls.

WOOL—Continues quiet, with no immediate prospect of activity. A local circular says: "This is a generally quiet time in the wool trade, but the market at present is rendered particularly dull by the proposed tariff being so decidedly adverse to the interests of growers and manufacturers. Until there is some definite action taken upon the tariff, or until there are prospects of more favorable legislation than has been lately proposed there is not likely to be any noteworthy trading in wool." We quote spring:

California, year's fleece, 7 @ 9c; do 6 to 8 months, 7 @ 8c; do Foothill, 10 @ 11c; do Northern, 12 @ 13c; do extra Humboldt and Mendocino, 11 @ 13c; Nevada, choice and light, 12 @ 14c; do heavy, 8 @ 10c; Oregon, Eastern, choice, 10 @ 12c; do Eastern, poor, 7 @ 9c; do Valley, 12 @ 15c. We quote fall: Free Mountain, 6 @ 7c; Northern defective, 5 @ 7c; Southern and San Joaquin, 3 @ 5c.

HIDES AND SKINS—Quotable as follows:

	Sound.	Culls.
Heavy Steers, 57 lbs up, 1/2 lb. 5	@—c	4 @—c
Medium Steers, 48 to 56 lbs. 4	@—c	3 1/2 @—c
Light, 42 to 47 lbs.	3 @ 3 1/2 c	2 1/2 @—c
Cows, over 50 lbs.	3 @ 3 1/2 c	2 1/2 @ 3 c
Light Cows, 30 to 50 lbs.	3 @—c	2 1/2 @—c
Stags.	2 1/2 @—c	2 @—c
Kips 17 to 30 lbs.	4 @—c	3 @—c
Veal Skins, 10 to 17 lbs.	5 @—c	4 @—c
Calf Skins, 5 to 10 lbs.	6 @—c	5 @—c
Dry Hides, usual selection, 6 1/2 @ 7c; Dry Kips, 6 1/2 @ 7c; Calf Skins, do, 6 1/2 @ 7c; Cull Hides, Kip and Calf, 4c; Pelts, Shearling, 10 @ 20c each; do, short 25 @ 35c each; do, medium, 40 @ 50c each; do, long wool, 50 @ 75c each; Deer Skins, summer, 25c; do, good medium, 15c; do, winter, 5c per lb; Goat Skins, 25 @ 40c apiece for prime to perfect, 10 @ 20c for damaged, and 5 @ 10c each for Kids.		

TALLOW—We quote: Refined, 5c; rendered, 4 1/2 @ 4 3/4 c; country Tallow, 4 1/2 @ 4 3/4 c; Grease, 3 @ 3 1/2 c. per lb.

San Francisco Meat Market.

Fancy beef for Christmas trade brings 7 to 8 cents per lb. Mutton and lamb are steady, supplies being moderate only. Following are the rates for whole carcasses from slaughterers to dealers:

BEEF—First quality, 5 @ 5 1/2 c; second quality, 4 1/2 @ 5c; third quality, 3 1/2 @ 4c per lb.

CALVES—Quotable at 4 @ 5c for large, and 6 @ 7c per lb for small.

MUTTON—Quotable at 5 1/2 @ 6 1/2 c per lb.

LAMB Quotable at 6 @ 7c per lb.

PORK—Live Hogs, on foot, grain fed, heavy and medium, 5c; small Hogs, 5 @ 5 1/2 c; stock Hogs, 4 1/2 @ 5c; dressed Hogs, 7 1/2 @ 7 3/4 c per lb.

Pacific Coast Products at the East.

NEW YORK, Dec. 14.—In hops the situation is unchanged. The deliveries to brewers are fairly large and exports continue quite liberal, leaving moderate accumulation here. Best Pacific are quoted at 21c to 22c.

Quite liberal quantities of California raisins, prunes, etc., still come via rail-water route. The receipts over other lines are unusually moderate. That there is quite enough to go around is clearly illustrated in the fact that prices continue at a very low level and rule relatively lower here than the primary markets. There are some signs that there will be less than usual carry-over stock by receivers and jobbers after the holidays.

NEW YORK, Dec. 15.—Hops show faint signs of rather freer movement. It is noted in the market that Pacifics are averaging much better in quality than State goods and are commanding better average prices, the valuations ranging from 18c for good up to 22 1/2 c for strictly choice shipping quality.

NEW YORK, Dec. 16.—Hops continue very uncertain in appearance, with considerable irregularity in prices, though on the moderate business done the general range is on a plane with previous quotations. The interest in full standard California fruit is steadily reviving. Fair-sized lines are quoted at \$1.50 a dozen for plums, \$2 for cherries, \$1.30 for pears and \$1.60 for apricots.

NEW YORK, Dec. 18.—In hops the dealings are on a moderate scale. There is nothing yet to indicate any change in the relations of the buying and selling interests. For the present there is enough to go around, with receipts from the interior. Best Pacifics are quoted at 22c to 22 1/2 c.

The trade in Pacific dried fruit continues to progress in a moderate way, and is governed by the immediate necessities of dealers. Raisins are in fair inquiry at firm prices. Prunes are dull. Buyers report offers of sacks as low as 5 1/2 c spot, but not large lots. Offers are also noted of 90s at 5c and 120 to 130s at 4 1/2 c.

NEW YORK, Dec. 19.—In hops business is on a moderate scale, and such as it is at former prices.

A large line of California raisins has been taken by a prominent jobber, and there is now less pressure of loose stock of three and four-crown quality for sale.

NEW YORK, Dec. 20.—In hops there are very few transactions between dealers and generally it is a waiting market. Quotations are unchanged.

It has been learned that recently a big deal in California raisins involved about 4000 50-pound boxes, and it is understood the price was about 1/2 a cent per pound under the present prices.

Evaporated California apricots and peaches are reported holding their own remarkably well in price, though the sales are rather light.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos., \$1 10 mos., \$2; 15 mos., \$3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Massachusetts has more incorporated cities of more than 10,000 inhabitants than any other State in the Union.

Commission Merchants.

ALLISON, GRAY & CO.,

501, 503, 505, 507 & 509 Front St.,
And 300 Washington Street, SAN FRANCISCO.

—GENERAL—

Commission - Merchants,
GREEN and DRIED FRUITS,
Poultry, Eggs, Game, Grain, Produce and
Wool.

P. STEINHAGEN & CO.



404 & 406 DAVIS ST. S.F.

MOORE, FERGUSON & CO.

WOOL, GRAIN, FLOUR

—AND—

General Commission Merchants,
310 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

MONEY TO LOAN

ON FARMING
and ORCHARD
PROPERTIES
We also deal in county lands. Several foreclosed properties for sale cheap, on easy terms. Write for list, or if you desire to sell, send us full particulars. LINDSAY & CRAIG, Land and Financial Agents, Crocker Building, San Francisco.

From North Butte Grange.

(Continued from page 434.)

mark in every way. Later in the day the annual election was held. By general consent it was determined to place in the official list as many new names as possible, with the double motive of giving the faithful ones a rest and of giving some of the younger ones the educational benefit of official service. The result of the election is reported under the head of Grange Elections.

Grange Elections for 1894.

ROSEVILLE, No. 161.—Master, S. W. Pilcher; Overseer, A. E. Farnham; Lecturer, J. D. Gould; Steward, W. H. Powell; Assistant Steward, E. C. Bedell; Chaplain, Carrie Farnham; Treasurer, A. Bedell; Secretary, S. S. Gladney; Gate-keeper, M. E. Farnham; Ceres, Jennie Gibbons; Pomona, Ella Berry; Flora, Amy Bisio; Lady Assistant Steward, Jennie Gould; Trustee, S. W. Pilcher.

TULARE, No. 198.—Master, M. Premo; Overseer, E. C. Shoemaker; Lecturer, John Tuohy; Steward, John Gill; Assistant Steward, A. J. Woods; Chaplain, Mrs. Adler; Treasurer, Julia Forrer; Secretary, Mrs. Ingham; Gate-keeper, Albert Nelson; Ceres, Sister Gill; Pomona, Ellie Hamilton; Flora, Mrs. Sage; Lady Assistant Steward, Mrs. Premo.

SANTA ROSA, No. 17.—Master, Mrs. M. E. Saxton; Overseer, W. C. Rogers; Lecturer, S. T. Coulter; Steward, Paul Coulter; Assistant Steward, W. Strong; Chaplain, Miss Eliza Coulter; Treasurer, John Strong; Secretary, Miss F. Gamble; Gate-keeper, Miss Alice Peerman; Ceres, Miss E. Saxton; Pomona, Mrs. R. S. Adams; Flora, Mrs. S. I. Allen; Lady Assistant Steward, Miss N. Coulter; Trustee, C. E. Gamble.

NORTH BUTTE, No. 225.—Master, Geo. Thresher; Overseer, W. R. Johnson; Lecturer, Janie Luther; Steward, Darius Burtch; Assistant Steward, James Hampton; Chaplain, E. L. Wilkins; Treasurer, H. Luther; Secretary, Etta Blodgett; Gate-keeper, W. E. Parker; Ceres, Cora Burtch; Pomona, Annie Todd; Flora, Carrie Hain; Lady Assistant Steward, Clara Hedgen; Trustee, C. H. Metteer.

STOCKTON, No. 70.—Master, Marion T. Noyes; Overseer, John L. Beecher, Jr.; Lecturer, Mrs. Irene E. Leadbetter; Steward, Mrs. Cora Beecher; Assistant Steward, N. H. Root; Chaplain, Mrs. W. D. Ashley; Treasurer, Joseph Adams; Secretary, N. T. Root; Gate-keeper, Miss Zadia Walrad; Pomona, Mrs. Lou Overhiser; Flora, Miss Anita Leadbetter; Ceres, Mrs. Phoebe C. Noyes; Lady Ass't Steward, Miss Elizabeth T. Root.

POTTER VALLEY, No. 15.—Master, William Eddie; Overseer, Mrs. Fannie Thomas; Lecturer, Miss Rosa Sides; Steward, Jerry Lierly; Assistant Steward, R. R. Burrows; Chaplain, Mrs. Kate McGee; Treasurer, H. P. McGee; Secretary, W. V. Kilbourne; Gate-keeper, L. D. Baun; Pomona, Miss Lula Sides; Flora, Miss Jennie DeSebon; Ceres, Mrs. Laura Lively; Lady Ass't Steward, Miss May Eddie; Trustee, J. Lierly.

SACRAMENTO, No. 12.—Master, W. M. Sims; Overseer, Elmer G. McMullen; Lecturer, Amy Greenlaw; Steward, George Burke; Assistant Steward, W. W. Greer; Chaplain, Annie Slawson; Treasurer, A. T. Lauder; Secretary, Della Krull; Gatekeeper, S. H. Jackman; Ceres, Sister A. M. Beasler; Pomona, Lydia Davis; Flora, Maggie Kelly; Lady Assistant Steward, Jennie Sims.

SAN JOSE, No. 10.—Master, R. P. McGlinchy; Overseer, G. W. Worthen; Lecturer, Mrs. Amos Adams; Steward, Wm. Beauchamp; Assistant Steward, D. Coats; Chaplain, Mrs. M. Wingate; Treasurer, G. W. Tarleton; Secretary, M. J. Worthen; Gatekeeper, Wm. Lester; Ceres, Sister M. J. Tarleton; Pomona, Janie Saunders; Flora, Ada Ross; Lady Assistant Steward, Ada Unglish; Trustee, D. H. Blake.

Big Figures.

It is a fact of striking magnitude that more than \$1,200,000,000 of railroad property in this country is now in the hands of receivers. There is likely to be a general reorganization of insolvent railroads, and the Government proposes to take a hand in the reorganization of the Union Pacific, in which it has a creditor's interest of about \$52,000,000. Five great railroad systems—the Union Pacific, Northern Pacific, Reading, Erie and Richmond Terminal—which now enjoy the protection of receiverships, have a mileage of 25,000 miles, a combined funded indebtedness of \$517,000,000 and aggregate assets exceeding \$1,174,000,000.—Pittsburg Post.

An Indiana Man's Wonderful Clock.

R. H. Sites of Portland, Indiana, will show a wonderful clock at the approaching Midwinter Fair. It is 13 feet high and 9 feet wide. The main dial is two feet in diameter, and it gives both sun and standard time, also the day of the month. On its face is a number of smaller dials, one giving the day of the week. Another shows the origin of the days, by the planets appearing as they were named in the second century, when the mode of reckoning time by weeks was adopted. On Saturday, Saturn appears; on Sunday, the sun; on Monday, the moon, and so on. Another dial points out important past events, fixed days that are most observed by the churches and the so-called unlucky days in each month as the ancients respected them.

Still other small dials show the time of the rising and the setting of the sun, the four cardinal points, the moon's phases, increasing and decreasing, and the moon's age in days and quarters. An ocean scene, with indicator attached, gives the ocean tides so that their proportional height can be seen at any time. The large dial exhibits a table of mortality, showing the proportion of deaths, based on a calculation of 10,000 persons. Still another dial is that from which the clock takes its name, the 100 year astronomical clock, which points out the ruling planets from 1876 to 1975, the long pointer from the center of the dial indicating the day of the month.

The solar system is represented by the earth, sun and moon, the center being a fixed sun, the larger ball the earth, and the smaller ball by its side the moon. The earth revolves around the sun, keeping pace with the solar time dial on the large dial, previously described, and the moon revolves around the earth in unison with the moon dial, showing the months of the year—winter, spring, summer and autumn.

On top of the clock is a figure representing Sir Isaac Newton taking views through his large telescope, which changes position on the quarter of the hour; the figure turns about and revolves one-fourth of a circle looking east, west, north and south. On either hand are the battlemented towers of an ancient castle. To the right of the dial are three sets of moving figures; the first is General Washington reviewing his army; the second the Presidents of the United States in the order in which they were elected; and the third the ancient mode of capital punishment is shown by the death of Mary Stuart by the ax.

On the left are also three sets of figures. The first, or uppermost, shows the flight of time with the four seasons. In the second the heroes of '76 are honored by a bow and wave of the hand from the Goddess of Liberty, all except Benedict Arnold, who is allowed to pass unnoticed. The lower one is a tableau picturing the fondness of the elephant for children. There are two other sets of figures, above and below the main dial, which are scriptural in character. In the one above an upright figure keeps time to the music with his hand, and another, kneeling by his side, strikes the hour with a hammer.

This clock has 100 moving figures and characters, making a change of scene every three minutes, and its music-boxes play 18 tunes, including the old-time "doxology," or "Old Hundred," and a sweet chime of bells, giving music every five minutes.

An Attractive Offer.

Readers of the PACIFIC RURAL PRESS need not be told of the high character and general value of the *Cosmopolitan Magazine*. It is a splendid monthly publication, a marvel of beauty and excellence.

We will send the PACIFIC RURAL PRESS and the *Cosmopolitan Magazine* to any address in the United States or Canada for twelve months for \$3.50. This is an attractive and unusual offer and will not long continue.

A Work of Merit.

Among the newest publications is Dr. John Henry Barrows' great history of the World's Parliament of Religions, a book of great value and sterling merit. The San Francisco agents are The King Publishing Co., 132 Market St., S. F.

Among a lot of choice beef cattle shipped last week from Woodland to the San Francisco market, three were of extraordinary size. Says the *Democrat*: These heaves were purchased from the stock farm of Wm. B. Gihson, who probably takes more interest in raising thoroughbred cattle than any other man in Yolo county. They are Galloways of the purest breeds. One—a cow—weighing 1830 pounds was imported from Missouri. The other two are steers, and they tip the beam at 4360 pounds. They were raised on Mr. Gihson's farm. The three were led down Main street this afternoon on their way to the depot to be shipped to San Francisco. The parade partook of the nature of a procession.

Air and Consumption.

A writer in the *Century* recommends deep breathing with arm exercise as a preventive of consumption. There is no doubt as to the efficiency of this course, for consumption, except in imported cases, is unknown in high altitudes, the air being so light that deep breathing is mechanical. Few of us use our lungs to their full extent. The practice of trades and callings that require close attention has given to many of us a slight stoop and a falling forward of the shoulders that confines the lungs, while the lack of robust exercise to stimulate the physical mechanism leads to a faint panting that goes nowhere near chest deep and that continues in sleep. We cannot all be soldiers, sailors, hunters and blacksmiths, but most of us can straighten up at our work now and again and give the starved lungs a full drink of air. Exercise, except in some incidental way, such as the mountain climber, the fisherman or the sportsman encounters in pursuit of his hobby, is so tiresome that few can persevere in it. Sparring and kicking at the atmosphere, bending and reaching at nothing, require more than ordinary courage and method to continue for more than a week. It may be all right in theory, but in practice it is a tedious nuisance. An occasional full breath involves no hardship and puts the body to no strain, and probably the results are as efficient as much exercise.

One fertile cause of consumption, and perhaps, if statistics were obtainable, the most fertile of all causes, is the breathing of stale air. Our shops and offices are poorly ventilated, and our homes, particularly in winter, are worse. There are housewives to whom sunlight is poison and fresh air is dangerous. They go about their parlors in a twilight, breathing the peculiar mustiness of carpets and upholstery that they save from fading at the cost of their health and that of their families, and they grow bleached and yellow and twice as susceptible to ailment as those who live a more normal life. If it were not for broken windows and rickety doors in city tenements and out-door occupations by day among the farmers, the ravages of phthisis—foolish spelling, that!—would be much worse than they are; for there are thousands of people who shut themselves into their rooms at night as hermetically sealed as may be. The smell of those rooms in the morning, charged as the air is with animal exhalations, is horrible.

A strange and wholly unaccountable notion prevails among such people, who are usually of the illiterate class, that night air is unhealthy, so they collect a few cubic feet of day air in their bedrooms and breathe it over and over again until it is fairly rotten. The continuance of life under such conditions is a marvel. Night air is the same as day air, except that it is cooler and fresher, and with the subsidence of industry it has less of gas, dust and smoke in it than the air of noon. It is, therefore, the fittest air to breathe that there is, and he who denies it to his lungs at night denies one of his greatest needs and invites the speedy corrosion of his lungs. Thus it is that in farming districts, where rugged health ought to prevail, we see stooping shoulders and pale faces and hear rasping coughs. Let the air in everywhere; let us have more of it in our places of work, let us have more of it in our theaters, especially let us sleep in it. Breathe it heartily to the bottom of the lungs, and there will be no more consumption.

AN ATTRACTIVE CATALOGUE.—An exceptionally complete and handsome catalogue has just been issued by the Sunset Seed and Plant Co. (formerly the Sherwood Hall Nursery Co.) of this city. It covers the whole range of seed and nursery stock, and is so arranged and illustrated as to make comparison of varieties easy. The plates are made from photographs and leave nothing to be desired in the points of number, clearness, or artistic quality. A special merit is that the planting and general cultural directions are carefully given and in every instance adapted to the conditions of cultivation on the Pacific coast. This beautiful catalogue will be sent without charge to those who write asking for it.

The change in name from Sherwood Hall Nursery Co. to Sunset Seed and Plant Co. is a change in name only. It was found that the original name did not sufficiently define the scope of the business, which includes not only nursery stock, but garden and flower stock of every sort and kind. The personnel of the firm, its place of business (427-429 Sansome St.) and the relation to the Sherwood Hall plantations remain the same as heretofore.

Send for Price Lists
OF GUNS
And all Articles used
by Hunters and
Anglers.



GEO. W. SHRYVE, 525 KEARNY STREET, SAN FRANCISCO.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING NOV. 28, 1893.

509,714.—BUTTER-MOLDING MACHINE—P. O. Andreason, Ferndale, Cal.
509,640.—ADVERTISING MACHINE—M. Anthony, Berkeley, Cal.
509,716.—TRAP GUN—M. S. Barker, Eugene, Or.
509,836.—CAR—Barker & Reynolds, Los Angeles, Cal.
509,046.—VEHICLE BRAKE—T. G. Barlow, Prescott, A. T.
509,649.—RAISIN SENDER—S. B. Bliss, Riverside, Cal.
509,843.—HYDRANT VALVE—S. L. Cohoon, Battle Mountain, Nev.
509,724.—PRESERVING TIMER—H. F. Eckert, S. F.
509,726.—STILT—E. C. Emde, Tacoma, Wash.
509,727.—FIRE ARM—G. B. Garrison, Sumas City, Wash.
509,624.—FIRE ALARM—J. B. Gill, S. F.
509,730.—PROJECTILE—J. S. Griffin, Roslyn, Wash.
509,732.—RIVET FEEDER—H. Hahn, S. F.
509,837.—VALVE—C. I. Hall, S. F.
509,735.—FOLDING CHAIR—G. F. Hanson, S. F.
509,736.—MITER BOX—M. Hanson, S. F.
509,805.—REFRIGERATION—C. S. Hardy, San Diego, Cal.
509,806.—REFRIGERATOR CAR—C. S. Hardy, San Diego, Cal.
509,807.—REFRIGERATOR CAR—C. S. Hardy, San Diego, Cal.
509,836.—SWIMMING SHOE—A. F. Hilker, Biggs, Cal.
509,740.—FILTER—M. Kraker, S. F.
509,741.—FILTER—M. Kraker, S. F.
509,739.—BALL BEARING—O. B. Jacobs, Fremont, Wash.
509,437.—PORT HOLE DIGGER—H. Paulson, Sumner, Wash.
509,828.—CARBURATOR—K. J. Rofoen, S. F.
509,691.—LACE HOLDER—J. M. Schlesinger, San Jose, Cal.
509,769.—OIL-CAN FAUCET—A. H. & I. A. Schlueter, Oakland, Cal.
509,692.—BICYCLE—L. Shapiro, San Jose, Cal.
509,772.—CHURN—E. Silen, Kelo, Wash.
509,559.—GATE—A. F. Spencer, Sidney, Wash.
509,777.—GAS COCK—E. J. Stoltz, S. F.
509,703.—REDWOOD EXTRACTS—A. Taylor, Edinburgh, Scotland.
509,407.—SAW TOOTH—Taylor & Wilmer, Woodville, Or.
509,498.—SPOOL HOLDER—H. H. Thomas, Santa Clara, Cal.
509,833.—CARL SEWAY—C. Vogel, San Anselmo, Cal.
509,661.—ANIMAL TRAP—W. Vogt, Dallas, Or.
509,414.—MUSICAL STRINGS—C. S. Weber, San Jose, Cal.
509,710.—GAS BURNER—Williamson & Buzby, Seattle, Wash.
22,917.—DESIGN—Geo. Rischmuller, S. F.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast Inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

SPECIAL ANNOUNCEMENT.

We have made arrangements with Dr. B. J. Kendall Co., publishers of "A Treatise on the Horse and his Diseases," which will enable all our subscribers to obtain a copy of that valuable work free by sending their address (enclosing a two-cent stamp for mailing same) to Dr. B. J. KENDALL CO., ENOSBURGH FALLS, VT. This book is now recognized as standard authority upon all diseases of the horse, as its phenomenal sale attests, over four million copies having been sold in the past ten years, a sale never before reached by any publication in the same period of time. We feel confident that our patrons will appreciate the work, and be glad to avail themselves of this opportunity of obtaining a valuable book.

It is necessary that you mention this paper in sending for the "Treatise." This offer will remain open for only a short time.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 11, 505 Montgomery St., San Francisco (Pacific Mutual Life Insurance Building).

Hay Pressing.

If you are interested in pressing hay write Truman Hooker & Co., San Francisco. They will save you money.

Trees, Vines and Plants,

— FOR 1893 and 1894. —

Terms on Application.

ADDRESS, L. D. BUTT.

Penryn, Placer Co., California.

LARGEST WELL MACHINERY Works.

All kinds of tools. For use for the driller by using our Adamantine process, can take a core. Perfected Economical Artesian Pumping Rises to work by Steam, Air, etc. Let us help you. THE AMERICAN WELL WORKS, Aurora, Ill. Chicago, Ill. Dallas, Tex.

SEND FOR SAMPLE COPY OF
CLEANINGS IN BEE CULTURE.
A Handsomely Illustrated
Magazine, and Catalog of
BEE SUPPLIES
FREE. A. I. ROOT, Medina, O.

WANTED, BY A MARRIED MAN.
Work on a Fruit Ranch,
Who thoroughly understands the business in all its branches. Good references. Address F. FOREMAN, Sacramento, Cal.

GUNS SENT ON TRIAL.

OLD GUNS TAKEN IN EXCHANGE.

Seeds, Plants, Etc.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrabalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond
Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

Santa Rosa Nurseries.

AN IMMENSE AND WELL
ASSORTED STOCK.

TREES TRUE TO NAME.—Warranted clean and
raised without irrigation.

PEARS AND PRUNES at about HALF USUAL
PRICES till my surplus is sold.

Price List mailed free.

Address R. W. Bell, Santa Rosa, Cal.

GOLD DUST.

"Gold Dust Cling," says H. E. Van Deman, U. S. Pomologist, "is a yellow cling of medium size, round and regular in shape, and very firm in flesh. The color is very attractive, being dark yellow with a very red cheek. It bears heavily and carries to market with very little damage. Coming as it does before the main peach crop is gathered, it is about the first yellow cling of any special value and therefore finds a ready sale. Each year it gains in favor, but as it is a variety but recently originated the public know little of it. It is a very profitable variety." Price \$1 each, \$5 per half dozen. For sale by SACRAMENTO RIVER NURSERY COMPANY, Growers of HIGH-GRADE Fruit Trees, Walnut Grove, Sacramento County, California. Our Specialties—Genuine Tragedy Prunes, Olyman and Japan Plums on true Myrabalan whole root seedlings—we use no piece roots nor cuttings; price 15 cents each; Sacramento River Bartlett and Peaches—price 10 cents each. Large quantities at lower rates. WE GUARANTEE OUR TREES TRUE TO NAME.

FERRY'S SEEDS

Are just what every grower needs. The merits of Ferry's Seeds form the foundation upon which has been built the largest seed business in the world. Ferry's Seed Annual for 1894 contains the sum and substance of the latest farming knowledge. Free for the asking.

D. M. FERRY & CO.,
Detroit, Mich.

CALIFORNIA FRUITS

—AND—

HOW TO GROW THEM.

A MANUAL OF METHODS WHICH HAVE YIELDED
GREATEST SUCCESS; WITH LISTS OF VARIETIES
BEST ADAPTED TO THE DIFFERENT
DISTRICTS OF THE STATE.

PRACTICAL, EXPLICIT, COMPREHENSIVE.

Embodying the Experience and Methods of Hundreds
of Successful Growers, and Constituting a Trust-
worthy Guide by which the Inexperienced
may Successfully Produce the Fruits
for which California is Famous

SECOND EDITION, REVISED AND ENLARGED.

BY EDWARD J. WICKSON, A. M.

Assoc. Prof. Agriculture, Horticulture and Entomology,
University of California; Horticultural Editor
PACIFIC RURAL PRESS, San Francisco; Sec'y
California State Horticultural So-
ciety; Pres. California State
Floral Society; Etc.

Large Octavo—599 Pages, Fully Illustrated.
PRICE \$3, POSTPAID.

FOR SALE BY

THE DEWEY PUBLISHING CO.,
PUBLISHERS PACIFIC RURAL PRESS,
220 Market Street, Elevator, 12 Front Street
SAN FRANCISCO, CAL.

BUY NORTHERN GROWN TREES

Grown on high rolling fir land without irrigation or manure. \$50,000 Prunes—French, Italian, Silver and Golden. Peaches—E. Crawford, Alexander, Amsden, Foster, Muir, Malta, and 20 other kinds, including Early Charlotte, the greatest peach that Nature has yet invented. (Write to us about it.) Plums—Burbank, Satusmas, Ogon, Olyman, Tragedy, Eton, Columbia, and a dozen others. Clark's Early Strawberry. If you want the above in quantity, we will give you the finest trees grown, healthy, true to name and at unprecedentedly low prices. Address PILKINGTON & CO., Portland, Or., or Dr. J. B. Pilkington, Los Angeles, Cal.

MAMMOTH.

A SUPERIOR QUALITY OF APRICOT.
Fine for Canning, Drying and Shipping.

They run 3 and 4 to the pound. The Largest and Finest
fruit of the Apricot variety.

ADDRESS

N. B. SMITH, Ventura, Ventura Co., Cal.

B. F. GODFREY & CO., NURSEYRYMEN,

Davisville, Cal.

Write for Catalogue and Prices.

CENTRAL NURSERY COMPANY,

VAN GELDER & WYLIE, Proprietors.

GROWERS AND DEALERS IN ALL THE LEADING VARIETIES OF

Fruit and Ornamental Trees.

Our Stock is Free From all Insect Pests and for Health and
Strength of Root Growth Cannot be Excelled.

Write for Prices on Wholesale or Retail Orders, Address

CENTRAL NURSERY COMPANY, Acampo, California.

STOCKTON NURSERIES,

—ESTABLISHED 1853.—

FRUIT TREES. FRUIT TREES.

—GRAPE VINES.—

Also Fine Stock of Shade and Ornamental Trees, Shrubs, Palms, Roses and Carnations.

PLANTS IN GREAT VARIETY.

Correspondence Solicited.

E. C. CLOWES, STOCKTON, CAL.

McKEVITT'S EARLY.

The New Yellow Freestone Peach!

—FIRST AND BEST OF EARLY YELLOW PEACHES.—

RIPENS IMMEDIATELY AFTER THE ALEXANDER (White Cling), which is the earliest
peach in market.

Fruit is round, of medium size, VERY HIGHLY COLORED, flesh firm and sweet.
THIS PEACH HAS BEEN SUCCESSFULLY SHIPPED EAST FOR FIVE YEARS and
is no new, untried variety.

Tree healthy, strong grower, and heavy bearer, never having missed a crop.
A limited number of yearling trees for sale this season. Apply early before stock is exhausted.

FRANK B. McKEVITT, : : : : VACAVILLE, CAL.

THE HOOD RIVER STRAWBERRY.

Known as Clarke's Early, is coming to be acknowledged as a world beater. Took a medal at World's Columbian Exposition. They are bi-sexual; large; firm-fleshed; prolific and uniform in size. They can be picked while they are white and will bear shipping to New York and come out a beautiful scarlet or crimson, looking as though made of wax, dotted with golden seeds and painted and varnished by an artist. Their flavor is superb. They originated in Oregon. The first crates that came to Portland this year were a fortnight later than last year. It was latter part of May and best California berries were selling at two boxes for a quarter. The Clarke brought at once 30 cents per box by the crate of 24 boxes. They sold all over Puget Sound, and at Spokane, Helena, Butte, Salt Lake, Denver, Omaha and Chicago at highest prices, standing a 2000-mile trip without apparent deterioration. We challenge the world to produce their equal for excellence of flavor combined with shipping quality. Any amount of references. Price per doz., \$1.00, sent by mail; by express, large, vigorous plants at buyer's charge, \$3 per 100, \$20 per 1000. Address

GUY M. PILKINGTON, HOOD RIVER, OREGON.

THE RAISIN INDUSTRY.

A PRACTICAL TREATISE ON THE RAISIN GRAPES,
THEIR HISTORY, CULTURE AND CURING.

By GUSTAV EISEN.

This is the Standard Work on the Raisin Industry in California. It has been
approved by Prof. Hilgard, Prof. Wickson, Mr. Chas. A. Wetmore and a multitude of
Practical Raisin Growers.

Sold only by the DEWEY PUBLISHING CO. or its Agents at the uniform price of
\$3.00, postage prepaid. Orders should be addressed:

THE DEWEY PUBLISHING CO.,

220 Market St., San Francisco.

E. J. BOWEN, SEED MERCHANT.

ALFALFA:

Grass, Clover, Vegetable and Flower Seeds,
Onion Sets.

LARGEST STOCK AND
MOST COMPLETE ASSORTMENT.

Illustrated, Descriptive and Priced Seed Catalogue for
1893 mailed free to all applicants. Address

E. J. BOWEN,

815 & 817 Sansome Street, San Francisco,
or 65 Front Street, Portland, Or.

GENUINE

Thompson Seedless RAISIN ROOTS

For sale at \$1.50 per hundred or \$12 per thousand. Ad-
dress

ROBERT DAVIS,

Yuba City, Sutter County, Cal.

San Ramon Valley Nursery.

Surplus Stock of

ALMONDS, 8 Varieties.

PEACHES, 4 Varieties.

PRUNES, 3 Varieties.

At very LOW PRICES. Also an assortment of
other varieties of Fruit Trees.

WRITE FOR PRICES ON STOCK YOU NEED.

BALDWIN & STONE,

Danville, Cal.

OLIVE TREES

In Variety for Nurserymen,
Dealers and Planters.

Will also contract now to propagate Rooted
Olive Cuttings for persons who wish to
plant them in nursery spring of 1894.

OLIVE CULTURE IN CALIFORNIA,

Sixteen pages, mailed free.

Address:

JOHN S. CALKINS,

POMONA, LOS ANGELES COUNTY, CAL.

OLIVES.

Missions and Nevadillos.

A NO. 1 TREES,

Two-Year-Old, 4 to 6 feet High.

Extra inducements offered to intending buyers both
as regards choice trees and very low prices. Order
once or open correspondence with me.

J. E. PACKARD, Pomona, Cal.

OLIVE TREES.

ALL KINDS OF

Nursery Stock.

Send and get book on Olive Culture.

HOWLAND BROS.,

Pomona, Cal.

OLIVE TREES FOR SALE.

Twelve years experience has taught me how to
PROPERLY root the olive. No artificial heat used.
Address

W. ALSTON-HAYNE Jr.,

Montecito P. O., Santa Barbara, Cal.

MYROBOLAN PLUM

AND

MAZZARD CHERRY SEED,

Fresh Crop Now Ready for Shipment.

FULL PRICE LIST OF

FRUIT STOCKS AND SEEDS

ON APPLICATION.

THOMAS MEEHAN & SONS, GERMANTOWN, PA.

Pepper's Nurseries.

ESTABLISHED IN 1853.

For Sale at Low Rates, a General Assort-
ment of Hardy Deciduous Fruit Trees.

I do not buy trees to sell; what is offered is grown in
my own grounds and free from scale bugs. No scale
bugs of any kind to be found in the Nursery. No agents
employed. Order direct from the nursery and procure
your trees true to label. Order early, as early planting
is the most successful with deciduous trees. Prices fur-
nished on application.

Address W. H. PEPPER, Petaluma, Cal.

50,000 FRENCH PRUNE TREES

On California Peach Root, for sale,

No. 1—6 to 8 ft., \$50.00 per 1000

No. 2—4 to 6 ft., 30.00 per 1000

No. 3—3 to 4 ft., 15.00 per 1000

First class stock. Free from insect pest. Samples
sent on application. Address

N. B. HARVEY, Milwaukee, Oregon.

OLIVE TREES.

Apply for Catalogue.

O. F. LOOP & SON, Pomona, Cal.

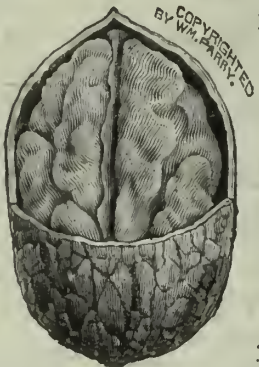
WE GIVE ESPECIAL ATTENTION TO

Fruit Trees! Deciduous Fruit Trees!

ALEXANDER & HAMMON'S

Rio Bonito Nurseries, Biggs, Butte Co., Cal.

KAGHAZI



PERSIAN

:- SOFT SHELL :-

:- WALNUT! :-

Our Stock of TREES and VINES is Most Complete
in EVERY CLASS of Fruits.

A LARGE STOCK OF THOMPSON'S SEEDLESS GRAPES.

SHIPPING, CANNING and DRYING Fruits of all Kinds.

Best Assortment of RAISIN and TABLE GRAPES in California.

Early Shipping Plums a Specialty.

SPECIAL PRICES FOR TREES IN LARGE QUANTITIES.

DURING the last three years, trees grown on the FEATHER RIVER BOTTOM LANDS, at RIO BONITO, BUTTE COUNTY, have been much sought after, and the demand for them is increasing all over the State where they have been planted. Owing to the peculiar adaptability of the soil and climate of this section for growing nursery stock, the trees making a very large and well-furnished system of root growth, and maintaining a correspondingly strong and vigorous top, maturing the wood thoroughly, we are enabled to supply our patrons with the best of trees, healthy in every respect, entirely free from insect pests, and in perfect condition for transplanting.

If You Are Going To Plant Trees, It Will Pay You To Correspond With Us Before Purchasing.

ALEXANDER & HAMMON,

BIGGS, BUTTE COUNTY, CALIFORNIA.

A Garden for a Dollar.

Any one of the following six collections will be sent free by mail for \$1. Plants all distinctly labeled.

\$1
GARDEN

Vegetable Seeds.

1 20 pk'ts, fine assort'm't

Flower Seeds.

2 5 pkts Orn't'l Foliage.

3 5 pkts Climbing Plants.

4 5 pkts Annuals.

5 5 pkts Perennials.

6 2 pkts Biennials.

7 3 pkts Orn'm't'l Grasses

Plants.

3 3 Chrysanthemums

4 3 Ornamental

5 3 Roses.

6 2 Geraniums.

7 1 Heliotrop.

8 2 Pelargoniums.

9 2 Roses.

2 Ohrysanthemums

3 Canas.

4 1 Tuberose.

5 1 Artillery Plant.

6 3 Single Geraniums.

7 2 Scented Geraniums.

8 2 Double Geraniums.

9 3 Fuchsias.

10 1 Begonia.

11 1 Heliotrop.

6

1 French Cana.

2 1 Tea Rose.

3 1 Carnation.

4 1 Pelargonium.

5 1 Fuchsia.

6 1 Begonia, Rex.

7 1 Rose Geranium.

8 1 Lemon Verbena.

9 1 White Lily.

Selection of varieties in collections must in all cases be left to us. Substitution made if necessary.

Sunset Seed and Plant Co.,

Seed Farm and Nurseries, (SHERWOOD HALL NURSERY CO.)

427-9 Sansome St.,
SAN FRANCISCO, CAL.

Write for beautifully illustrated catalogues containing instructions for cultivating. Sent free.

FANCHER CREEK NURSERY,

FRESNO, CALIFORNIA.

FRUIT TREES,
ORNAMENTAL TREES,
GRAPE VINES.

SPECIALTIES—OLIVES, ROSES, PALMS.

SEND FOR CATALOGUE AND PRICE LIST.

GEO. C. B. EDING, Manager.

FOR THE SEASON OF 1893-94

BUDED ORANGE TREES, of the leading varieties, one and two year buds; also a small lot of choice budded and seedling LEMON TREES. Sweet Seedling Orange. 1 to 4 years old. Shade and Ornamental Plants. Prices to suit the times.

ORCHARD AND NURSERY.....THERMALITO, BUTTE COUNTY, CAL.

For prices and terms, address

OROVILLE CITRUS ASSOCIATION, OROVILLE, BUTTE COUNTY, CALIFORNIA

Correspondence Solicited.

WE MANUFACTURE AND SELL AT
FACTORY PRICES

Triple-Acting Pumps,

For High and Low Lifts.

Centrifugal Pumps,

Steam Pumps,

Deep Well Pumps,

Wind Mills,

Tanks,

Horse Powers of all Sizes,

Link-Belt Elevators

and Conveyors,

Link Chain and

Sprocket Wheels,

Wine Presses,

Grape Crushers

and Stemmers.

KROGH MANUFACTURING CO.,

51 BEALE STREET, - - SAN FRANCISCO

Incorporated 1884.

500 Acres.

CALIFORNIA NURSERY COMPANY,

Niles, Alameda Co., California.

FRUIT TREES,
SHADE TREES,
EVERGREENS,
PALMS AND FLOWERING PLANTS.

SPECIALTIES: OLIVES—38 sorts, French, Italian and Spanish.

ROSES—360 sorts, all the leading kinds, new and old.

CLEMATIS—25 Varieties.

SEND FOR CATALOGUES.

JOHN ROCK, Manager.

LOW PRICES
ON

ALMOND TREES!

California Paper-Shell, Nonpareil, Ne Plus Ultra
and I. X. L.

A pamphlet on Almonds mailed free of charge on application. A large supply of the GOLDEN PEACH and FRENCH PRUNE. All kinds of leading fruit trees for sale. No charges made for hauling trees.

NO CHARGE FOR BALING.

Address, PERCY W. TREAT.

Daviesville Nurseries.....Concord, California

PRUNE TREES

FOR SALE—50,000 Trees on Myrobalan Stock.

Imported from one of the first French nurseries. Scions from an orchard near Saratoga. Fruit raised in this celebrated district has taken for us six first-class awards, INCLUDING HIGHEST AWARD, COLUMBIAN EXHIBITION. Apply to

BALFOUR, GUTHRIE & CO., 316 California St., San Francisco, Cal.
Agents for Saratoga Packing Company.

NAPA VALLEY NURSERIES.

NEW CATALOGUES NOW READY.

Fruit, Nut and Shade Trees, Grape Vines, Etc., Citrus Fruits, Ornamental Shrubs,
Flowering Plants, Roses, Palms, Bulbs, Seeds, Etc.

Fruit and Nut Trees propagated from bearing orchards at Sausal Fruit Farm; Unirrigated, Clean and Healthy.
Do not fail to correspond before making purchases. Satisfaction guaranteed.

LEONARD COATES, - - - NAPA, CAL

PACIFIC RURAL PRESS

Vol. XLVI. No. 27.

SAN FRANCISCO, SATURDAY, DECEMBER 30, 1893.

THE DEWEY PUBLISHING CO.
Office, 220 Market Street.

Pioneer Olive Oil Mills.

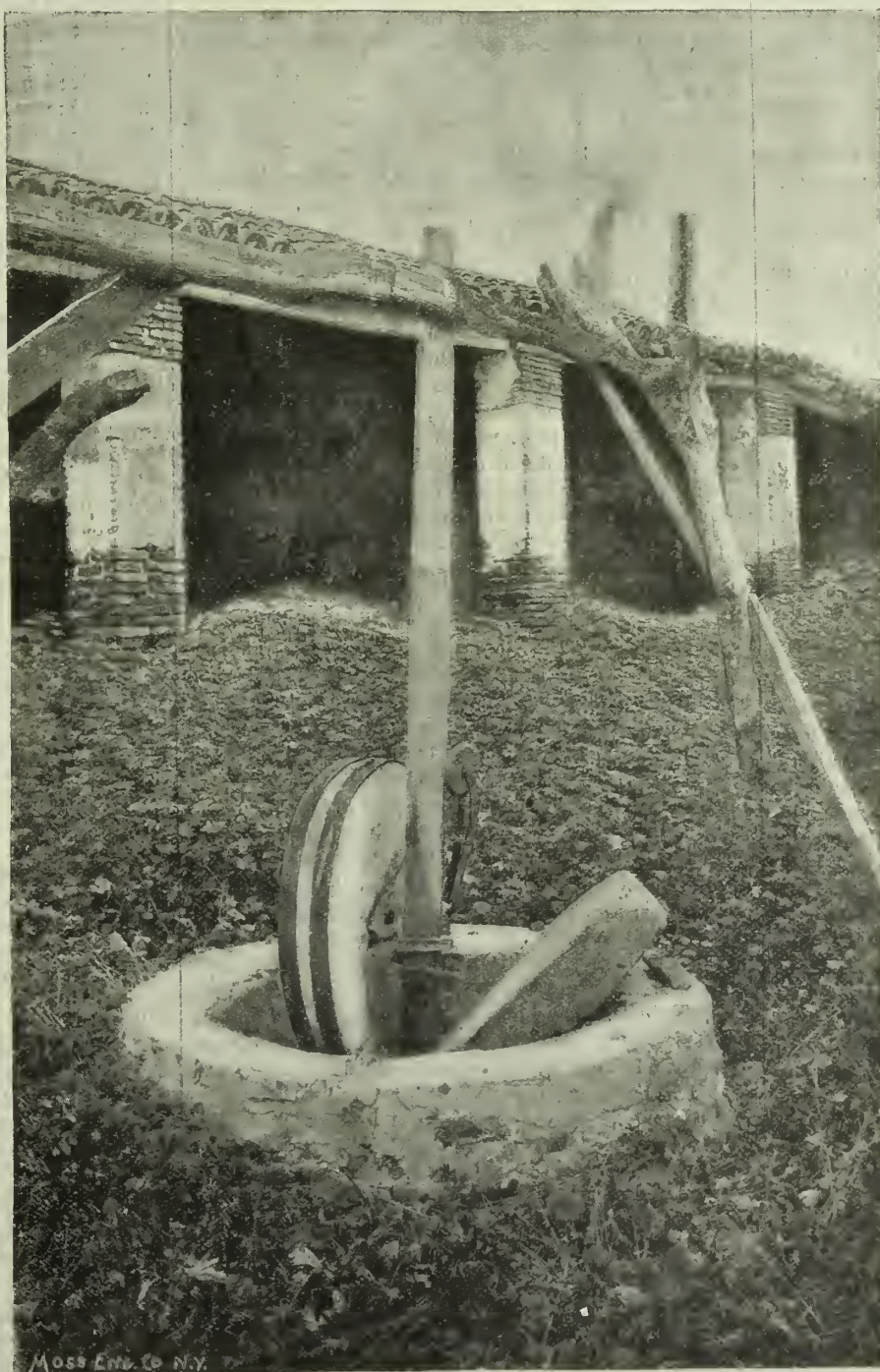
The engravings which we present in this issue possess both historic and horticultural interest. They are from photographs taken by Mr. Lelong, Secretary of the State Board of Horticulture. The engraving on this page shows the oldest olive mill in California, and possibly the first one built. It was the work of the padres of San Diego Mission, where the olive was first grown in California and where some of the original trees still survive. It is not known just how old is the mill shown in the picture, but it is supposed to have been built in the last century. The engraving on page 444 adds romantic interest to historical and horticultural, for it is situated at Camulos, in Ventura county, the farm made famous in Mrs. Hunt's "Ramona." The mill was built in 1871 and is said to be the first ever built, away from the Missions.

It is a singular fact in a world of progress that the very old method of crushing olives by means of rolling stones is still accepted as the best way. Some changes have been made, of course, in gearing and motive power, and in the number of stones employed, but the principle is the same—a massive circular stone traveling over the olives placed in a circular basin of stone beneath it. This method of crushing, though slow, is held to be best, because the pomace is not heated and the oil thereby injured. There are, however, olive crushers operated by passing the fruit between rollers. As the olive interest is new to American inventive genius, it is possible that more rapid machinery may yet be devised which can be used without injury to the oil. The older producers, like Cooper and Kimball, however, followed the Mission and the best Italian precedents in the use of rolling stones.

WE are glad our Eastern nursery friends have something to distract their attention from denunciation of the California quarantine. We read that the reduction of duty on nursery stock by the new tariff will prove a serious injury to the large nursery interests of western New York. Mr. William C. Barry, of Ellwanger & Barry of Rochester, protests vigorously against the tariff. There is very little profit in tree growing at present prices, and the importation of French-grown stock will take even that profit away unless cheaper labor can be got for growing nursery stock here. Mr. Barry has been among those who favored a revision of the tariff, but, like many other tariff reformers, he did not wish to see revision take this shape. Our Eastern friends should try the quarantine scheme if the tariff is knocked off.

WHAT does it matter to the old earth if there is a new year? Prof. C. D. Walcott of Washington places the age of the earth at about 45,000,000 years. Winchell placed the age of the world at about 25,000,000 years; Lyell made it 240,000,000 years; Darwin, in a general way, placed it at 200,000,000 years; Geikie, at 73,000,000 years. Other estimates range from 100,000,000 to 600,000,000 years. At the

rate of deposit in the ocean to-day, it would require, Prof. Walcott calculates, 1,200,000 years to deposit the 6000 feet of limestone which cover an area of 400,000 square miles on the plateaus of Utah and Nevada, that were formerly



OLIVE MILL AT SAN DIEGO MISSION, PROBABLY BUILT IN THE LAST CENTURY.

a sea bottom. The sandstones in the same region, and shales, are 15,000 feet thick, and for their deposit he assigns 16,000,000 years. And yet we think of the New Year as one of the greatest things in the world. As a matter of fact, it is one of the least.

THE English home supply of cereals is short all around. The preliminary statement of the Board of Agriculture shows the year's yield of barley is 10,000,000 bushels less than in 1892, although 40,000 more acres were planted. Of oats there are 6,000,000 bushels less, although 150,000 more acres were planted. The yield of wheat has fallen 9,000,000 bushels, and the acreage has decreased 300,000 bushels.

The Wheat Outlook.

And there is to be a happy new year even for the wheat crop. We do not refer to the local attempts to manipulate the wheat market by causing the farmers to hold back wheat to which we made allusion last week. The flurry in San Francisco seems to be a thing with a local reason behind it which has not been clearly disclosed.

What we especially refer to now is the hope which is outheld that wheat has seen its worst and is likely to enter a period of better values during the next few years. Probably no one in the United States better understands the statistics of wheat production or is better qualified to discuss future prices of the grain than Mr. C. Wood Davis of Kansas. After a careful computation of the world's production and consumption of wheat the past 15 years, Mr. Davis writes to the *American Cultivator* as follows:

"I have not a doubt that this is the last year of low-priced wheat, and that wheat will soon be as much too high as it has lately been too low. By soon I mean five years. A crop like that of 1891 would next year barely suffice for the world's needs, for since 1891 not less than 17,000,000 mouths have been added to those that must be filled with bread, and this implies an added requirement of not less than 80,000,000 bushels. At the present rate of yield—world's yield—of the last 14 years, the world's wheat acreage will give a product of no more than 2,312,000,000 bushels, while the 455,000,000 bread eaters of European lineage will require in the 1894-95 harvest year no less than 2,450,000,000 bushels, if they continue to consume bread at the rate obtaining from 1886 to 1890."

This is encouraging, for though it may not be any encouragement to hold wheat now in store, it is a comfort for that which lies buried in soil fertility and argues well for the future of our great wheat valleys, if newer parts of the world do not rise too fast in wheat. Of course there are many contingencies about it, but a bright outlook beats a black one anyhow.

PROF. HILGARD's letter on another page, descriptive of a newly opened gypsum deposit in the San Joaquin valley, will be read with interest by all who have alkali soils which can be ameliorated by the use of this material. There have been other gypsum quarries opened and worked, but much of the ground gypsum marketed has been much less pure than that taken from this mine. Probably better selection of the rock would improve the product. However this may be, it is of immense importance to the valley to have ample supplies of gypsum of high purity and the present discovery may lead to others.

THE *Moniteur Vinicole* of Paris publishes full returns of the yield to French vineyards. The crop estimated is 1,225,000,000 gallons, against 650,000,000 gallons last year. The total value of the crop is over \$250,000,000, the best since 1877.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

Office, 220 Market St.: Elevator, 12 Front St., San Francisco, Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying \$3 in advance will receive 15 months' (one year and 15 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months. Trial subscriptions for twelve weeks, paid in advance, each 50 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate).....	\$.25	\$.50	\$ 1.20	\$ 4.00
Half inch (1 square).....	1.00	2.50	6.50	22.00
One inch.....	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Registered at S. F. Post Office as second-class mail matter.

Our latest forms go to press Wednesday evening.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....Editor
J. F. HALLORAN.....General Manager
E. J. WICKSON.....Special Contributor

San Francisco, December 30, 1893.

TABLE OF CONTENTS.

ILLUSTRATIONS.—Olive Mill at San Diego Mission, 441. Olive Mill at Camulos, 444.
EDITORIALS.—Pioneer Olive Oil Mills; The Wheat Outlook; Miscellaneous, 441. The Week; Thoughts for the New Year; The Year's Produce Prices; Miscellaneous, 442. From an Independent Standpoint, 443.
CORRESPONDENCE.—Important to Alkali Land Owners, The Fruit-Growers' Convention and the Nationalization of Railroads, 444.
HORTICULTURE.—Tropical Fruits in California; Pruning the Lemon, 445.
FRUIT MARKETING.—Suggestions on Fruit Handling; Chicago Fruit Sales, 446.
ENTOMOLOGICAL.—Advice to Bug and Fungus Killers, 446.
THE FIELD.—Advice to Grain-Growers; Potato Show at the World's Fair, 446.
THE VETERINARIAN.—Equine Lockjaw—Its Causes and Cure, 447.
THE STOCK YARD.—Wintering Young Stock, 447.
TRACK AND FARM.—Possibilities on the Race Track, 448.
POULTRY YARD.—Treatment for Sore Head; The Egg Business, 448.
THE HOME CIRCLE.—450-451.
AGRICULTURAL NOTES.—452.
MISCELLANEOUS.—How Coke is Made; The Purity of Gold, 453. Treatment of the Foot of the Horse; Artificial Snail; It Helps Germination; Increasing Use of Spectacles, 454. Do Species Exist? Death Rate of Large Cities, 455. Damage by Lightning; Tobacco Displacing Cotton; A Novel Pencil, 456. The Number of Farms in the United States; Southern Citrus Display at the Midwinter Fair, 444.
MARKET REPORTS.—The Local Produce Market, 457.

BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

	PAGE.
Incubators—Petaluma Incubator Co.....	458
Poultry—W. O. Bowen, National City, Cal.....	458
Nursery Stock—Thomas Meherin.....	459
Pile Suppository, etc.—Martin Rudy, Lancaster, Pa.....	458
Nursery Stock—James A. Anderson, Lodi, Cal.....	459
Poland-China Hogs—P. H. Murphy, Perkins, Cal.....	460
Dividend Notice—German Savings and Loan Society.....	460

See Advertising Columns.

The Week.

A fine bunch of storms has struck the coast during the week. They have come announced and unannounced and from different directions. The fortunate outcome is that rain has fallen everywhere, and in some regions in large volume. There is now water enough for present cultural uses, and the sky is full of promise. There should be now no hesitation about going forward with customary winter work and making good use of the time, for usually the one who plants early plants best in California.

The storms have postponed the formal opening of the Midwinter Fair. Building has been somewhat delayed, and transportation of exhibits has also been retarded. The present plan is to have an informal opening on January first, and the great unavailing of the concern about January 20. It is just as well; in fact, February 1 would probably be even better, for the last third of January generally has meteorological openings which tend to close up everything else.

And now comes the "Happy New Year," of blessed memory. Happy may it be indeed to the RURAL household!

AGAIN the English farmer appeals for "protection." These are the words of H. Kains Jackson, the well-known London cereal expert:

As was forecast in these columns, the price of English wheat keeps distinctly higher than are the rates of imported samples. The following comparison indicates that where foreign wheat is 2s to 4s lower in price, the value of English is maintained at about last year's level:

	1893.	1892.	1891.	7 yrs.
English.....	27s 1d	27s 5d	39s 1d	32s 1d
Russian.....	25 6	28 0	43 0	—
Australian.....	29 6	34 0	46 0	—
Indian.....	25 6	30 0	40 6	—

Here is the text: That the foreigner is the underseller and rival of the handicapped and tax-handcuffed English wheat-grower. May the Royal Commission read, mark and inwardly digest these figures.

And yet our reformers want us to ship more low-priced food to persecute these tired Englishmen, instead of building up industries here to use up our own breadstuffs.

SACRAMENTO held a county convention last week, and, after full discussion, a proposition to bond the county for \$500,000 to build good roads was carried almost unanimously. The convention passed a resolution, respectfully petitioning the Supervisors to submit the question of bonds to the vote of the people.

Thoughts for the New Year.

We do not contemplate an exhortation to renewed spasms of morality. They may be useful, and it may be timely to urge them, but we pass them by. And yet it is not so easy to lift one's pen out of the common rut of New Year writing—still we resolutely refrain and ask the reader's thanks for the firmness thus displayed.

But though we change the bearings of the theme we do not promise novelty. That which we think of saying is probably as old as that which we avoid, and yet, in view of the experience of the last year, it seems to possess especial force at this time. Probably to be true it must be old; let it be called, then, old truth suggesting itself with new force and particular adaptations to present needs.

As we look upon it, those who have lived through the last year with least discomfort and deprivation are those who have had most money and those who have had least. We speak agriculturally. We include neither millionaires nor tramps, capitalists nor paupers, but have in mind the ranks of producing agriculturists. Those of them who have surpluses in banks or in good securities have merely drawn somewhat upon their reserves, which are still ample perhaps for a decade of bad years. On the other hand, those who have least money and least need for it, and who draw from their farms various food supplies which constitute the chief support of their families, and market small surpluses of these same varied products to secure the moderate demands which the tax-gatherer, the clothier and the grocer make upon their purses—these, too, have gone through the year with some deprivations and self-denials, perhaps; but they have not lacked for food nor have they passed sleepless nights in contemplation of payments overdue and approaching. They, too, could survive a decade of such bad years as the last, if such dire fate should be in store for them.

It is not indisputable that those who have suffered most and worried most, and who can now see least light ahead, are those who have made investments in special lines of production which require constant outlay for labor and materials, and result in products which cannot of themselves constitute family supplies, but must be sold and paid for before the producer can command even a breakfast for his household. Is it not also the fact that these products, which represent wages and not home labor, and which are charged up to and beyond their present market value with horse feed and interest on deferred payments, are the ones which are now hardest of all to realize upon? If these be facts, what then are the thoughts for the New Year which promise most comfort agriculturally?

We do not intend to say a word nor exert an influence against the importance and desirability of specialties in agricultural production. Under proper conditions they are a wise direction of productive effort. Their products constitute our means of getting our share of the world's gold to meet our legitimate demand for the world's goods. Their industrial status is clearly defined. In the nature of things we shall always follow these lines of industry to the utmost limits of profitability. People will go into them and stay with them just as long as they can. They merit praise; they do not deserve condemnation.

But while this is true, all are not wise who risk their futures wholly on specialties. Some, it is true, have such lands or areas of land that they cannot wisely diversify their products. They have selections of soil and climate which can only yield adequate returns through some specialty. In most cases they will reach final success and reward by pursuit of their present lines, and it is true that there is no more grievous agricultural policy than a flip-flop from one specialty to another. Usually the floppers are at the tail-end of the procession of the prosperities. If, then, one has a specialty which yields a staple of recognized value, let him carry it along through periods of depression which will set all the floppers in motion, and he will reach the reward of the faithful.

It seems, however, that just at this period of our development as a new country we need to return, to a certain extent, to the old principles of farming which we have almost forgotten, and it is contemplation of these principles which is suggested for New Years thoughts. The old idea of the farm was a home establishment. Its first office was to supply the family needs. In the older discharge of this office, which included the mechanic arts of weaving, cobbling, etc., the farm is now emancipated. They have no place in the farming of this age. Legitimate farm production is fortunately able to command these manufactures by its commonest surpluses, which are fortunately always in demand everywhere, and nowhere, perhaps, have higher exchange value than in California.

What we would commend for the attention of all those who have land and water suitable for diversifying farm products is an effort to supply the needs of the household. The farm-garden, the poultry-yard, the home dairy, the alfalfa or other pasture fields, with their population of cows, pigs and sheep, the stable with its few brood mares

—some of these are quite compatible with some one specialty of orchard, if the location suits, or they may of themselves constitute a mixed farm, which will always yield something to eat and something to sell. In some of the older counties, where old-style farming is common, most striking examples of comfort and prosperity on these lines could be pointed out—farms neat and thrifty in their general aspect, and filled from cowshed to residence with substantial buildings which are a joy to own and work under. Some of these, too, into which the newer idea of specialization has crept, are being carried through these times not by the outcome of the specialty, but by the unflinching income of some one or more of the old lines of production. Probably more farms are in fact being propelled by hen power than the ordinary observer has any idea of.

It will not be possible to specify in a general article of this kind in what way diversification of farm produce should be undertaken, nor would the results of the attempt, if made, be trustworthy. So much depends upon the local conditions of soil and climate and water supply that generalizations of specific courses are apt to mislead. As, however, our specialization has been generally in horticultural lines, the diversification will come through the introduction of the animal element. With all animals there comes the hay and pasture allotments, field crops, and the care of animal products. Most of these are home food supplies and legal tender at the general stores, and the production of them is so plain, or easily learned, that effort to secure them will almost succeed if natural conditions are not inhospitable and the earnest desire to succeed and the will to work, are present. But they will not brook carelessness nor neglect—nor will anything else that is worth having.

We have but a single word of advice to add with reference to the desire to diversify farm products in California. Our correspondence and observation teach us that there are many who get the idea but are disposed to follow the most impracticable schemes to embody it. They are striving for new things, which are at best but experiments, and in many cases of the most doubtful outcome. They ransack the world's literature for products of distant countries. They are disposed to invest time and money in crops to which Asia holds the key through her incalculable supply of pauper labor. They would undertake high lines of production which only manufacturing chemists with large capital can possibly put forth. They are eager to encumber their ground with growths which can be of no possible value unless capital undertakes factories, and they glow with enthusiasm when the professional organizer comes to them with processes and prospectuses. They are like Naaman the Assyrian—they must have some great deed to secure their cleansing from the scars of debt and anxiety; they will not wash in the Jordan of plain old-fashioned farm products, which would bring them comfort and prosperity. California brings in yearly from all directions trainloads and shiploads of common food products which could be produced here if our farmers would first meet their own wants and put upon local sale the surpluses of the same materials which they now find it so difficult to pay for.

Southern Citrus Display at the Midwinter Fair.

LOS ANGELES, December 23.—The Southern Citrus Fair will be held in San Francisco at the Midwinter Fair, and will be a big feature. At a meeting of the citrus fruit-growers here to-day it was decided that the fair should be held in San Francisco from Tuesday, February 20th, to Saturday, February 24th, inclusive.

Committees were selected as follows: General Committee, Los Angeles county—C. E. Bemis, Scott Chapman, A. C. Thompson; San Diego county—J. E. Boal, W. C. Kimball; San Bernardino county—E. Wyatt, William Friend, W. F. Grow.

Committee on Premiums—Los Angeles county, C. D. Willard; Santa Barbara county, Harleigh Johnson; Orange county, H. K. Snow; Ventura county, F. A. Foster; San Diego county, R. H. Young.

Committee on Judges—Messrs. Bemis, Foster, Johnson, Friend, Newberry and McKoon.

It was announced that Los Angeles people would raise \$12,000 to \$15,000 for the Fair, and it was decided to add to the fund by an assessment of 40 per cent. on the premiums to be awarded. The growers were enthusiastic about the matter and pledged large exhibits of fruit.

THE Southern California citrus fruit-growers have decided to continue their fight against the patent on the gas treatment of scale insects. They claim: first, the patent was not issued for anything that can be patented, as it claims nothing except to do something by night, in the absence of light, and there is no mechanical or chemical appliance in the patent; second, the history of the process shows that these people that claim it were not its originators. The Riverside growers have assessed themselves at the rate of two cents per tree. The Orange county growers are organized under a contract by which they agree to pay assessments for the defense of the suits not to exceed five cents for each tree.

From an Independent Standpoint.

The Wilson tariff bill, the outlines of which were given in this column some three weeks back, was formally introduced in the House of Representatives last week. It was accompanied by a report, signed by the Democratic members of the Ways and Means Committee, in which all the stock arguments for tariff reform are gone over elaborately. Since these arguments are familiar to everybody, it is hardly worth while to re-state them in detail; and it is enough to say that they are of the purely theoretic sort. Here, indeed, is the fundamental fault of the free-trade dogma as sought to be applied to our national policy. Its promoters shut their eyes to the conditions and relationships of things as they exist practically in the world at this time, and persist in viewing things in a purely abstract and philosophic light; and the result is a system as widely removed from what in the every-day business view is wise and practical, as what ought to be is separated from what is.

In the philosophic view—that is, in an ideal world filled with an ideal people, subjected to ideal conditions and under the rule of ideal laws, and of an ideal morality—there would indeed be no room for protection as applied to commerce. In fact, nobody, unless it be some rank partisan, too ignorant to know the basis of his party creed, pretends that there is any philosophic foundation for protection. The motive, support and defense of protection lies not in theoretic abstractions, but in the condition of things as we actually find them in this imperfect world and age. We find that if no artificial aid is given to our people they cannot, in many lines of production and manufacture essential to the completeness of national life, compete with European countries. The reason is clear. Our people are free, independent, literate and aspiring. Our system is founded upon these conditions, and they are essential to its existence. In competing countries the population is dense, the people oppressed by social authority, profoundly ignorant and hopelessly poor. The narrowness and subjection of their lives make them content with bare subsistence. They begin to labor when they leave the cradle and lay down the burden of labor only when they die. Now, a people who must have means and time for education, who must be well housed and well fed and well clothed, who must take time for that varied vigilance which is the price and bulwark of liberty, cannot compete directly with mere human machines. If we are to maintain the superior character of our working population, we must save them from the competition of the half-starved, half-pauper and wholly enslaved labor of Europe. And, let it be borne in mind, upon the superior character and the contentment of our people rests the fabric of our government. Let our people fall under the direct competition of European countries, and through it to the debasement of European social conditions, and how long, let us ask, would our system last?

The free trader's answer that it is not necessary under their projected system that our people should compete with the labor of Europe; that we should give up to Europe those lines of production in which they can supply the world, including our own country, at less cost than we can; that we should confine our energies and labor to those things for which nature has given us special advantages. Reduced to practicability, this is a recommendation to give up all forms of manufacture or production wherein the value is chiefly or largely the product of human industry and skill and to limit ourselves to the production of raw products, in which our wide and virgin territory gives us an unquestionable advantage. From the standpoint of abstract philosophy the free traders' advice sounds very well; but carry it into practice and it would be fatal to our national prosperity and to our national intelligence. The secret of American ingenuity and American enterprise, of American pluck and of American success, lies in the varied character of our national industry; and if, through political or other folly, we were to limit that variety, we should in exact proportion destroy the practical effectiveness of the American character, and with it lose half of what is best in American life.

The argument in favor of the Wilson scheme, presented by the majority of the Ways and Means Committee, was met last week by an opposing argument in the form of a minority report of the same committee. The opportunity was a great one, but it was not fairly used. Instead of going over the ground broadly in the spirit of thoughtful statesmanship, the report confines itself to the negative attitude and is written in the severest partisan spirit. Much is made or attempted to be made of the fact that the Wilson bill is nominally a measure to raise revenue, while, in fact, its effect would be to reduce the revenue. This is a good subject for a smart newspaper paragraph or for a sharp thrust in debate, but it is unworthy of serious discussion in a State paper. The report further declares

that the bill proposes to transfer to our own people a burden of taxation now borne by foreigners, a proposition too fallacious and too cheap to deceive anybody. In conclusion, the report says:

Had the committee followed the uncompromising declaration of the party and abolished protection, giving us a tariff for revenue only, our task in commenting upon the results of the committee's efforts would have been much more simple. So far, however, has the committee departed from the demands of the national convention that we are much tempted to borrow a phrase from its own platform and designate the bill as a "cowardly makeshift," were not the results already too serious for mere epithets. The committee has presented another tinkering tariff bill, the like of which has disturbed business so many times in the last 30 years. Had the bill been for revenue only, the people of the country might have seen at a glance whether they desired one policy or the other, and the question might have been settled once and for all, and the country attained that repose and stability on which our prosperity so much depends.

Readers who stand with the RURAL in opposition to the measure which this report seeks to condemn will, we believe, agree with us that it is not in the right spirit and not effective in the right way. It is wholly partisan in tone and therefore wholly wanting in propriety as a State paper. We can only regret a great opportunity lost for putting before the country a dispassionate statement of facts and considerations very important for the general interest at this time.

Special interest attaches to the minority report from the fact that it is the personal work of Hon. Thos. B. Reed of Maine, a prominent candidate for the Republican Presidential nomination. It expresses fairly well Mr. Reed's political character. He is a strong man of the partisan type, drawing his political principles from his environment, and by instinct a fighter. Physically and intellectually he is of coarse fiber, and in no fair way comparable with Governor McKinley, who, as the "logical," may be said to be the leading candidate. It must be said of McKinley, to be truthful, that he errs on one side about as far as Reed does on the other. There is about him an air which seems to justify the critics who sneeringly declare that he is a little too good for this world. If political gossip may be credited, there is to be another candidate in the field; one certainly not to be ignored, namely, ex-President Harrison. He is clearly the ablest man on the available list, but the coldness of his temper, the antagonisms grow-out of past incumbency of the Presidential office and the discredit of defeat are against him. We have, however, seen Mr. Cleveland overcome these several disabilities and more; and certainly what has been done may be done again.

Recent events have, in the popular estimation, strengthened Republican chances in the next election. The extremely hard times, the dissatisfaction in many quarters respecting financial legislation, the almost universal disapproval of Mr. Cleveland's course in the Hawaiian affair, and, chiefest of all, the Democratic attitude on the tariff question—these circumstances combine to inspire the party, which may claim plausibly, if not in all respects fairly, to be without responsibility. It is, however, two and one-half years until nomination day, and within that time a thousand things may happen to alter the whole political prospect. If, in the meantime, a settlement should be reached as to the tariff; if the country should again become prosperous; and if by promoting the Nicaraguan canal, or some other vast national and universally beneficent enterprise, the Administration should regain its lost popularity, the position of the Democratic party would be a very strong one. It has what the Republican party distinctly lacks—strong and definite leadership.

The latest development in the Hawaiian matter is in connection with the resolution censuring the course of President Cleveland, introduced in the House by Mr. Boutelle of Maine. This resolution was referred to the committee of foreign affairs, by which it was killed and replaced by a substitute resolution reciting and affirming the facts of the Hawaiian revolution as reported by Commissioner Blount, and condemning the alleged interference of Minister Stevens with Island affairs. As yet the substitute has not been brought before the House for discussion. The fact that it has been proposed by a Democratic committee is understood in some quarters to imply that the party will stand by Mr. Cleveland in his policy of respecting the queen. This seems to us hardly credible. Public sentiment against the project is so pronounced, so many Democratic Congressmen are positively opposed to it, and the project itself is so monstrously absurd and wrong, that it is not in the nature of things that it should be enforced. It would, indeed, be a most extraordinary thing and a most discouraging fact to all lovers of our American system, if the mere absurd whim of a President can be made to rule the course of a Congress in opposition to the common sense and common will of the people in general.

Something must soon be done in the matter or the chance will be gone. Neither the public temper nor the public resource at Honolulu can long stand the intense

strain; and if we don't come to some determination the offer made to us will be withdrawn and made to England. It is expected that the subject will be taken up as soon as Congress comes together (it is now the holiday recess), and there is no reason why much time should be spent in its consideration unless there should be a determined attempt to enforce the Cleveland policy. In that event there will certainly be a long and bitter fight, with the probable consequence of losing the islands altogether. The situation at Honolulu is unchanged. The leaders of the Provisional Government declare that they will fight for their rights, and it is believed that they will do it.

The Number of Farms in the United States.

The first publication is made by the *American Agriculturist* of the official count of the number of farms in the whole United States, taken in June, 1890, by the enumerators for the Eleventh Federal Census. The figures are complete.

There are, in round numbers, 4,560,000 farms in the United States, contrasted with 4,008,000 at the opening of the decade, or a gain of 550,000 in the ten years. Over 600,000 new farms were created, but the absorption of over 50,000 farms into larger ones in the New England and Middle States and Illinois reduced the net gain to the number stated. The gross gain in the number of farms is about 20 per cent, the decrease was 5 57 per cent, leaving a net gain of 13 1/4 per cent in the number of farms in the United States for the ten years.

SUMMARY BY SECTIONS OF THE NUMBER OF FARMS.				
	1890.	1880.	Total.	Per cent.
Decrease.				
New England.....	189,961	207,232	17,271	8.31
Middle.....	468,624	488,907	20,283	4.15
Illinois.....	240,681	255,741	15,060	5.89
Nevada.....	1,277	1,404	127	9.05
New Mexico.....	4,468	5,053	585	11.77
District of Columbia.....	382	435	53	12.18
Total decrease States.....	905,383	958,772	53,389	5.57
Increase.				
Middle South.....	782,687	720,169	62,518	8.67
The South.....	1,014,644	810,473	204,171	28.89
Central ex. Illinois.....	768,350	729,532	38,818	5.32
Northwestern.....	209,951	113,882	96,069	84.69
Western.....	720,007	602,874	117,133	19.43
Pacific.....	96,480	54,680	41,800	64.42
Mountain, ex. Nev. & N. M.....	28,332	14,725	13,607	92.41
Total increase States.....	3,650,351	3,050,135	600,216	19.67
Total decrease States.....	905,383	958,772	53,389	5.57
Aggregate, U. S.....	4,565,734	4,008,907	546,827	13.64
STATES IN WHICH NUMBER OF FARMS DECREASED.				
	1890.	1880.	Total.	Per cent.
States.				
Connecticut.....	26,350	30,598	4,248	13.88
District of Columbia.....	382	435	53	12.18
Illinois.....	240,681	255,741	15,060	5.89
Maine.....	62,018	64,309	2,296	3.57
Massachusetts.....	34,374	38,406	4,032	10.40
Nevada.....	1,277	1,404	127	9.05
New Hampshire.....	29,151	32,181	3,030	9.41
New Jersey.....	30,828	34,307	3,479	10.14
New Mexico.....	4,468	5,053	585	11.77
New York.....	226,239	241,058	14,819	6.15
Pennsylvania.....	211,567	213,542	1,975	.93
Rhode Island.....	5,500	6,216	716	11.52
Vermont.....	32,573	35,522	2,949	8.30
Totals.....	905,383	958,772	53,389	5.57
INCREASE IN NUMBER OF FARMS.				
	1890.	1880.	Total.	Per cent.
States.				
Alabama.....	157,772	135,864	21,908	16.13
Arizona.....	1,426	7-7	659	85.92
Arkansas.....	124,760	94,433	30,327	32.12
California.....	52,894	35,934	16,960	47.19
Colorado.....	16,389	4,596	11,883	263.71
Dakota, North.....	27,611	17,435	60,334	346.05
Dakota, South.....	50,158	8,749	632	7.22
Delaware.....	9,381	28,438	10,790	46.04
Florida.....	84,228	138,826	32,445	23.41
Georgia.....	171,071	1,886	4,718	250.19
Idaho.....	6,603	194,013	4,154	2.14
Indiana.....	198,167	135,351	16,552	8.93
Iowa.....	201,903	138,601	28,056	20.25
Kansas.....	166,617	166,463	12,811	7.69
Kentucky.....	179,264	48,292	21,002	43.49
Louisiana.....	69,294	40,517	281	.69
Maryland.....	40,708	172,344	13,336	11.90
Michigan.....	172,344	94,068	24,465	26.48
Minnesota.....	116,851	101,772	49,548	43.51
Mississippi.....	144,318	215,475	22,504	10.34
Missouri.....	237,879	5,603	4,081	268.86
Montana.....	113,608	63,337	50,221	79.23
Nebraska.....	178,359	157,600	20,750	13.16
North Carolina.....	251,430	247,189	4,241	1.72
Ohio.....	25,570	16,217	9,313	57.42
Oregon.....	115,008	93,864	21,144	22.53
South Carolina.....	174,412	165,650	8,762	5.29
Tennessee.....	228,193	174,184	54,009	31.00
Texas.....	10,517	9,452	1,065	11.28
Utah.....	127,600	118,517	9,083	7.66
Washington.....	18,056	6,529	11,527	176.55
West Virginia.....	72,763	62,674	10,089	16.11
Wisconsin.....	146,409	134,322	12,087	8.09
Wyoming.....	3,125	467	2,658	583.81
Totals.....	3,650,351	3,050,135	600,216	19.67

A Convention in the Wool Interest.

A meeting of wool men in this city on Friday last resulted in the issuance of the following call for a convention:

SAN FRANCISCO, Dec. 22, 1893.
At a meeting of the Wool-Growers and Wool-Dealers' Protective Association, held in this city this day, resolutions were adopted calling a State Convention of all persons interested in wool and woollens to be held in San Francisco on January 10, 1894, and the undersigned were appointed a committee to issue a call for the same.
The object of the convention is to publicly protest against the proposed Wilson tariff bill, now pending before Congress, which threatens the very existence of the wool interest on this Coast; to send delegates to Washington to lay before Congress the situation; to appeal to our delegation in Congress to vote for our interests and to use all honorable means to leave the present tariff as regards wool and woollens unchanged.
You are hereby requested and earnestly urged to attend said convention with all others who are favorable to the cause.
Jacob Rosenberg, Chairman; F. S. Moody, Secretary; John E. Shoober, James P. Hulme, B. P. Flint, Isaac R. Hall, Thomas Denigan, C. S. Moses, Committee.

Important to Alkali Land Owners.

TO THE EDITOR:—The great importance of an abundant and reasonably cheap supply of gypsum as a fertilizer is recognized everywhere. Although not a universally efficacious fertilizer like the phosphates, its favorable effect on the legumes—peas, beans and clovers, (including alfalfa)—is enough, alone, to give it a prominent place in agriculture. Its special importance in California is due to the fact (first announced from the State Experiment Station) that it is an effectual antidote to the "black alkali" that afflicts some portions of the State, where it impregnates the soil not so much in large continuous tracts as in spots varying from a fraction of an acre to several acres, where little or nothing can be grown, and which mar the continuity of fields, vineyards and orchards. Experience shows, moreover, that as a rule such spots extend their area as irrigation is practiced, invading bearing plantations of all kinds and causing loss and discouragement. Yet the fact that such lands when once reclaimed are profusely and lastingly productive, constitutes a strong incentive toward the utilization of the alkali lands, and renders the question of their reclamation for culture a very important one. The characteristic ingredient of "black alkali" being carbonate of soda, it follows that when gypsum is applied to land impregnated with it an exchange of chemical ingredients takes place, the soda being converted into "Glauber's salt" or sulphate of soda, while the gypsum becomes carbonate of lime, or chalk. Glauber's salt, with more or less of common salt, constitutes the "white alkali," which is rarely abundant enough in the soils to form a serious obstacle to their

slope of the third spur (from the main summit), in a deep canyon and quite 150 feet vertically below the highest outcrop, there is a long exposure of a regular stratum about 18 feet thick so far as visible. Whether or not there exists a solid mass of the mineral from this outcrop to the summit cannot be seen; should such be the case the mass would be enormous, but in any case the deposit is a large one, sufficient to supply the needs of the San Joaquin valley for a long time to come.

The samples collected, which of course are essentially "croppings," show the material to be very nearly uniform from top to bottom; a yellowish-white chalky mass, easily crumbled and therefore readily put in shape for farmers' use. Eight samples were selected to represent the outcrops on the crests of the several ridges, and also the one in the canyon mentioned above. The analyses of four of these gave the following results:

ANALYSES OF GYPSUM FROM PAOLI MINE.

	Gypsum.	Sand and Clay.	Moisture, Carb. Lime, Etc.
No. 1, from summit of main ridge	95.24	1.08	2.78
No. 5, from 2d spur, middle crest	94.74	1.52	3.74
No. 6, from 3d spur, in canyon	92.90	2.60	4.50
No. 7, from 4th spur, near road	82.27	8.21	3.75

These results render superfluous the analyses of the other four samples taken. It is probable that had the

The Fruit-Growers' Convention and the Nationalization of Railroads.

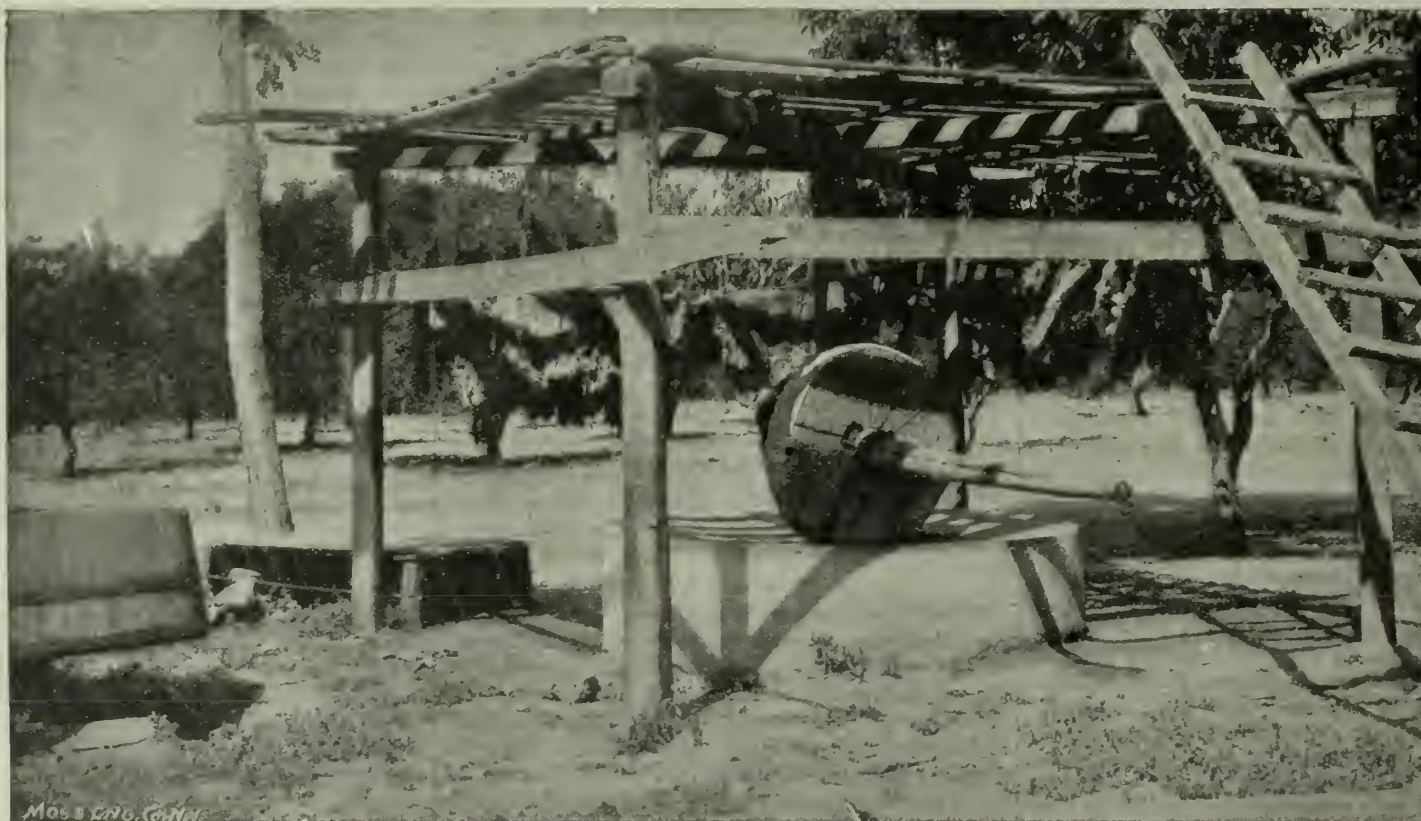
"Oh I wad some fay the giftie gie us
To see oursels as ithers see us."

TO THE EDITOR:—I have often met in life persons who speak and act as though a farmer's time were a thing of little or no value. It struck me that the leaders of our convention were a little disposed to acquiesce in that popular delusion. I was taught to regard every minute of time as of value. If you keep a convention of 240 members waiting only one minute there is a half day of valuable time gone. If you keep that convention waiting 30 minutes there is a half month gone. If you do this three times a day for four days there is a half year gone; and this, it seemed to me, was about what happened at the Los Angeles Convention.

Then, although there was much talk of the amount of business we had to transact, it seemed to me that the programme was by no means full enough; and some of those who were announced to read essays did not appear when called for, nor did they place their papers in the secretary's hands for him to read.

So pardon me, Mr. Editor and friends all, if, being impressed with the importance of my subject, I unduly "magnified mine office" as apostle of the nationalization of railroads.

As my motto above indicates, it is hard to see oneself just as others see us. But, as I see this transportation question, it is the question of all others for horticulturists to consider. Without cheap transportation horticulture on



OLIVE MILL AT CAMULOS, BUILT IN 1871—THE FIRST MILL AWAY FROM THE MISSIONS.

cultivation, being many times less injurious to vegetation than the carbonate of soda.

But gypsum acts not only as a neutralizer of the injurious effect of the carbonate of soda on the plants themselves; it is also of essential benefit in that it renders friable, and therefore tillable, the hardpan always formed in black alkali lands; moreover, it serves to retain in the soil the humus and phosphates which the soda has dissolved and which would be leached out of the land, to its great injury, if it were attempted to reclaim it by underdraining alone. These good effects have been verified in practice many times over, outside of the successful experiments made at the Experiment Station near Tulare. But until now gypsum—land plaster—has been rather too costly for general use on account of the heavy cost of transportation from a distance to the points where it is mainly needed, viz., in the upper San Joaquin valley; nor has quality of the material furnished been always satisfactory.

It is thus a matter of no little interest that a mine has been found and partially developed, which combines a location near the chief consumers of land plaster with an excellent quality of material easily mined and crushed for farmers' use. At the suggestion of Mr. John S. Dore of Fresno, the writer has lately visited the new mine and believes the results of the examination to be of sufficient general interest for immediate publication.

This mine is located in the ridges bordering the west side of the great valley, just north of Tome creek, and about five miles south of the Big Panoche. It was discovered in 1892 by Mr. J. H. Hall, of Selma, and is owned and worked by the Paoli Gypsum Company, of Selma and Mendota, Fresno county; the location being about 18 miles W. SW. from the latter station.

The main ridge, on which the gypsum appears at the highest level, extends about 2000 feet along the creek, to which it falls off steeply. Toward the north there extend from this ridge four spurs, from one-third of a mile to one mile long, on the crests of which the gypsum crops out abundantly, with a gentle dip toward the valley. The deposit on the crest of the main ridge, where most work has been done, shows a thickness of at least 30 feet, but its lower limit has not been exposed. At the foot of the east

sample No. 7 been taken further from the surface, most of the sand it contained would not have been found, since the rest contain none like it. It is probable that the average of the deposit ranges above 90 per cent, since the only one of the samples taken in the mass of the deposit (No. 1, from the main workings thus far done) is the highest of all, and, counting out the two per cent or thereabouts of atmospheric moisture, is probably equal in purity to any thus far found in quantity west of the Sierra Nevadas. Selected portions of the deposit will undoubtedly be available for burning into plaster of Paris for builders' use.

It is thus obvious that whenever this mine shall be worked on a proper technical basis, the other mines now supplying plaster will have to look to their laurels in competition with it.

It is proper to suggest in this connection that gypsum, like all other fertilizers, should be sold on a basis of a guaranteed percentage of the pure substance, and not simply by weight or measure. We have repeatedly heard of what has been bought for gypsum failing to produce any effect on black alkali, and have traced the cause to material bought for "land plaster" which contained little or no gypsum. In this matter, as in the fertilizing trade generally, the need of State control and inspection such as exists in the majority of the States of the Union becomes more and more apparent. The experiment station is compelled to decline any responsibility as regards the materials actually furnished the farmers by dealers or manufacturers, even though samples of what purports to be the same material may have been analyzed here and such analysis may be attached to the packages. While we have reason to believe that the fertilizers supplied by reputable houses in California are what they are represented to be, to a degree unusual in States not exercising supervision, yet the impositions that are occasionally practiced tend to discredit not only those directly responsible, but to damage the fertilizer trade at large, and discourages the free use of the bona fide articles by farmers. This is a case in which even the anti-paternalism of Secretary Morton must yield to what has been proved to be the only practicable solution of the question of "fertilizers true to name."

University of California, Dec. 26. E. W. HILGARD.

the gigantic scale attainable, and almost attained, in this State will result in hopeless bankruptcy, and become a thing of the past.

Nor is this transportation question confined to the horticulturist. Every class is interested. The chairman of our convention asked a speaker how the railroads could be nationalized. Had the question been directed to me I should have replied that in my opinion the matter was not so beset with difficulty as the public is led to suppose. United States bonds, with interest at 3 or 3½ per cent, could be given in payment for the roads at appraised valuation. These bonds could be payable in the year 2000 A. D., and then, if need were, be renewed. The property would be worth ten fold more then than now, unless Americans are of suicidal intent as a nation. The annual profit would certainly pay the interest, and also, if necessary, provide a sinking fund for bond redemption.

Then, as to the argument of the appalling addition of power to our already too potent "political machine," I should simply suggest the common-sense expedient that all officials hold office during efficiency and good behavior.

Lastly, as to whether now is the opportune time to discuss and decide this question; I know with some

"Thet now ain't jest the minit
Thet ever suits exact'ly when we're in it."

With me, however, "now is the accepted time." And I think most business men

"don't need be told
That now's the only bird lays eggs of gold."

Every year's delay foots up a bigger bill. Every year's delay gives our vast corporations a firmer seat in the saddle. Every year makes their yoke more galling, their burden heavier, their political pull stronger. Even now it appears men are afraid to speak their honest opinions for fear of offending the millionaire oligarchy who dictate as to whether a nation—a free nation—shall enjoy the privilege of buying and owning its own roads. Meanwhile nations whom we are prone to consider much inferior to our worshipful selves, such as Chili, Brazil, Germany, Belgium, Australia, etc., already have done what we are taught to say is impossible and impolitic. "My brethren, these things ought not so to be!" EDWARD BERWICK.

HORTICULTURE.

Tropical Fruits in California.

At the last meeting of the Southern California Pomological Society, Mr. J. C. Harvey of Los Angeles read a carefully prepared essay which will be read with interest by all horticultural amateurs at least, and every commercial fruit-grower should be in certain senses an amateur. We are glad to put these facts on record in our columns:

Tropical fruit culture presupposes a set of climatic conditions somewhat different from those prevailing in even the most favored section of southern California. No country, properly speaking, can be said to have a tropical climate, whose mean temperature for the three coldest months of the year is less than 65° Fah.; the knowledge of this fact has doubtless deterred many from any attempt to cultivate tropical fruits. Within certain limitations, however, many tropical plants develop unexpected powers of adaptability, or perhaps more correctly speaking, powers of endurance, the plants remaining dormant during the coolest weather, through which period root action practically ceases. If, owing to favorable conditions of soil, freedom from frost or other local causes, this period of inactivity be not unduly extended, the vigor of the plant remains unimpaired, and with the return of higher temperatures root action and consequent growth again commence.

Before proceeding to enumerate such fruits as appear to hold out a promise of success, it will be essential to consider the localities best adapted to their culture. Most of us have no doubt observed, on ascending any moderate eminence during the coldest of our December or January nights, a very perceptible increase of temperature. In many instances this is the difference between a killing frost in the adjoining hollow and total exemption on higher ground, from which we are taught to avoid low-lying areas. It is almost needless to say that a southern exposure with a reasonable slope will be warmer than one toward the north, while if the more favorable situation is still further fortified by adjoining mountains to the north, or even substantial windbreaks, so much the better.

The character of the soil is of almost equal importance. Heavy adhesive soils, underlaid by rock or hard pan, afford poor drainage and become excessively cold and sodden during winter rains, causing the destruction of the roots of most tropical plants. As the result of my own experience and observation, I am inclined to the opinion that a granitic soil, carrying considerable vegetable humus of good depth to insure perfect drainage, offers the best possible conditions.

Commencing at a point somewhere near Crescenta Cañada, and extending eastward close to the base of the Sierra Madre range, there are many situations where at most but the slightest frosts occur, and then only at long intervals. The lands along the base of the Cabuenga hills enjoy equal immunity from frosts, and doubtless as much can be said for certain areas in San Diego county. The lands in the Montecito, near Santa Barbara, are also peculiarly sheltered. No arbitrary distinctions can, however, be made, and no doubt there are other places entitled to the same recognition for comparative exemption from frost. I think the total area where it can truthfully be said that frost never occurs is very limited indeed. The area where very slight and infrequent frost occurs is of course much larger; it is, therefore, only with such locations that we propose to deal—always providing that a water supply be at hand.

Taking up the Alligator pear: It is proper to say that this fruit is not in any way related to the pear, though it bears some resemblance in form. Botanically it is *Persea gratissima*, which, with its allies, forms a genus of *Lauraceæ*. It is a handsome evergreen tree, and, in the typical form, bears elliptical leaves from two and one-half to three inches in width, narrow toward the base, and about six inches long. In some varieties the new growth is of a reddish brown, ultimately becoming deep green. The fruits are pear-shaped, about the size of a Bartlett pear, and contain a single, rather large seed. When ripe, the skin, which is much thinner than that of an orange, parts easily from the pulp, which is of a moderately firm though buttery consistency, and forms, with lime juice or pepper and salt, one of the most delicious salads known to epicures. Indeed, the fruit is a perfect mayonnaise in itself. Few persons fail to like it, even at first, and in countries where it is common, is esteemed above all other vegetable productions, both by natives and foreigners alike. The pulp is quite rich in a bland and most agreeable oil, said to be very nutritious. The tree attains a height of from 25 to 35 feet, and forms a handsome object when liberally cultivated. I have found the tree a gross feeder; the roots are very abundant and rather coarse, of a light reddish-brown color, with white and very brittle fleshy spongy roots or feeding rootlets. Good-sized trees carry a large crop, which, after attaining a certain size, can be picked at intervals of a week or two extending over a period of two or three months, the fruits in each instance ripening in a week or ten days after gathering; and a very remarkable fact is that the quality or flavor of the last picking seems just the same as the first. There are two or three bearing trees about Montecito and one or more in Los Angeles. The fruit bears transportation well, if shipped soon after gathering. Alligator pears bring from 25 to 50 cents each in New York, San Francisco and Philadelphia.

Bananas have been grown here for many years, mainly as ornamental subjects; the fruit produced being of very poor quality, no doubt owing to the variety being inferior. In the tropics a good many sorts are cultivated. Some of the most delicious kinds are never exported, being too delicate to bear shipment. As to the possibility of growing a really good banana in the hottest and most sheltered places I have little doubt of, and for at least home use should receive more attention at the hands of horticulturists. Two years ago I ate delicious bananas at Montecito, the

product of imported plants of the varieties known as Hart's Choice and the Golden Tahiti. Both these varieties are greatly superior to the sort commonly found in gardens here. The banana requires, during its period of full growth in summer, plenty of water and manure, it being one of the grossest feeding plants in the vegetable kingdom; under such liberal culture it will fruit much earlier. Good strong suckers should be set early in April, and if grown with a rush during the same summer, the flower spathe should appear the following summer—it is important to accomplish this, as flowers appearing in winter or late autumn run a poor chance of developing the fruit during the winter. In ripening the fruit, much is gained by cutting the bunch when fully developed, as to size, but still green, and hanging it in a warm room; the starch in the fruit is quickly transformed into sugar and the aroma increased to a surprising degree. The Cavendish, or dwarf Chinese banana, also bears a good fruit and is much grown in the Sandwich Islands. I have seen plants growing at San Diego and Montecito, but I did not learn of any fruit having been produced.

The Cherimoya or Peruvian custard apple, the fruit of *Anona cherimolia*, is indigenous in the temperate Andean regions of Peru, and does not require a hot climate for its best development, though it is cut back with frost. The fruit when ripened off the tree has a fine aromatic flavor of a delicate consistency, very sweet with a trace of sub-acidity. Unfortunately the quality varies somewhat in varieties from seed. First-class fruit, however, is produced by trees growing on Mr. Jacob Miller's place in the Cabuenga, also at Santa Barbara and Montecito. Mr. Miller's trees are nine years old and have been in bearing for several years. Every spring for the past three years he has kindly sent me a few fruits, and having eaten the cherimoya in the tropics, I can unhesitatingly pronounce those grown on his place as excellent. Several parties in the Cabuenga, appreciating this fact, have set out a number of trees. I think there is no doubt a moderate production of this fruit would bring fancy prices.

The strawberry guava, or botanically *Psidium cattleianum*, is now pretty well known and can hardly be classed as a tropical fruit. I desire, however, to call your attention to what is known in Florida as the Yellow Cattley. This plant, out of fruit, can hardly be distinguished from the strawberry guava, as the foliage is the same and the habit of the plant identical, forming an arborescent shrub. The fruit, however, while the same in shape and size, is of a brilliant yellow color, and in my opinion is superior to the strawberry guava. A certain acidity, more or less common in the skin of the strawberry guava, is quite wanting in this yellow variety. I observe that in one of the bulletins of the Agricultural Department this yellow form has been given specific rank, under the name of *Psidium lucidum*. This plant, species or variety as may be, is quite as hardy as the strawberry guava and is well worthy of more extended culture. The strictly tropical guavas are much tenderer, producing larger fruit, and in many varieties, some with round fruit, yellow with pink pulp, emitting a powerful and to some persons disagreeable odor; some with quite a tart flavor, while still others lack acidity wholly and are quite sweet. This section offers quite a field for trial. Personally, I am much interested in them, and have raised a collection from seed received from different tropical countries for trial culture. The guava is a good wholesome fruit and makes excellent jelly, especially the varieties of *Psidium guajuba*.

Another little known fruit is the product of *Casimiroa edulis*. This tree endures slight frosts unharmed. It is indigenous in northwest Mexico and is remarkable among the *Aurantiaceæ*, producing green colored flowers, and superficially bears little resemblance to an otherwise well marked order of plants. The fruits are the size of apples, and are esteemed in that portion of Mexico where it is common; according to some botanical authorities it is not considered altogether wholesome, possessing narcotic properties. The pulp is described as possessing a delicious, melting peach-like taste. An interesting account has been published in a recent number of the *Gardeners' Chronicle* of the fruiting of this tree for the first time in one of the gardens of the Riviera in southern Europe. Commenting editorially, doubts are expressed as to the narcotic properties of the fruit owing to its Rutaceous affinities. The tree grows well with me as raised from seeds received from Vera Cruz.

The most of us are no doubt familiar with the Litchi as distributed in a dried state by the Chinese. This fruit is the product of a tree belonging to a genus of *Sapindaceæ* known as *Nephelium litchii*, and is confined to southern Asia and the Indian Archipelago. I have eaten the fresh fruit at Singapore, and thought it pleasant and refreshing; it is certainly consumed in enormous quantities in southern China. The tree is an evergreen and does not attain a large size, seldom exceeding 18 to 20 feet, bearing alternate, pinnate glossy leaves with panicles of small flowers at the ends of the branches, producing bunches of globular warty-skinned fruits; each fruit contains a single seed covered with a fleshy arillus which is the edible part. The fruit varies much in quality as grown from seed, and is grafted by approach or inarched by the Chinese. Imported grafted plants are offered by importers of Chinese and Japanese plants in San Francisco. A good healthy young tree is growing at Mr. Kinton Stephens' place at Montecito, and a large and equally vigorous one on the grounds of the Park nursery at Pasadena. I think neither of these plants have yet fruited, however there is no doubt the tree will flourish in sheltered places in southern California.

Taking up the Eugenias, a genus of myrtaceous shrubs and trees, we have a large field for experiments. Many species bear more or less valuable fruits. *Eugenia Mitchellii* flourishes with Mr. Kinton Stephens at Montecito. This species is said to be extensively cultivated in the West Indies under the name of Surinam cherries, and is considered a desirable fruit. *E. jambos*, the rose apple, grows well in Los Angeles, though not yet large enough to fruit. Baron Von Mueller, in his excellent work on select plants

for extra tropical countries, enumerates thirteen species of Eugenias more or less valuable for their fruits. Another myrtaceous shrub from the Nilgherry hills of southern India, known botanically as *Rhodomyrtus tomentosa*, bears abundantly edible berries about the size of gooseberries. This plant succeeds in Florida, and no doubt will flourish here, not requiring a tropical climate for its development.

I further desire to mention a most interesting experiment being conducted by a Mr. Rapp, a resident of Cabuenga foothills, who has perhaps 100 pineapple plants growing on his place. When last I visited him several of the plants were in flower, and quite a number were set with fruit in various stages of development. It will be very instructive, not to say valuable, to know whether the quality of the fruit produced will prove good. I can say, however, that the plants were in vigorous health, certainly as promising as any I have ever seen, even in the tropics; they are growing in the open ground, wholly unprotected and without shade.

Some reference should be made to the mango, by many considered the king of fruits. He who has not eaten of Bombay mangoes knows not what a mango is. I wish I could be more hopeful regarding this fruit, but for some reason the plants do not flourish with me, even during summer. It is worthy of note, however, that Mr. Stevens of Montecito has a young tree on his grounds which has borne a few fruits, so that one may take heart of grace and try again.

Aberia caffra, the Kai apple of Natal and Caffraria, belonging to the natural order *Bixineæ*, bears edible fruits the size of small apples. They are, however, very sour, but make good preserve. The plant is much grown for hedges in Natal; being densely clothed with dry, strong spines it forms an impenetrable hedge. I have found the plant sufficiently hardy and have noted a good plant at Montecito.

The preceding list embraces only such tropical fruit plants that are known to me to have received actual trial culture in southern California, but in such a limited degree that I have felt justified in calling the matter to your attention in the hope of stimulating further interest in the subject.

Pruning the Lemon.

At the last meeting of the Southern California Farmers' Institute, Mr. I. C. Wood, of Ontario, gave his experience in pruning the lemon as follows:

I came into possession of a lemon grove in June, 1890. It had then been set six years and had very fair care so far as plowing, cultivating, irrigating, etc., is concerned, but very little pruning. The varieties were Lisbon, Eureka, Genoa, together with a half a dozen Villa Francas. The party of whom I purchased was a finicky sort of a fellow that believed severely in the let-alone policy, consequently the trees had been allowed to grow at will. Many of the trees were full of dead, scraggy spurs, and others had suckers one, two and three years old that had started out from the main branches, shooting straight up through the tree, often 10 or more feet in length, with a few branches and leaves way up on top, and often several fruits in their various stages of development, catching every breeze, swaying backward and forward as though the exercise was necessary for the proper health and development of the product. I found, on gathering the fruit that had reached the proper sizes, the specimens on the fish-pole like branches were, as a rule, rough and irregular in shape, skin thick, fluted or corrugated, and quite generally seedy, while those that come from the lighter growth and from the spurs closer to the larger wood were invariably smooth skinned, more rounded in shape and more even in size.

I was told that it would not do to prune heavily, especially the Eureka and Genoa, because they are outward bearers and the results of pruning would be to cut off the bearing wood. The argument seemed a little feasible, as the Eureka in its natural habit seems to force its growth to the extremities, which, if let alone, fails to push the buds along the stems, and finally become barren of foliage and branches except at the ends, which also accounts for their bearing on the outer branches, and would seem an argument in favor of not pruning for fear of loss of crop. In the case of my orchard something had to be done, as I could not afford to grow half culis; so the first operation was to remove all dry and sickly spurs and branches and all fish-pole like suckers that were not needed to fill up an open space on the tree, and those left were cut back often three-fourths of their length, so as to take a lower start. Probably a hundred boxes of fruit were sacrificed by this first pruning. In early November of that season we had a severe wind and sand storm. Many trees on the side toward the storm were partly denuded of foliage; then it occurred to me it was a good time to complete the shaping process in the way of pruning. All trees at this time were carefully gone over a second time and rounded in; many wagon-loads of trimmings were consigned to the brush heap. The following season the trees grew beautifully, forming fine, compact pyramidal masses; the blossoming and set of fruit was comparatively light, except on the small branches and spurs on the inside of the trees; the trees for the season possibly did not average more than a box apiece, but it was all first-class fruit. Pruning from that time has been followed up continuously, but necessarily much lighter—confined to straggling branches and those of too rampant growth.

Now, what is the result? The fruit gathered from these trees is uniform in shape and size, smooth-skinned and seedless. We are not bothered with rough, irregular specimens, or with fruit ripening up before the proper market sizes are attained. The heavy wood is kept largely on the inside of the tree out of the sun as much with the Eureka as with the Lisbon. We have none of the small yellow fruit to speak of that requires picking before it reaches the market size, and there are, comparatively speaking, no culls or waste as there always will be where trees are allowed to grow at will. As a proof of what I say as to the fruit produced under this rigid system of pruning,

the fruit from this orchard was shown at the Los Angeles Citrus Fair in 1892, and took first prize on best box of Lisbon and best box of Villa Franca, and second prize on best box of Genoa. Again, at the citrus fair held at Colton, fruit from the same orchard took first prize for best display of lemons, also first prize for best 30 lemons. The trees picked the past season have averaged about five boxes each.

FRUIT MARKETING.

Suggestions on Fruit Handling.

At the meeting of the Placer County Horticultural Society held in Penryn last week, an interesting paper was read by Hon. A. P. Hall upon the subject of picking, packing and shipping fruit. We reproduce the parts which are of general significance, as follows:

The subject which has been allotted me covers, excepting in planting, almost the whole fruit industry; for, as soon as the trees come into bearing, the picking, packing and shipping begins. It is a fact recognized by all that only the best varieties of fruit should be shipped, and to attain that end only the best varieties of fruit must be planted. The fruit, then, having attained a certain degree of ripeness—which must be determined by its color, size and degree of hardness required for marketing—the picker goes to each tree of the variety sought, selecting such as seem suitable. Having laid the fruit carefully into the basket, and as carefully into the bins, if it is to be packed from bins—the care being necessary to prevent bruising—for the least bruise will be the starting point of decay. To prove this, place a bruised peach beside one free from bruise and note the keeping qualities of each. Having placed the fruit within convenient reach, the process of wrapping in paper and packing into boxes begins.

This requires no small amount of skill and experience; some with years of practice never acquire the knack of the expert. The end to be attained in packing fruit is to have the package or box attractive by being neatly done and so firmly pressed together, that, although it is vigorously shaken, there will be no displacement of the fruit. This is necessary, as fruit always shrinks a little in the course of a few days, and when it reaches its destination may be very loose and unsightly, thereby losing much of its attractiveness, which is a prime factor in marketing fruits. But the best of packing will not compensate for poor or undersized fruit. The ordinary grower will usually pack what he picks; if he brings in fruit not up to the honest requirements, somehow that fruit will find its way into the boxes for shipment, and strange as it may seem, the smaller fruit always proves to be heavier than the larger, for it always settles to the bottom of the box. I have noticed the same peculiar and unphilosophical condition in bags of potatoes exposed for sale.

This is one unsatisfactory thing which is noticeable in the shipment of inferior fruit—the inferior will always pull down the rating of the superior, so that the grower who strives to ship only first-class fruit is unable to get the price he otherwise would were there no inferior fruit in the market, so, in the end, it would be best, no doubt, to ship but one class of fruit, and that the first class. Shippers have been somewhat to blame in the past for buying fruit without thoroughly examining it. This, I am aware, is very difficult to do in the rush and jam of the busy season; but it works a hardship to the honest grower by rating his superior fruit to the same as the inferior. But these things will right themselves eventually.

There seems to be open two paths which lead to a solution of the difficulty before us—either to pack all fruits under the eye of a manager, which I have always claimed was practicable, though it is not necessary to explain it here, or to ship all fruit on its merits. This would be fair and just. When this is done the grade of fruit will be largely increased. So long as growers can obtain the same price for rather inferior fruit as for a superior, there will be no incentive to raise a higher grade; but when good prices only come from the sale of the best fruit, every one will strive to produce it. This, I believe, is a logical solution, the truth of which we must all admit.

To be an honest grower of fruit as well as to be honest in many walks of life requires moral courage—first in pruning, next in thinning out, and lastly in the packing of fruit. There are probably very few fruit ranches in the county in which there are not some trees that produce inferior fruit, and yet they are allowed to remain because at present inferior fruit is preferred to a three-years-in-the-future fruit. And so in thinning. Every year he fears he is wasting too great a proportion of his crop, only to discover later on that he has not wasted half enough. And so in wrapping, the temptation to put in a fine looking peach with a little defect in it, or an under-sized one, is, perhaps, too great to be withstood. In packing fruit I think a good rule would be to pack each box just as though we were going to purchase it for our own use. I fear too often we ease our conscience with the reflection that our fruit is quite as good as our neighbors', and, constituted as we are, is it any wonder that some of us are persuaded to follow such faulty reasonings? And yet there are just two ways to follow—the right and the wrong way, and the right way is the only path that leads to sure and permanent success.

There should be a friendly rivalry between all growers, each striving to outdo the other in the quality and condition of fruit shipped, and each endeavoring to make his own brand superior in some respect to all others. This would eventually raise the standard of our fruit and we would win the recognition and fame for the best and most sought for in the market.

The condition of fruit when picked is a very important consideration. I believe, as a rule, sufficient attention is not given to it—some being much too green—for beyond a certain degree of greenness it will not ripen, but will be-

come soft, insipid and unpalatable, and is intended to disgust the purchaser at the other end of the road.

It is due to the grower that he should know how long his fruit will be on its way to its destination, as that will determine for him the degree of ripeness required. We must not console ourselves with the reflection that we have done all our duty when we have placed our fruit upon the cars here, whatever its condition—the important part is its condition at its destination, whether it shall be sold for freight or at a profit. We must remember that we cannot force our fruit upon the consumers in the East. If it is not fairly good they will reject it, so by some means it must be placed before them in such a condition as will be fairly acceptable, at least. This part of the subject is an all-important one, and, notwithstanding, it is worn somewhat threadbare by frequent journeys across it and through it, yet it cannot be too strongly impressed upon all.

In treating the subject as a whole, I have touched more particularly upon those parts which have to a great degree been either overlooked or disregarded and will be scarcely required by those who comprehend the importance of raising the fruit industry to that scale which its magnitude and importance demands, and I feel fully assured that the time is very near when the difficulties which have assailed the profitable marketing of fruit will be surmounted and the greatest and most important industry in this State will also be the most profitable to engage in.

Mr. Hall concluded with considerations especially pertinent to the local fruit interests of Placer county.

Chicago Fruit Sales.

J. Ross Trayner, manager of the Sutter Fruit-Growers' Association, recently returned from a trip to Chicago and the World's Fair, Kansas City, Denver and other Eastern points.

"I went East," said Mr. Trayner to a representative of the Marysville Appeal, "for the purpose of studying the problem of marketing and transporting our fruit products, and incidentally to see what I could of the World's Fair. I spent only a few days at the fair, most of my time in Chicago being taken up with work in the big fruit-auction houses.

"I was enabled to observe the methods of handling and disposing of California fruits; some several cars of grapes from this immediate section arrived while I was there, and I inspected the packages immediately upon the opening of the car, saw the fruit sold and checked the quotations as they came from the auctioneer. One particular car, that was loaded after I started East by two or three growers here, that I saw opened, was in a bad condition, the grapes being very moldy; the prices at which they sold were, of course, very small, but it surprised me that they brought anything at all, on account of the poor manner in which they were packed. Six other cars of grapes were sold the same day, but they were better packed and brought better prices than the particular car I mention.

"I made a close investigation of the auction method employed by the Porter Brothers Company, the firm that handled our fruits the past season, and I am satisfied that the growers receive every cent as much for their fruit as if it had been sold in any other manner or in what are called the open auction houses, and I am surprised that there should be any such opposition as has been shown to the system used by the Porter Brothers Company. As a matter of fact it is not a closed auction system. The first day I attended the auction I was entirely unknown, and there was no objection made. I was given a catalogue, inspected the fruit and noted the sales, and I believe could have purchased any quantity of it had I wished to. The best trade buy at these auctions, and, as matters now stand, it is the best system that could be employed. I spent a number of days in Kansas City and Denver and became quite thoroughly posted on the methods used in those cities.

ENTOMOLOGICAL.

Advice to Bug and Fungus Killers.

The experiment station of the University of California has just issued a neat folder for use in its correspondence relative to plant protection from insects and fungi. It is written by Prof. C. W. Woodworth, the instructor in these subjects. The brief statement of successful treatments should be available to all our readers, and we quote from the publication as follows:

For powdery mildews, use sulphur, dusting it on the plants.

For fungi in general, use Bordeaux mixture, made as follows: For every ten gallons take one pound of lime and one pound of bluestone. Dissolve these separately in hot water and mix when cool, adding the rest of the water. Spray on the plants. Or spray with ammoniacal copper carbonate solution, made as follows: Dissolve one ounce of copper carbonate in six ounces of ammonia and add ten gallons of water.

For fungi and scale insects, use lime, salt and sulphur mixture, a winter wash composed of lime 8 pounds, salt 3 pounds and sulphur 4 pounds, for each 12 gallons of water. Mix one fourth of the water, one-fourth of the lime and all the sulphur, and boil for one and a half hours; put the salt with the rest of the lime and slake with hot water; add to the above and boil half an hour longer; add the remainder of the water and apply as a spray.

For scale insects, use resin soap, as follows: For 100 gallons for summer use take resin 18 pounds, caustic soda (98 per cent) 3½ pounds and fish oil 2½ pints; for winter use, resin 30 pounds, caustic soda 6¼ pounds and fish oil 4½ pints. The material is put in a kettle and covered with four or five inches of water. The lid is put on and the mixture boiled two hours or more, and then the rest of the

water is added, a little at a time. Spray on the plants. Or use the gas treatment: Cover the plant with an oiled tent, and for each 100 cubic feet of contents place in a bowl beneath the tent two-thirds ounce of water, one-third ounce of sulphuric acid (oil of vitriol) and one-third ounce of potassium cyanide (58 per cent), being careful not to inhale the poisonous gas nor to allow it to escape from the tent for a half an hour. The leaves may be injured if used during the middle of the day.

For insects in general, use kerosene emulsion, as follows: Make a soap solution of half a pound of soap to a gallon of water. Heat it to boiling and add two gallons of kerosene. Pump it through the spray pump, with good pressure, for five to ten minutes. For use, add ten times as much water as you have of emulsion. Apply as a spray. Sour milk may be used instead of the soap solution. The emulsion is made more effective by the addition of a very small amount of arsenic to the soap solution, or of buhach to the kerosene.

For fruit or leaf-eating insects, use Paris green or London purple as a powder at the rate of one to five pounds to the acre, distributed by walking or riding over the field, carrying a pole, at both ends of which are hung muslin bags containing the poison. As a spray, use 1 pound to 200 gallons of water. In spraying these arsenites, the nozzle should be held at some distance from the plant, and no more should be applied after the leaves begin to drip. Do not use these on crops where the poison would be injurious to health.

THE FIELD.

Advice to Grain-Growers.

Mr. C. T. Hinde, of San Diego, gives the following advice to southern grain-growers: In reply to your inquiry regarding the quality of the wheat crop for southern California, and the means to remedy the faults in the quality of grain produced, we find that all the white wheats grown close to the coast are very dark in color, and that it is a rare thing to find grain which is not badly mixed with barley, oats and weed seeds. With the most careful grading it is impossible to make up a cargo equal to No. 1 shipping wheat of the San Francisco standard. The white Russian (a red) wheat is usually of much more even grades and better color, though the same criticism about the mixture of foreign seeds applies to this kind of wheat also.

As to the remedy, we would suggest that farmers secure the cleanest, plumpest seed possible, even if they have to pay \$2 or \$3 a ton more for it, as the additional expense on say half a sack per acre of seed used is a mere bagatelle as compared with the enhanced value of the product of say 20 sacks per acre. It would pay to import seed from the Sacramento valley in order to get a better start, as we think that after a few seasons of growth in southern California the character of the wheat changes materially. It would be better if farmers, even after finding a clean lot, would have the seed wheat thoroughly cleaned. In selecting varieties, we would suggest that the white Russian wheat be grown on farms which lie near the coast. The yield per acre is perhaps not as large as Defiance, but the quality produced, we think, will command enough better price to cover the difference, and it is a safe crop as regards rust and smut. Defiance wheat gives a good yield per acre, but is not a white wheat; it is an amber, and cannot command the price in consequence. It grows well and makes good hay and is safe from rust. The best wheats for inland farmers are the white Australian and Propo—both are tender and liable to rust, and the seed must be thoroughly bluestoned, but with careful farming will always command top prices.

In plowing we cannot emphasize too much the necessity of feeding the horses wheat hay and rolled barley. Where barley hay is fed the horses will do voluntary seeding and deteriorate the product and lower the selling price accordingly. Plowing must be deep and thorough—it is not enough to scratch the surface and leave the rest to nature, as she invariably favors weeds unless they are buried deep.

In conclusion, we would like to say that we are in position to pay the full San Francisco prices for choice wheats, and where we pay less it is entirely owing to the fact that the wheat will not grade up to the standard.

It is just, however, to mention that W. Newport, of Perris, and A. Cochran, near Murietta, and a few others are careful in reference to seed and other matters outlined above, and have good, clean grain every season, for which they always secure the highest market prices.

Potato Show at the World's Fair.

One of the most instructive exhibits at the World's Fair, writes the *Ohio Farmer*, was the New York State potato show. It was, perhaps, the finest in every respect at any exposition. There were 300 varieties of potatoes, exhibited by 600 growers, located in the 22 counties of the State where potatoes are a leading crop. These potatoes were grown by contract in counties that produce annually not less than one million bushels.

The exhibit, as a whole, was a valuable object lesson to potato-growers everywhere, furnishing a solution to the vexed question, "What number of eyes to the hill will produce the largest returns of marketable potatoes?" The test reveals the fact that one eye produced the largest potatoes, while three eyes yielded the largest number of pounds of marketable tubers. For example, on a given piece of ground, planted with but one eye to the hill, the yield was 660 pounds of uniformly large, smooth potatoes, with no small ones. On a piece of ground of the same size and similarly treated, with two eyes planted to the hill, the yield was 770 pounds of merchantable potatoes; and on

another strip planted with three eyes to the hill, the yield was 953 pounds of good merchantable potatoes.

The hill tests were intended to show the possibilities of potato-growing under extensive cultivation, and revealed some remarkable results. For instance, the Early Maine yielded at the rate of 1100 bushels per acre; Dutton's Seedling, which is very large and adapted to poor soil, yielded at the rate of 900 bushels per acre, and Chicago Market, 574 bushels per acre.

In nearly every instance where a large yield was reported high grade commercial fertilizer, valued at \$2 per hundred, was sown, and not infrequently as much as 600 pounds to the acre was applied. It is only fair to say that the Early Maine variety, which produced so enormously, received especial care and attention. In addition to the liberal application of high grade fertilizers, the potatoes were regularly irrigated. Such treatment, of course, would not be practicable with the average farmer, but it emphasizes the fact that it is not the cost of production that counts, but the profit over and above the cost of production. If an application of 600 pounds of fertilizers per acre, costing \$12, will add to the yield 100 bushels of potatoes, worth \$60, it will certainly pay to use fertilizers.

Apropos, I may mention the extraordinary results obtained by the celebrated Frenchman, Girard, that is exciting the French and English farmers to-day. He has produced as much as 600 bushels of potatoes per acre over large areas. His plan is, briefly, to plow six inches deeper. Of fertilizers, he applies from eight to twelve tons of manure to the acre, together with 250 pounds of superphosphate and 200 pounds of sulphate of potash and adds a dressing of 200 pounds of nitrate of soda.

THE VETERINARIAN.

Equine Lockjaw—Its Causes and Cure.

Lockjaw, properly called tetanus (from *tetano*, "I stretch"), is of two kinds; first, traumatic lockjaw or lockjaw that is caused by a nail or some injury; second, idiopathic or rheumatic, which attacks an animal from some unknown cause.

Lockjaw is a tonic spasm of the voluntary muscles of the entire system. In lockjaw the masseter muscle may become contracted, thus locking the jaws. When the jaws are locked it is called *trismus*. A horse may have a very severe attack of tetanus (lockjaw) and yet be able to eat, but in the majority of cases the jaws are completely locked. Lockjaw is caused by an irritation of the periphery or ends of the nerves.

Traumatic lockjaw is the most common kind. It follows nails, wounds of all kinds, splinters, sore neck and back. A very common cause of lockjaw is a sore tail, made so from an ill-fitting crouper. Where a horse is injured by a piece of wood and the splinters left, it is no matter how small they may be, lockjaw is almost sure to result. Any kind of a wound or bruise, if not properly attended to, may result in lockjaw. This result, as a rule, will not occur where pus or matter freely flows after an injury. It will not occur until the wound is beginning to heal. If a horse is castrated in cold weather this disease is more likely to result than if the horse was cut in warm weather. This disease is more common in the Eastern States, where the weather is very severe and so many horses have their tails docked and nicked.

The idiopathic or rheumatic form of this disease is where lockjaw occurs without any apparent injury and a most searching examination of the body fails to reveal the most minute injury or abrasion. If a horse is chilled or left out in the cold rain, or driven violently during a rainstorm, it may result in lockjaw. Being warmed and left standing without blanketing on a ferryboat is many times traced as the cause of this disease. It is not a contagious disease and there is no danger in keeping a horse with lockjaw among other animals.

Symptoms of lockjaw come on very suddenly. The horse is found in the morning stiff in its movements; the disease commences with a localized spasm; there is a stiffness about the animal; nose extended as if throat was sore, nostrils dilated, tail slightly elevated and carried to one side, legs stiff and wide apart, hind legs as a rule straddled; in turning they move as if made of one piece with no joints; backing performed with great difficulty; the teeth are set, you cannot separate them; the jaws may open slightly; as a rule saliva is thick and ropy and constantly discharging, covering the manger with it; the muscles are very hard, particularly the muscles of the neck. A positive symptom of this disease, and one so easily detected that a person not familiar with horses can easily detect a case, is that if dirt or chaff or some other foreign bodies drop into a horse's eye the haw or *membrana nictitans* will be seen to shoot over the eye, clearing it; or, poke your finger in the eye and this membrane or finger will be seen to shoot over to protect the eye. Now if any doubt exists as to the horse having the disease, take hold of the halter under the jaw, watch the eye and suddenly raise the head; when this haw or membrane will shoot over, covering or partly covering the eye, then you will know it is a case of lockjaw. In no other disease is this symptom present, so this then is the positive symptom for the detection of this disease.

Lockjaw is entirely a nervous disease; the animal is very excitable, in fact the slamming of a door or the sudden appearance of a stranger will set it into convulsions. The back is slightly curved up or down, or may be curved sideways. No fever is usually present, although some cases may exhibit more or less fever but of a slight degree. As a rule an animal will die in four or five days, but sometimes they live longer. This disease in former times was considered incurable, but now the disease is easily cured if taken in time. It takes from three to five weeks to cure a

horse of lockjaw, and when they recover they are just as sound and good as ever.

Treatment is very important, for the slightest mistake means death. First get them in a dark stall, as dark as ink if possible. Have a beam in the center of stall to which a block and tackle has been attached. Have a good strong pair of slings handy and ready for instant use; have a bucket of fresh cold water constantly in stall where he can reach it without stooping, but do not have it too high. It is impossible for them to stoop without falling; if they lie down it is impossible for them to get up; they beat and thrash about the stall beating themselves to pieces and going into convulsion after convulsion until death relieves them. It is in this emergency that the slings are to be used. As soon as they get down immediately put the slings under them and raise them to their feet. It will be necessary to raise them to their natural height before they can stand as they will be as stiff as a saw horse and just as helpless. Have only one man to care for the horse; under no circumstances are strangers allowed to see him. Above all things do not allow them to peep into the stall thinking that the horse will not know; the horse's nerves are so extremely sensitive that even a finger pointed at him will set him in convulsions. Apply no liniments or counter irritants to the spinal cord as some veterinarians recommend. This will complicate the case. Hot fomentations would be very beneficial but the excitement you would cause the horse in applying them would cause more harm than good. Keep the animal blanketed.

If possibly the cause of the lockjaw is from a nail then the shoe is to be removed; the foot carefully pared with as little excitement as possible. Give a good free opening for the pus to escape, wash and soak the foot out in a 3 to 1000 solution of warm bi-chloride of mercury, then poultice with a warm flaxseed poultice in which has been sprinkled a solution of belladonna.

Internally the following powders are to be given three times daily:

Bromide of potash.....	4 1/2 ounces
Nitrate of potash.....	9 ounces
Chloride of sodium.....	1 ounce

Mix and divide into 36 powders and give three powders daily. Dissolve in water and with a small rubber syringe inject on the tongue. Take time and care in administering; push the syringe through next to the bridle teeth, no matter how tightly the teeth are closed a passage for medicine is easily found. Give, as nourishment, two eggs, one pint of milk, one-half cup of whisky three times daily by the syringe and through the bridle teeth. In the drinking water a couple of handfuls of oatmeal will be of great benefit. After the teeth get slightly parted vegetables and carrot tops and easily digested food are recommended.

If the lockjaw is caused by injuries first see that all foreign bodies are removed, then thoroughly cleanse and antisepticise the wound and use iodoform ointment dressings. Don't use any medicines that will irritate the wound; on the contrary, use soothing lotions and preparations. The main treatment of all is to treat and remove the cause of the disease, and the symptoms will take care of themselves.

Many veterinary surgeons wonder why a few succeed and they make failures. The cause is very plain: They treat the symptoms in place of devoting their energies to the cause of the disease. Opium, belladonna, chloral hydrate, ether, chloroform, morphine and atropine, calabar bean, cocaine locally, amyl nitrate, etc., are drugs used by veterinarians, but with no success. My extensive practice has taught me that my success in treating these cases has been in using little or no medicine internally and enforcing the rule of quiet and keeping curiosity-seekers away from the stall. Never open a stall without saying in a low, gentle voice, "Whoa" Dolly or Prince or Dick or whatever the name may be. A sudden clanging of bolt, opening of door, will set the acutely sensitive nerves of the horse on tension, and this is the very thing to be avoided. Out of the number of horses treated by me for this disease, over 120 cases have been cured and are working every day at their different occupations; so this lesson will teach all who have valuable horses stricken with this disease that hope must not be abandoned, patience and care will bring the worst of them through.

The method in vogue a number of years ago was to tap the jugular vein, bleed the animals till they could hardly stand, then purge them as much as possible. Is it any wonder that in those days the disease was considered absolutely incurable? Many cases are on record where a horse suffering with lockjaw was led to the end of a wharf blindfolded, and three or four men suddenly rush and pitch the poor animal into the water. The bandage was so arranged that on leaving the wharf it would be removed. The exertions of swimming, the cold plunge and great shock and surprise have cured the animal, so the experts would claim; but later experiments have proven that this method would not cure lockjaw, and the person claiming to have cured the animal was probably mistaken in the disease and had made a wrong diagnosis. Horses are treated exactly like man. Imagine a human physician taking his lockjaw patient to the end of a wharf and pitching him in? Would a person imagine for one instant that this would cause a cure? If it would not cure a human being it surely would not cure a horse. Another method, and even used by some horsemen to this day for curing lockjaw, is to take a one-inch plank, blindfold the horse, put the plank to forehead, and with all the force imaginable, strike the plank one blow with a heavy sledge hammer. This would knock the horse down, and when he arose the jaws would be unlocked and the horse cured. This treatment is just as successful as pitching him into the river, but, as before mentioned, good horsemen will swear that they have cured bad cases instantly by this method. Other persons use wedges to pry the jaws apart, but medical scientists scoff at the idea of curing a horse except by the same treatment as is resorted to in human practice. The disease in man and horse, and naturally the treatment, must be alike. The best and most costly drugs are to be used; impress it on the druggist if stale and shopworn drugs are not good

enough for the human being they surely are not good enough for our noble animal, the horse.

Dr. E. J. CREELY, D. V. S.
510 Golden Gate Avenue, S. F.

THE STOCK YARD.

Wintering Young Stock.

Although in most parts of California the stock-grower does not have to deal with the severe winter conditions which prevail east of the Rocky mountains, we do have some wintry weather which is very trying to stock, although the thermometer holds rather high. Prof. C. C. George-son of the Kansas Agricultural College gives the following practical points on the above subject in the *Kansas City Journal*, which may be suggestive to our own people:

There is no such thing as a maintenance ration for young stock. Nature demands that they shall continue to increase both in size and weight until full grown, and the feed should be sufficient, both in quantity and quality, to enable the system to fulfill this law of nature. A maintenance ration is a ration which furnishes only nutriment enough to supply the actual waste of the body. The waste will vary with certain conditions. If the conditions require much exercise of the animal, then there is a greater destruction of tissues than there is when the animal is at perfect rest. If exposed to cold it requires more energy to keep up the natural heat of the body than is required by an animal warmly stabled, and this energy must come from an extra allowance of food, so what would answer as a maintenance ration under the most favorable circumstances would fail to meet the requirements under adverse conditions, and the animal would lose in flesh.

But, aside from this necessary amount to maintain life, young stock should be fed enough more to make constant additions to the body in the shape of uninterrupted growth. If the feed does not furnish material for such growth the animal becomes stunted, and no amount of subsequent feed or care will ever enable it to develop to the proportions it might have attained if it had been treated in accordance with the demands of nature during the growing period, and all farmers and feeders admit that the most unprofitable animals to handle, when they are to be finally fitted for the market, are the stunted runts. They give but a feeble response, in the form of gain, to the feed they consume; their digestive and assimilative powers are crippled. They are of all "critters" the most unprofitable, and lack of rational care, during the first two winters of their lives, is the most potent agency in bringing about this condition.

The kind of feed which may answer to keep a grown animal in fair condition is inadequate to meet the requirements of a growing animal. The latter must, in addition to maintaining life, make a regular increase in bone and muscle, and the elements which are required for that purpose are not present in sufficient quantity in a maintenance ration. The chief element in the composition of muscle, that is, lean meat, is the substance known as protein. This substance has nitrogen in its composition, while fat has no nitrogen. Now, protein for the growth of muscle cannot be drawn from any source except the feed; nor can the body create protein or convert any material into muscle which does not have protein in its composition. Of necessity, therefore, when the feed lacks protein there can be no formation of muscle, and, in the case of young animals, growth must cease. Mature animals in fairly good condition do not grow muscle to any considerable extent, and this explains why they can maintain their weight on feed which would stunt young stock.

In like manner the growth of bone demands material which is not required by a mature animal. Bones of young animals contain some 25 per cent of gelatine, which has essentially the same composition as muscle, and some 65 per cent of ash elements, chief of which is a combination of lime and phosphoric acid. The feed must furnish these elements or the bone cannot be developed. But in the case of cattle which live largely on coarse feed the required ash elements are usually supplied in abundance to meet all demands, even of growing stock. It will be seen that the material from which to form muscle is the element which is most likely to be deficient and which the farmer must take care to supply to his young stock. The need of this care is greatest in winter. In summer nature supplies, in most cases, the demands for growth in the pasture.

Admitting that the above is correct the question arises what constitutes good care of young stock in winter? What must be the nature of the food they should have, and how does it differ from that required to maintain grown stock? The reply is that they should have richer feed. In proportion to their weight they require more grain in their ration, and the grain should be richer in protein. With this general proposition in mind each farmer must decide on the make-up of the ration for himself. So much depends upon local conditions—the available feeds and the prices at which desirable feeds can be had. Corn is a good feed, but for young stock the ration should be improved, if in addition to shelled corn or corn meal they got a little bran, or oil meal or gluten meal, in order to increase the proportion of protein.

The very low prices for wheat this year makes it possible to feed wheat as a measure of true economy. Here at Manhattan No. 2 wheat is worth only 43 cents per bushel, while inferior grades run still lower, even to 30 and 35 cents. It is evident that at such prices wheat cannot be sold at a profit, and that at least the inferior grades can be used for feeding to advantage. It would be best to grind it in a coarse flour, or, if this cannot be done, owing perhaps to distance from the mill, then it should be soaked for 24 hours before it is fed. Oats, too, are cheap, bringing only 22 cents per bushel, and when of good quality there are few grains better for young stock. They are more

readily masticated if crushed before they are fed, and in absence of this preparation they should be soaked.

A mixture of equal parts of corn, oats and wheat would make an excellent ration for any young beasts during the first and second winters of their lives. The amount given should be entirely proportionate to their size and appetite, but bear in mind that to stint them is false economy. On such a ration they could with propriety have access to the straw stack or to corn stover, where they would get all the coarse fodder needed.

If wheat or oats cannot be had give them a little bran or shorts along with some corn, or even a third to a half a pound of oil meal per head daily along with the corn might prove to be in the line of true economy.

When the feed has been settled to your satisfaction next consider the question of shelter. Bear in mind that good shelter saves feed, and that it is a mistaken idea that exposure toughens the constitution and makes the animal thriftier. A good warm barn at night and on stormy days is the best place for young stock. If such shelter is not available do the best possible, and a shed made of poles and straw may, for that matter, afford as much, or even more comfort than a more pretentious structure built of planed boards and with a shingle roof. Cut details on these points are not necessary. The main points to be considered are that the young stock must be kept growing without interruption; that the materials for this growth must come from the feed, and that feed which is capable of maintaining a grown animal in fair condition may be wholly inadequate to meet the requirements of the growing animal.

TRACK AND FARM.

Possibilities on the Race Track.

The Kentucky *Stock Farm* rises to prophesy with reference to next year's possibilities on the race track. The gossip thus produced is interesting, if it will not do to wager by. We quote the following:

It has been a year of good events in the trotting world, in most respects greater than any of its predecessors. Scarcely any of the records that were the champion records at the beginning of the year remain unfractured. The stallion record, the four-year-old record and the race record were all broken by one great horse in one great mile. The three-year-old record has been reduced to what was but a few years ago the world's record for any age. Two of the greatest records stand, however, unchallenged—Nancy Hanks' 2:04 and Arion's 2:10 $\frac{3}{4}$, made as a two-year-old. It was hoped by the friends of Nancy Hanks (and they are very many) that she would this year be able to cut her mark down one or two seconds. Had she done this she would probably have put it beyond reach for a good many years to come, as each additional second's reduction going at her marvelous rate of speed requires a supremely great effort. The great little mare has, however, been unable to improve or even equal her wonderful mile of last year, and it is probable that her track career is about ended. She has left a great mark, however, for future champions.

It does not seem impossible that next year would see her record yield to some other great horse, just as Sunol's and Maud S.'s records yielded to her. From the present outlook it ought to be within the capacity of at least one horse to equal Nancy Hanks' record next year. If Directum does not go wrong, he should, with good wintering and judicious treatment, be equal to the effort. No horse has ever before shown such quality in his four-year-old form, and with the usual improvement between four and five years, a performance of 2:04 should be within his powers. From his late mile of 2:08 it would appear that the hard work of the past season has not diminished his speed capacity, and it now seems to be settled that he will be trotted and not paced next year. Although Nancy Hanks' mile has not been yet equaled, the most enthusiastic of her admirers must admit that she has at last found an equal in Directum. It may be, however, that he has been driven out harder and compelled to reach his limit earlier than she. Nancy was always driven with very great care, and with the intention to husband as much as possible her great powers. Directum has, on the other hand, been pushed to the extremity of his speed in many hot contests. It is not at all improbable that the different methods of handling pursued are largely responsible for the earlier speed development of Directum. The Happy Mediums, as a rule, are not extremely early trotters, while quite a number of the descendants of Old Dolly and several of the get of Director have trotted fast while quite young. Jay-Eye-See, also by the sire of Director, at one time held the four-year-old record and at another time the five-year-old record, when fast trotting at these ages was regarded as early speed. We do not now recall any of Happy Medium's immediate descendants that have shown great precocity of development. It is not impossible that Directum may have reached his limit, or very nearly his limit, at his present age, and it may be that he will be next year like Nancy Hanks this year, unable to reach a lower mark, but we hope this will not be the case.

Another probable record-breaker of next year is the splendid young Electioneer stallion Arion. Like Directum, he is a four-year-old. His record of 2:10 $\frac{3}{4}$, made as a two-year-old, stands like a stone wall. He was the most precocious colt that ever started on the track, but he has trained on and reached a four-year-old mark of 2:07 $\frac{3}{4}$. He has been handled in a very conservative way since his purchase by Mr. Forbes. His race at Washington Park was one of the marked events of the year. Notwithstanding his precocity of development, as he had but few starts this year it is very probable that he has a considerable reserve of speed, and among stallions he should, from present indications, be the chief competitor of Directum next year—although it will not by any means do to leave Kremlin and Stamboul out of the fight. Kremlin has been laid up for a year in order to do stud service. He was a won-

derful horse in 1892, when he was but a five-year-old. He is a splendidly bred fellow, and therefore liable to train on well, and no one doubts his great racing ability.

Stamboul is growing in age and has done much service in the stud. His mile at Lexington in 2:10 $\frac{1}{2}$ was a very creditable performance, considering these facts, and the additional fact that it was made in his first year out of the California climate, to which he has always been accustomed. He should be a better horse next year than he was this, but it is hardly probable that he will ever again be a formidable candidate for the championship. Should he be, we think it will be rather a surprise to his best friends.

A serious mistake was made with Nelson this year in driving him over half-mile tracks and confining him too closely at home. His reduction of his record to 2:09 was creditable. Had his efforts been confined to good mile tracks he would, the chances are, have lowered his record still more.

Alix is yet but a five-year-old, having been foaled in 1888. While she has been unable to beat Directum this year, and while she may never be able to accomplish this feat, the indications are that she will continue to improve. As a two-year-old she trotted in 2:30, as a three-year-old in 2:16 $\frac{1}{2}$, as a four-year-old in 2:10, and as a five-year-old in 2:07 $\frac{1}{2}$ in a race. Nancy Hanks' five-year-old record against time was 2:09 with the big-wheeled sulky. Alix has, however, been developed much more than was Nancy at the same age, having trotted from her two-year-old form up. We do not anticipate as great an improvement as Nancy Hanks showed between her five and six-year-old form for that season. There is, however, little doubt that Alix will be able to trot faster in 1894 than in 1893, as we have not heard that she has shown any symptoms of breaking down.

Allerton should, if entirely recovered from his injury, be able to trot very fast next year. His record of 2:09 $\frac{1}{2}$ was taken against time on the Independence kite before the bicycle wheel came into use. If as good a horse next year as he was then his mark should be reduced by several seconds. He will in 1894 be but eight years old, and just in his prime.

It is a circumstance that the owners of great stallions will have to consider—the present stallion record, 2:05 $\frac{1}{2}$, was made in a race. There has been some comment upon the fact that a runner accompanied Directum in the last half of his great mile, and it has been argued from this that it was merely equivalent to a time record after all. We do not concur in this view. It was made in the third heat, and the only reason that he did not go faster the first two heats was that there was nothing in the race that could then drive him out in faster time. The running horse was necessary when he was "cut loose" for a record for the same reason—none of his competitors could get near enough to him to afford the necessary stimulus. Had any of the other horses in the race been capable of keeping at or near his wheel the runner would have been unnecessary. The stallion that trots against Directum's time should also trot in a race, and if he can go fast enough to make the running accompaniment necessary, by all means let him have it. Time performances will hardly take the championship from Directum that he has so gallantly won.

Another horse that may be the holder at the close of next year of a faster record than the good one he now possesses is the splendid little racing horse, Pamlico. While he is not yet in the 2:08 class, there are horses that can trot very close to that mark that could not defeat him in a three-five race. There is no horse that comes nearer being good all the time for what he can do, and if he trots as well next year, and has a fair opportunity, it need surprise no one to see him rank with some of the fastest. Very few horses that have had a let-up for two or three years could accomplish what he did this year.

In the young mare Fantasy, Mr. Hamlin has one that should be a bright and shining light in the future. To take in a race 1 $\frac{1}{2}$ seconds off Sunol's time record at the same age was a feat such as has been rarely accomplished. Should she improve as much as Sunol did between three and four years of age she should next year go in 2:06 $\frac{1}{2}$.

It is very evident from even this very imperfect statement of the great horses that are liable to participate in next year's trotting races that 1894 will be a year of wonderful performances. We have omitted many that should be among the best of the year, whose merits are already known, and in addition to these are the new stars that are year by year coming to the front. It is apparent that the near future will be rich in trotting history, even more splendid than the recent past.

POULTRY YARD.

Treatment for Sore Head.

E. W. Amsden gives the Florida *Farmer* an account of this disease and its treatment. He says:

Sore head is a form of roup peculiar to the Southern States. It is called warts in some localities, and does resemble them at times. I might say it is roup in its incipient stage, but roup does not always commence that way. Editor Jacobs of the *Poultry Keeper* says it's chicken pox, but I do not agree with him, for if left to run its course, the worst forms of roup will develop. Not so with chicken pox. Then in the former the blotches are black, while in the so-called sore head disease, the first appearance of the blotches is a pale flesh color. This is before the scab forms over them. The nature of the sore is cancerous, and it spreads until the head is covered. If taken at once, and before the hard scab is formed, a cure can be effected in one application.

The sore spots should be thoroughly cleansed with quite hot water and afterward wiped dry with a clean rag or sponge. Anoint the sore spots with blue vitriol, using a piece and dipping it in water; or dissolve it in warm water and use a camel's-hair brush to apply it. Where you have many fowls to doctor, this is the best way. The applica-

tion of vitriol will cause a hard scab to form, but, unless it shows signs of mattering, do not disturb it; it will heal underneath and soon come off of its own accord. This is a simple and easy remedy and the best one I have ever tried. Carbolized vaseline will do the work, but not as effectually.

Editor Jacobs, of the *Poultry Keeper*, gives this remedy to a Texas correspondent: "Equal parts of sweet oil, crude petroleum, cedar oil and turpentine. A few drops, well rubbed on the head, face, comb and eyes once a day."

Our correspondent wants to know the chief causes. There are several: Climatic changes, crowding, over-feeding, the feeding of poor grain, damaged, musty or mouldy; impure drinking water, filthy quarters. I might have put the last first, for more trouble comes from that than any other source.

As a preventive is always better than a cure, I will tell you how to prevent it. We presume all poultry keepers feed whole grain once a day at least. To a ten-quart pail of grain, mix a half pint of kerosene oil and two tablespoonfuls of spirits of turpentine (one-half pint when mixed.) Pour this over the pail of whole grain and thoroughly mix it; let it stand several hours before feeding, then give the usual amount to each fowl. Scatter it well so as to reduce the odor of oil and turpentine. Do not feed again until this is all consumed. Once a week is often enough to feed it, if the flock shows symptoms of disease, and once in two weeks if they are well. This is a good tonic, and if fed to a flock that seems out of condition, it will benefit them.

Turpentine is a sure cure for roup, but if mixed with grain without oil it would penetrate the first handful it touched. If one fowl should get more than its share, the result might be fatal.

The Egg Business.

A writer for the *Prairie Farmer* notes the fact that eggs rise above the prevalent low tide in produce values. Almost everything produced on farms, gardens, orchards and vineyards sells at lower prices than they have brought for many years. Even poultry, which generally meets with a ready sale at good prices, is now low. Thanksgiving week saw Chicago markets so well filled with turkeys, geese, ducks and chickens that they were sold at the prices generally obtained for butcher's meat.

But eggs bring as good prices as they did in flush times.

The market of this and other cities never seems to be overstocked with them. This year very few eggs were packed for preservation, or put in cold storage in Chicago or its vicinity. The Fair produced an unusual consumption of eggs. A large proportion of people who take meals at restaurants call for eggs, especially when they are in a hurry to be served, as is the case when they wish to visit an exposition like the World's Fair. An exceedingly large number of eggs was also wanted to fill lunch baskets, of which thousands were carried into the grounds every day.

Of course the great Fair increased the demand for eggs and helped to sustain prices; but the prospect is that eggs will never be low again. Changes in the condition of society, such as have been going on for many years, are favorable to an increased consumption of eggs. An urban population requires more eggs than a rural population of the same size. This has been repeatedly shown of most of the countries in Europe. Persons who practice light house-keeping, as many do who live in large cities, prefer eggs to meat chiefly for the reason that they are more easily and more cheaply prepared for the table.

The population of cities and large towns is increasing much faster than that of rural districts. This of itself shows that the demand for eggs will increase. Great cities require an enormous number to supply them. The average number of eggs eaten by residents of Paris is 200 per year. In London and Vienna the number is still larger. Next to bread, eggs are the most convenient article of food for persons who have not ample facilities for cooking. They need little preparation and there is no waste about them. They are relished by more persons than any single kind of food. They can be cooked in so many ways as to furnish an almost infinite variety in taste and appearance.

Nothing pertaining to dietetics seems to be better established than that the demand for eggs increases as civilization extends, and people congregate in large towns. It is stated that the eggs consumed in France in a single year would, if placed end to end, reach twice around the globe at the equator. Much of this country will soon be as densely populated as France and will require as many eggs. With such a condition of things the price of eggs cannot rule low. We are now importing eggs, and shall probably continue to do so for many years, if not for all time.

A New Road to the Yosemite Proposed.

Our readers in Stanislaus and Merced counties will be interested in the statement which is currently made that the Southern Pacific is considering the construction of a new branch road into the Yosemite valley, starting from a little south of Modesto and crossing the Oakdale branch near the town of Montpelier and thence up the valley of the Merced river to the Yosemite valley. This branch will be about 90 miles long. It will traverse a most important agricultural district, as well as unlock vast stores of lumber, building stone and minerals. It will also be a great boon to the traveling public, as it would allow one to reach the Yosemite valley in about 12 hours from San Francisco, so that a city man could leave town Saturday evening, pass Sunday in the valley and be back again at his work Monday morning. Something of this kind would be of vast public benefit. The present routes to the valley are too costly both of time and money.

GRANGERS' BANK

OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 187



Authorized Capital.....\$1,000,000
Capital paid up and Reserve Fund 800,000
Dividends paid to Stockholders.... 750,000

OFFICERS.

A. D. LOGAN.....President
I. O. STEELE.....Vice-President
ALBERT MONTELLIER.....Cashier and Manager
FRANK MUMFORD.....Secretary
General Banking. Deposits received, Gold and Silver.
Bills of Exchange bought and sold.
Loans on wheat and country produce a specialty.
January 1, 1893. A. MONTELLIER, Manager.

Guano Fertilizer!

PLAIN AND NITROGENOUS
SUPERPHOSPHATES.

GUANO FLOUR.

Complete and Special Fertilizers

FOR ALL KINDS OF

Fruit, Grain, Sugar Beets, Vegetables, Etc.

MANUFACTURED BY THE

MEXICAN PHOSPHATE & SULPHUR CO.

For circulars and other information address

H. M. NEWHALL & CO., Agents,
809 & 811 SANSOME STREET,
San Francisco.

Deep Well Pumps.

The valves and working parts of the Fulton Pump can be removed, repaired and replaced without taking the pump out of the well.

Pumps fitted up for all depths of wells, ready to put in.

Send for illustrated circulars and price list to

A. T. Ames,
GALT, CAL.

Manufacturer of Pumps and Windmills.

\$100 for the Best Advertisement

For SEAL'S SKIN SOAP for Complexion and Toilet.

All advertisements must be in by January 1st, 1894.

Send 25 cents for sample cake and full particulars to

A. J. McKNIGHT,

1195 Mission Street San Francisco, Cal.

TREE WASH. OLIVE DIP.

"Greenbank" Powdered Caustic Soda and Pure Potash.

T. W. JACKSON & CO..

Sole Agents,

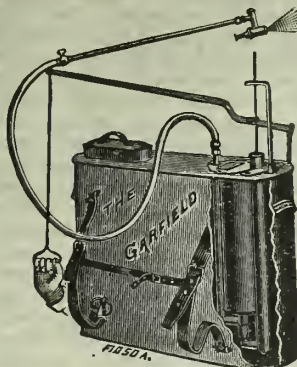
No 5 Market Street, San Francisco, Cal

CANCER.

THE KOEHLER CANCER CURE CO.,
1428 Market St., San Francisco.

CANCER, Tumors or Malignant Growths removed without knife or caustic. A GUARANTEED CURE a specialty. Call or send for circular. Over 300 cancers preserved in alcohol in our office. Consultation free.

PHILIP KOEHLER, Manager.



SPRAYING PUMPS.

Ours always the best—We lead others follow—Our Double Empire Barrel Pump has brass cylinder, plunger and rod, brass valve seat, and brass spout. Our

GARFIELD KNAPSACK

is made of heavy sheet copper, concaved to fit the back, with metal valves, and furnished with the latest improved Vermorel Nozzle. The very best Knapsack Sprayer on the market. Our Little Gem pail pump is all brass with metal valves, heavy hose and the improved Vermorel Nozzle. Special prices to offset high transportation rates. Catalogue free.

FIELD FORCE PUMP CO.,

141 BRISTOL AVE., LOCKPORT, N. Y.

Time Labor Money

Save Time and Labor, and you save Money. You can save all three by using the PLANET JR. Labor Saving Farm Tools. They will do your work in half the time; with half the labor; at half the cost. Do it better than you can possibly do it by any other method. The new PLANET JR. Book for 1894 will make you better acquainted with these machines. It will give you new ideas; fresh ambition; open brighter prospects for the future. You can have it for the asking.
S. L. ALLEN & CO., 1107 Market St., Philada.

FRANCIS SMITH & CO.,

MANUFACTURER OF

SHEET IRON & STEEL PIPE

FOR TOWN WATER WORKS.

Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes.
NO. 130 BEALE STREET, SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.

A. T. DEWEY.

W. B. EVER.

G. H. STRONG.

DEWEY & CO.'S

Scientific Press

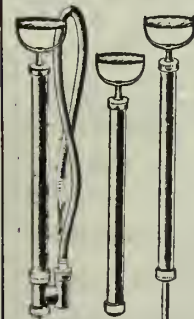


Patent Agency.

ESTABLISHED 1863.

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class Agency. We have able and trustworthy Associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 220 Market St. S. F.

\$15 SPRAY PUMP FOR \$7 EXPRESS PAID.



Makes Three Complete Brass Machines. WILL SPRAY TEN ACRES PER DAY. Endorsed by the Leading Entomologist of the United States.

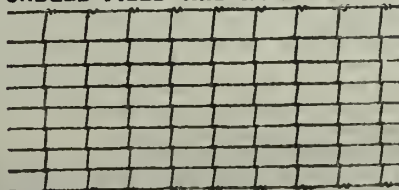
Satisfaction guaranteed or money refunded. A valuable illustrated book on our insect pests given to each purchaser.

We will put this pump in competition with any other pump made, costing \$15 or less. Address

F. G. WORDEN,
2715 Mission St., S. F.
Only General Agent of the Pacific Coast.

THIS CUT SHOWS THE THREE MACHINES MADE BY THE NEW WONDER SPRAY PUMP

CABLED FIELD AND HOG FENCING.



Also Steel Web Picket Fence and Steel Wire Fence Board. Write for circulars.
DeKALB FENCE CO., 33 High St., DeKalb, Ill.

JNO. WOODLOOK, 26 Beale St.,

SAN FRANCISCO, CAL.

General Agents for Pacific Slope.

CANCER CURED

WITH SOOTHING BALMY OILS.

WE SUCCESSFULLY TREAT

Cancer, Tumor, Catarrh, Piles, Fistula, Eczema and all Skin and Womb Diseases.

CANCER of the nose, eye, lip, ear, neck, breast, stomach or womb; in fact, all diseased internal and external organs or tissues, successfully treated, without the knife or burning caustic plasters, but with soothing, balmy magnetic oils. Beware of imitations as there are those who hope to profit by advertising an oil cure for these diseases. We are the originators of this system, all others are frauds.

Correspondence solicited. Consultation free. Testimonials furnished. Address

DR. EUGENE BUELL,

Cancer Institute,

ROOM 57, SUPREME COURT BUILDING,

Cor. McAllister and Larkin Sts., San Francisco, Cal.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos. A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 230 Market St., San Francisco.

HAYWARD'S SHEEP DIPS

Hayward's famous Paste and Liquid Dips received the Highest Award at the World's Columbian Exposition; also the Prize Medal at the California State Fair. Dips from all over the world were exhibited at Chicago and practical sheep men pronounced Hayward's the best and most effective medicine for the cure of scab and general benefit to wool.

CHRISTY & WISE,

General and Sole Agents for the Pacific Coast,

Office—Fifth and Townsend Streets,

San Francisco.

STOCK SCALES

4 TON \$45.

U. S. STANDARD. FULLY WARRANTED.

Delivered at your R. R. Station and ample time for building and testing allowed before acceptance.

186000 & 1860000

PORTABLE PLATFORM SCALES, TRUCKS, ETC.

Twenty-five per cent cheaper than any other on the market. Send for Catalogue.

C. H. LINDEMANN, Agent,

126 KEARNY STREET SAN FRANCISCO

C. H. EVANS & CO.,

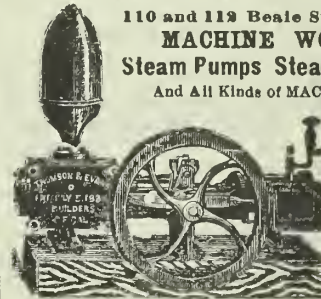
(Successors to THOMSON & EVANS.)

110 and 112 Beale Street, S. F.

MACHINE WORKS,

Steam Pumps Steam Engines

And All Kinds of MACHINERY.



DEEP WELL PUMPS

ACTUAL BUSINESS PRACTICE.



LIFE SCHOLARSHIPS, \$75.

Bookkeeping, Penmanship, Shorthand, Typewriting, English Branches, etc. Graduates aided in getting positions. Send for circulars. T. A. ROBINSON, Pres.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,

Surveying, Architecture, Drawing and Assaying,

728 MARKET ST., SAN FRANCISCO, CAL

Open All Year.

A. VAN DER NAILLEN, President.

Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. ESTABLISHED 1864. Send for circular.

BELLE CITY FEED AND ENSILAGE CUTTER

Made in all sizes, for both power and hand use. A full line of Tread and Sweep Powers, Root Cutters, etc. Send for Blue Catalogue and Price List. Silo and Ensilage Treatise—FREE to all who mention this paper. BELLE CITY MFG. CO., Racine, Wis.



The American Bee Journal,

(Established 1861.)

Is Oldest, Largest, Best, Cheapest and the Only weekly Bee-Paper in all America. 32 pages, \$1.00 a year. Send for Free Sample \$1.00 BEE-BOOK FREE

70 W. W. YORK & CO. 147 N. LaSalle, Chicago, Ill.

BEEKEEPERS SEND FOR CLEANINGS IN BEE CULTURE.

A Handsomely Illustrated Magazine, and Catalog of BEE SUPPLIES FREE.

A. I. ROOT, Medina, O.

LIGHTNING WELL MACHINERY Works.

LARGEST Sample copy of All kinds of tools. Fortune for the driller by using our Adamantine process; can take a core. Perfected Economical Artesian Pumping Rises to work by Steam, Air, etc. Let us help you. THE AMERICAN WELL WORKS, Aurora, Ill.; Chicago, Ill.; Dallas, Tex.

THE HOME CIRCLE.

I Wouldn't Be Cross.

I wouldn't be cross, dear, it's never worth while,
Disarm the vexation by wearing a smile;
Let hap a disaster, a trouble, a loss,
Just meet the thing boldly, but never be cross.

I wouldn't be cross, dear, with people at home,
They love you so fondly, whatever may come,
You may count on the kinfolk around you to stand,
Oh, loyally true, is a brotherly band!

So, since the fine gold far exceedeth the dross,
I wouldn't be cross, dear, I wouldn't be cross.

I wouldn't be cross with a stranger, ah, no!
To the pilgrims we meet on the life path, we owe
This kindness, to give them good cheer as they pass,
To clear out the flint stones and plant the soft grass;

No, dear, with a stranger in trial or loss,
I perchance might be silent, I wouldn't be cross.

No bitterness sweetens, no sharpness may heal
The wound which the soul is too proud to reveal.
No envy hath peace; by a frei and a jar
The beautiful work of our hands we may mar.
Let happen what may, dear, of trouble and loss,
I wouldn't be cross, dear, I wouldn't be cross.

—MARGARET E. SANGSTER.

The Usual Way.

Didst ever observe when a pig in the fence
Sends forth its most pitiful shout
How all the neighbors betake themselves thence
To punish him ere he gets out?

And the hubbub they raise, so that others afar
May know his condition and hence
Come running to join them in adding a scar
To the pig that is fast in the fence.

Well, swine are not all of the creatures that be
Who find themselves sticking between
The rails of the fence and try to get free,
While the world is still shoving them in;

Who find that the favor they meet with depends
Not on words, but dollars and cents,
And that 'tis but few who will prove themselves
Friends

To the pig that is fast in the fence.

—Philadelphia Ledger.

Saved from the Fire.

AT the time of the great hush
fires which, with disastrous
results to human and animal
life as well as property,
swept over a vast extent of
the Western States in Octo-

ber, 1871, there were living on adjoining
farms in Isabella county, Mich., two fami-
lies named, respectively, Wilson and Moreau.
The first-mentioned consisted of father,
mother and their five-year-old twin boys,
Samuel and Peter; while Narcisse and Mrs.
Moreau had but one child, a girl of 15,
called Marie—Marie Moreau—a name al-
most as pretty as was its American French-
descended owner.

In addition to remarkable beauty, Marie
possessed the still more precious gift of a
sweet, unselfish disposition, and was, more-
over, the foremost among all the scholars
attending the somewhat distant country
school. But, for a girl brought up in the
woods, she was neither very large nor strong
for her age, and the performance of a spe-
cially daring deed was the last thing of which
any one could have supposed her capable.

The two log houses of these families stood
three hundred yards apart, in the midst of
cleared fields, and considerably more than
that distance from any standing timber, the
nearest piece of woods being a tract of
primeval forest lying over a quarter-mile
southwest of and facing both, so that it
seemed hardly possible for either to be en-
dangered.

Up to the tenth of the month, though the
surrounding atmosphere was somewhat
darkened by smoke wafted from the great
conflagration at Chicago, no fires had
broken out in the Wilson-Moreau neighbor-
hood. On that day, in accordance with a
previously made appointment, the heads of
both families drove away to Farwell village,
sixteen miles distant, to make the final pay-
ments on and receive deeds of their respec-
tive farms, Mrs. Wilson leaving the twins in
charge of Marie, not another person living
within two miles of her house.

The party set out in Moreau's farm-wagon
at 10 o'clock in the forenoon, promising to
return not later than 9 that same night.

Marie, well pleased at the prospect of
having curly-headed "Sammy" and "Pete"
all to herself for a whole day, spent a de-
lightful forenoon playing with and amusing
the little fellows, and in due time prepared
in their honor a regular holiday feast, while
discussing which Sammy ingeniously re-
marked: "Me likes mudder to go 'way in
big wagon."

"So does me," chimed in Pete, "'cause
us gets lots of pies an' cakes den."

"I'm rather afraid," merrily said Marie,
"that I'm giving you little rogues too many
sweet things; but you can run out doors now

and scamper round while I wash up the
dishes."

"Us couldn't bave too much honey and
jam, could us, Pete?" sagely observed Mas-
ter Sammy.

"Dess not; they's awfully good," rejoined
Pete, and the pair rushed gleefully out.

But the next moment, though followed by
a cloud of dust and smoke, they rushed still
more gleefully in again, shouting: "Oh,
auntie"—as the youngsters always called
Marie—"there's a b'u'ful big fire out in the
woods. Mehbe we'll have 'budder Fourth
July!"

Much to the twins' surprise, Marie re-
ceived their joyful tidings with an alarmed
cry, and, hurrying to the door, she saw that,
just beginning to show through the trees, a
great fire was raging in the heart of the
forest, and, driven by the southeast gale,
was rapidly approaching the clearings.

On the instant the clear-headed girl real-
ized the danger; for, parched by a six weeks'
drouth, not only the grass and stubble, but
also the upper soil itself, was as dry as gun-
powder, and, helped on by the numerous
rail fences, the flames would be sure to
sweep across the fields and destroy both
houses, as well as every living thing lying
in their path. "But," she reasoned, "the very
violence of the wind will keep the fire to a
northeast course, and, though wide enough
on leaving the woods to face the whole of
our clearings, it will probably not extend to
any great distance either due east or due
north."

The children, quick to catch the infection
of fear, had become gravely silent, and
Marie, lifting the trap-door of the cellar,
cheerfully said:

"Now, little men, you must be brave and
do just as auntie says. The smoke is so
bad that you'll almost smother up here.
Come down to the cellar and stay there till
I get back. I'll be gone only a little while."

With the implicit confidence begotten of
love, Sammy replied:

"Yes, auntie; us'll be weal good an' not
cwy any more when us gets 'way from the
nasty smoke. It hurts our eyes awful!"

In an inclosed field back of the house were
Wilson's two farm horses, together with four
cows and six young cattle belonging to both
families, who had lately begun to use this,
the least shriveled of the pastures, in com-
mon. Marie had determined to save the
dumb creatures if possible, and, repaying
each one of the twins' parting kisses with a
hearty word of cheer, she caught up a bridle
and hurried out to the field. Here she
found the instinctively frightened animals
buddled close in a fence corner. Letting
down the bars and slipping the bridle on
one of the horses, the practiced girl sprang
to his back, and, after some trouble, suc-
ceeded in driving the whole herd down to
the Pine river, lying somewhat south of east
and nearly a mile away.

Then, through blinding smoke, she rode
at full speed back to the house, intending to
carry the children also to the river. But by
this time the front of the forest was a roar-
ing sea of fire. The boundary fence had
caught, and great masses of burning
leaves were whirling over into the
fields, kindling fresh fires wherever they
fell. The heat was stifling; in a few short
minutes more the dwelling would be
wrapped in flames, yet the good horse
might yet save the three young lives.

Sliding to the ground, Marie threw the
reins over a post, dashed into the house,
jerked a pair of blankets from her own bed,
soused them in a tub of water, folded them
saddlewise on old Dick's back, snatched up
the children, set them astride the horse's
shoulders, and mounting behind them turned
to fly.

Too late! On glancing toward the way
whence she had just come, she saw, to her
dismay, that escape in that direction was cut
off, an advanced tongue of ever-widening
flame having already crept across the path,
while on, and fearfully close now came
leaping waves of fire, projected from the
forest.

What was to be done? The heat was be-
coming intolerable and the horse frantic.
She could no longer hold the boys to their
seat; she and they would be thrown and,
perhaps, killed on the spot.

"Oh," moaned the brave girl, "why did I
not save the children at once and let the
poor cattle go?"

"Will us be burnt up, auntie?" pitifully
asked little Pete, as she scrambled off the
plunging horse with her precious charges.

"No, no, my pets, you shall not be
burned!" exclaimed Marie; for suddenly
there had flashed across her mind a possible
means of salvation.

Dragging the blankets to the ground and
freeing Dick from the bridle, she struck
him sharply across the quarters with it,

when the intelligent beast wheeled around
and galloped away, fortunately due north,
now the only safe point; for, though he
might run before and at first outstrip the
pursuing flames, they would quickly cross
the intervening space and catch the un-
broken forest to the northwest of the farms.

Connecting Moreau's with Wilson's house
was a lane, sixty feet wide, bounded on
either side by a rail fence, and a little way
beyond Wilson's there was, as our heroine
now recollected, a milk house, chambered
deep in the slope of a solid clay mound.
Could the three reach this all would be well,
as it was absolutely impervious to fire, and
by the time both houses and barns were
consumed, the grass and rail-fed flames
would die out and leave the fields passable
for further flight if necessary.

Raising Pete in her arms, the girl wrapped
him and herself in one of the wet blankets,
enveloped Sammy in the other, and, hid-
ding him hold tight to her, set off down the
lane.

But before they had gone one half of its
three hundred yards of length, the fence on
the left caught fire, driving them over to
that on the right.

A little way farther they struggled on;
and then poor Sammy, not having wit
enough to keep the protecting blanket prop-
erly before his mouth, inhaled the pungent
smoke and sank senseless to the ground.

Marie uttered a despairing cry. The
place of refuge was fully one hundred and
sixty yards away. She could not shield and
carry both children at once. Must she
abandon the unconscious boy? No, a
thousand times no, though fractions of sec-
onds were precious and the danger appall-
ing.

Bravely she rallied her senses, and, know-
ing that quite close to the earth's surface the
air was comparatively free from smoke, she
laid herself flat down, with little Pete in
her arms, rolled Sammy over and over, mummy-
like, in his blanket, secured it about him with
half a dozen wire pins snatched from her
hair, and in an incredibly short time was
again on her feet.

Now she told the trembling Pete to clasp
his arms about her neck, while with one
hand she held the blanket before him and
her own face and with the other dragged
Sammy like a wool sack along the ground.

'Twas desperate work for a young girl, as
the dry grass on the left side of the lane had
taken fire and the heat and smoke had so
greatly increased that only by drawing every
breath through the saturated cloth could life
be sustained. But Marie never faltered.
Nerved to unwonted strength by the heroic
resolve of her own undaunted soul, she man-
aged, despite her double burden, not only to
keep moving but actually to quicken her
pace to a run!

Just as the flames took possession of the
whole lane and beat fiercely against the
house, she passed beyond the latter into a
small plowed field leading to the mound,
barely eighty yards away. There was no
fire under foot here, but the heat was greater
than ever, and the almost exhausted girl
found it well nigh impossible to draw
Sammy's chubby weight over the turned-up
soil.

At last, however, after much painful tug-
ging, she arrived at the door of the milk
house, but only—oh, horror!—to find it se-
curely fastened by a padlock and hasp af-
fixed to the outside. The key, of course,
was at the now blazing dwelling. It might
as well have been a thousand miles away.

Clouds of steam were now rising from
Marie's blanket. Not for three minutes
longer could she or the boys live in the fur-
nace-like air. Quite ignoring her own peril
she sobbly wailed:

"Dear, merciful Father, must these inno-
cent lambs perish? Oh, if I could only find
a stone or an ax!"

Then, from beneath the hot blanket-folds,
observant little Peter lisped:

"Daddy did have an ax here for to make
a bench one day, auntie!"

"Oh, you blessed child!" cried Marie, as
she caught sight of the implement lying on
a pine board.

Drawing a long, deep breath and retain-
ing it in her lungs, she laid the little fellow
down beside his brother, covered both with
the blanket and seized the ax. While the
superheated air almost blistered her now
unprotected face, she still held her breath,
with one deft blow broke the cast-iron
staple, and the next moment the three were
safe in the cool underground chamber and
had reclosed its clay-lined door.

No danger of burning here, nor of starv-
ing either, for on a low shelf were ranged
four great pans of milk, a roll of butter and
a cold rice pudding.

In order to ventilate the room, a few
lengths of small drain tiles had been run
from its arched ceiling, through the solid
earth, to the top of the mound, and down

this narrow tube there came enough light
to redeem the place from absolute darkness.

While Marie, in trembling doubt whether
the child yet lived, was unwinding Sammy,
the youngster regained consciousness and
set at rest by feebly murmuring: "Me
wants a dwink"—a want shared by the other
two and easily satisfied by aid of a tin
dipper.

It was now about 3 o'clock in the after-
noon. The imprisoned children would have
to wait six hours for the return of their
parents. But the room was now too cool
for comfort; its atmosphere was delightfully
pure; not a particle of smoke descended the
shaft; the twins behaved remarkably well,
and their auntie was so blissfully happy
over their escape that she whiled away the
time with merry jest and story until, by
and by, the little heroes dropped quietly
asleep.

Driving straight downward from the north,
the two farmers and their wives had come
within three miles of the spot where stood
their homes that morning, when they met
old Dick peacefully grazing, or rather trying
to graze, by the roadside. Instantly recog-
nizing the horse, and seeing, far to their left,
the light of burning woods, they hurried on
and arrived at the northern edge of Wilson's
clearing half an hour before nine.

No fire was in the fields now, but all were
black and desolate. Houses and barns had
vanished; not a fence nor a head of stock
was to be seen, and the ruin seemed com-
plete.

Yet, in shuddering dread of a greater
catastrophe, they scarcely thought of their
material loss, as, forcing their team to a
gallop, they drove furiously on.

Their way lay close to the hill cellar, of
which, very curiously, not one of the four
were thinking—the men, with sternly set
features, looking straight ahead, and the
cowering women covering their eyes, as if
shut out to the last moment a sight of the
unutterable horror which each in her secret
heart deemed certain must all too soon
appear.

Enveloped in a cloud of black dust raised
by their own heating hoofs, the horses
rushed madly on until abreast of the mound.
Then they stopped so suddenly that the
wagon's occupants pitched forward on their
seats, for right in their path, looking weird-
like in the murky light, stood Marie Moreau,
holding outstretched before her one of the
dingy blankets.

Hearing the thunder of the approaching
vehicle, the watchful girl had darted out just
in time to intercept it.

"'Tis I, Marie!" she loudly called, as the
affrighted team stood shivering in their
tracks; and almost blending with her own
voice came two startled cries—one a fervent:

"Oh, thank God!" and the other rising to
a shriek: "My boys! Oh, my boys, Marie?"

"Safe, safe and unhurt, in the milk-house,
Mrs. Wilson!" rang out the girl's joyous
answer.

Silence for a moment. Then the soft
weeping of women, the shaking sobs of
strong men, and presently—the two mothers
locked in each other's arms—the returned
travelers stood on the ground.

But why go on? No description of mine
can make more vivid the understanding
reader's conception of such a reunion, and
to one so unhappily constituted as not to
understand, all description is useless.

Soon parents and children were in the
wagon, and, turning northward again, the
stout horses quickly bore the rejoicing party
to the hospitable shelter of a neighbor's
house, two miles distant.

Naturally there were many congratula-
tions and much talking on the way—much
well-deserved commendation of Marie; but
of all the compliments showered upon her
none was more entirely sincere than Sam-
my's:

"Mudder, us likes auntie a heap! We's
chuck full of good things!"

* * * * *

Next day the farmers found that all their
cattle had escaped injury, the fire not having
extended far enough east to reach that part
of Pine river whither provident Marie had
driven them. Though much inconvenienced
by the loss of houses and plenishing, the
good people were by no means ruined. The
two men went to work with a will, and long
before winter came both homes were sub-
stantially rebuilt and refurnished. — W.
Thompson in New York Ledger.

Sparrows and Farthings.

Young Freethinker writes to say that "in
many instances the words of the Bible are
untrue as applied to our own times." And
he says, "Take the passage, 'Are not two
sparrows sold for a farthing?' I say they
are not." Oh well, I agree with Young Free-
thinker that the passage quoted may not

apply to this day and this generation; but that is the fault of this generation. The Bible is all right. It is only we who are all wrong. Two sparrows were sold for a farthing then, and I don't suppose inspiration itself could foresee that, in the year 1893, in the United States of America, a race of human beings would wring from a starving neighbor one dollar and eighty-five cents for a spring chicken no bigger than a robin, or two dollars for a squab three days out of the shell, and would make butter out of dead cattle, and when their children asked for bread would give them a preparation of alum, and would catch imported sardines off the coast of Maine, and would sell "bob-veal" in the public market, and would mix split peas in the coffee and sand in the sugar. I suppose it was the intention to burn the old globe up before a generation arose that was capable of doing such things. Of course, you can't make the Bible fit our day, my son. Omnipotence could not do that without making a hopeless wreck of the Bible. But you can make our day and generations fit the Bible. Suppose you try that. Commence at the other end of the bridge, and by the time you get Wall street fitted to the Sermon on the Mount, you will be gratified to see that you have landed the country safely on the old "two sparrows for a farthing" basis.—Burdette.

A White House Baby.

The recent advent of a baby within the doors of the Executive Mansion has brought forward numerous claimants for the honor of being the oldest living and the first child born in the White House. The first of these honors is properly the possession of Mrs. Mary Emily Donelson Wilcox, who was born at the Executive Mansion during Andrew Jackson's first administration, the second child born within its walls, but the oldest now living, writes Alice Graham McCollin in a delightful article in the January *Ladies' Home Journal*. To her President Jackson gave the name "The Sunshine of the White House." Mary Emily Donelson Wilcox was the eldest child of Andrew Jackson Donelson and his wife Emily, and was born in the large corner room of the White House fronting on Pennsylvania avenue—the room in which Mrs. Harrison died.

Her christening was an event. It was performed according to the ritual of the Protestant Episcopal Church, though read by a Presbyterian minister, the Rev. Mr. Gallagher. The daughter of the Secretary of State, Miss Cora Livingstone, was chosen as godmother, while Martin Van Buren and President Jackson officiated as godfathers. When the baby was brought into the room Mr. Van Buren attempted to take her in his arms, but on her objecting President Jackson took her and held her throughout the ceremony. She enjoyed the sprinkling greatly, laughing and cooing with pleasure at the drops of water. When, in the course of the ceremony, the clergyman read the question, "Do you, in the name of this child, renounce the devil and all his works?" Jackson stiffened himself grimly and replied in his most emphatic tones:

"I do, sir, I renounce them all!" bringing a smile to the face of those who knew what was the more ritualistic reply. A lady who was present said, after the ceremony: "The President renounces the devil for the baby but not for himself," to which Jackson responded laughingly:

"I don't mind my enemies thinking me a devil if my friends find me the reverse."

Among the guests at the christening were Robert E. Lee, then a young lieutenant of engineers, and his wife, née Mary Curtis.

The ceremony was held in the East Room—where, according to the contemporary gossip, Mrs. Madison hung her linen to dry—which was gayly illuminated and decorated with flowers.

Fuel of Steamers.

The American liners New York and Paris burn about 330 tons of coal per day, or about 30,800 pounds per hour, and maintain about 18,000 indicated horse power, which is equivalent to a coal consumption of 1.71 pounds per hour her horse power. The average for all the fast ships with triple expansion engines, like the New York, Paris, Majestic, Teutonic and Furst Bismarck, is probably only about 1.75 pounds per hour per horse power. In the case of the Umbria and Etruria and similar ships, which have only compound engines, the rate is higher. For example, the Etruria burns as much coal as the New York and more than the Teutonic, and develops far less power than either of them, which illustrates the great advance made in marine engineering by the introduction of the triple expansion system.

Mollie's Problem.

There's lots of things I cannot understand,
It really makes no matter how I try,
One's why the brown comes on my little hand
Because the sun is hot up in the sky.

I never understand why birds eat worms
Instead of pie and puddings full of plums.
I can't see why a baby always squirms,
Or why big boys are 'fraid of little sums.

I cannot understand why doggies bark
Instead of talking sense like you and me;
And why the sun don't shine when it is dark;
Instead of when it's light, I cannot see.

I wonder what it is makes children grow,
And why they have no wings like little flies.
But puzzlingest of all the things I know
Is why grandma wears windows on her eyes.

—Selected.

How to Live a Century.

First, live as much as possible out of doors, never letting a day pass without spending at least three or four hours in the open air, says *Medical Age*.

Second, keep all the powers of mind and body occupied in congenial work. The muscles should be developed and the mind kept active.

Third, avoid excesses of all kinds, whether of food, drink, or of whatever nature they may be. Be moderate in all things.

Fourth, never despair. Be cheerful at all times. Never give way to anger. Never let the trials of one day pass over to the next.

The period from 50 to 75 should not be passed in idleness or abandonment of all work. Here is where a great many men fail. They resign all care of interest in worldly affairs, and rest of body and mind begins. They throw up their business and retire to private life, which in too many cases proves to be a suicidal policy.

During the next period—the period from 75 to 100 years, while the powers of life are at their lowest ebb—one cannot be too careful about catching cold. Bronchitis is a most prolific cause of death in the aged. During this last period rest should be in abundance.

Anybody who can follow these directions ought to live to be 100 years old at least. There is always this comfort, however—if we cannot live up to our ideas always, we can at least try our best to do so, and the steady effort will be bringing us constantly nearer them.

Gems.

Sweeter than anything sweet,
The power to lay it aside

—L. I. Guiney.

Where is the aristocracy which does not regard wealth won by ancient thievery as better than money modernly earned in a commonplace way?—Eggleston.

There is an infinite sadness in a mind left fallow.—Lucy Smith.

The impossible is, to faith, the only thing worth attempting.—G. L. Chaney.

Out of the common stones of your daily work you may build yourself a temple which shall shelter your head from all harm, and bring down on you the inspiration of God.—Theodore Parker.

Unless one could cure men of being fools it is to no purpose to cure them of any folly, as it is only making room for some other.—Horace Walpole.

If a man be gracious and courteous to strangers, it shows he is a citizen of the world, and that his heart is no island cut off from other lands, but a continent that joins them.—Lord Bacon.

My conscience is my crown,
Contented thoughts my rest;
My heart is happy in itself;
My bliss is in my breast.

Enough, I reckon wealth;
A mean, the surest lot
That lies too high for base contempt,
Too low for envy's shot.

—Robert Southwell.

The strength of a nation, especially of a republican nation, is in the intelligent and well-ordered homes of the people.—Mrs. Sigourney.

He is richest who is content with the least; for content is the wealth of nature.—Socrates.

Do all the good you can and don't make a fuss about it.—Charles Dickens.

The pain occasioned by a request granted too late is greater than the pain occasioned by a request denied.

A man who gives his children habits of industry provides for them better than giving them a fortune.—Whately.

One must be poor to know the luxury of giving!—George Eliot.

Home Hints.

Apply raw egg to a cut.
Try stewed fruit and hot milk for dyspepsia.

Hot water is good for sprains, and hot lemonade for a cold.

A teaspoonful of borax dissolved in water and rubbed well into the scalp is an excellent tonic for the hair.

Soiled bed ticks may be cleaned by rubbing them thickly in starch with a wet cloth. Put them in the sun to dry, and then rub thoroughly with the hand. Repeat if necessary.

A dry sponge, sprinkled with sugar and left on a closet shelf where ants are troublesome, will gather them in a short time. Then drop the sponge quickly into boiling water.

This is said to be an excellent remedy for earache: Tie a pinch of black pepper on a bit of cotton batting, dip in sweet oil and insert in the ear. Tie a silk handkerchief or flannel band over the ear to keep it warm.

An old recipe for wrinkles is the whites of two eggs beaten with twice as much rose-water, and half a teaspoonful of powdered alum, dissolved in a spoonful of rose-water, added to it. Apply to the face on going to bed.

Lightning Cookery.

Prince Bismarck's old chef, who is now head cook in a Berlin restaurant, recently won a novel bet, and gave a surprising exhibition of his mastery of the culinary art. He had wagered fifty dollars that he could kill, clean, cook and serve a chicken, all in six minutes. The wager was decided at night in the cafe of the restaurant, in the presence of a big crowd. The cook appeared at nine o'clock on an improvised platform, upon which stood a gas cooking-stove. He held a live chicken high over his head, and the fowl cackled loudly. One blow of the keen carver severed the head from the neck, and the cook began to pick the feathers with great swiftness. It took just one minute to get rid of every feather. In less than another minute the expert had opened and cleaned the fowl, and had placed it upon a broiler on the gas stove. The cook busied himself at the broiler, seasoning the fowl as it cooked. It lacked just a second of the sixth minute when he stepped from the platform and served the chicken to the nearest guest, amid great applause.

Burdette on Gymnasiums.

Boys generally get their due quota of exercise. At the same time they can never get too much, if not of a too severe nature and taken with some measure of moderation, writes Ellen Le Garde in a valuable article entitled "A Gymnasium at Home" in the January *Ladies' Home Journal*. Burdette says in reply to the interrogation regarding his acts: "If a boy again, I would spend a great deal of time in the gymnasium. I am a strong believer in athletic scholarship and gymnastic training. The ventilation in my gymnasium was perfect. The air came in with a free sweep from sunrise to sunset. There was sunshine all the way from Heaven in the clearings and grateful shadows under the trees. I don't know so much about gymnasiums hedged in with walls and roof, and ventilated by machinery, but I know they are better than none. Live out of doors all you can, my boy. Walk a heap. The open air, the free air and the sunshine are as good as the exercise—better." This advice should apply to our girls as well.

The human family living on earth to-day consists of about 1,450,000,000 persons in round numbers. Of these only about 500,000,000, or one-third, are even properly clothed; 250,000,000 habitually go naked; 700,000,000 have only the middle part of their bodies covered; only 500,000,000 live

in houses, 700,000,000 in huts or caves, while the remaining 250,000,000 have no home or shelter whatever.

The Magic of a Face.

In that cruel interview where my lord Hamlet uses harshest words to the artless Ophelia he says: "I have heard of your paintings, too, well enough. God has given you one face, and you make yourself another." A gentle Quakeress, guileless of plagiarism, once modified this accusation in a way that robbed it of all malice and made it a wise and helpful thought.

To a young niece who was bewailing her own lack of beauty, she said tenderly: "The good Lord gave thee plain features, but he left it to thee to make thine own expression."

The girl took her lesson and learned it thoroughly, and now that the graces of her amiable character illumine her face, none ever think of it as plain. Her great wealth—and riches too often serve as a cloak for unloveliness of mind or person—is entirely lost sight of in the affluence of noble womanly qualities, while her cultivated intellect and affectionate disposition give to her face that charm which is lacking in features.—Harper's Bazar.

The Value of a Little Thing.

In a little volume of lectures by Henry Irving, just published, is a story which illustrates the actor's motto, "While trifles make perfection, perfection is no trifle." "This lesson was enjoined on me when I was a very young man," he says, "by that remarkable actress, Charlotte Cushman. I remember that when she played Meg Merrilies I was cast for Henry Bertram. It was my duty to give Meg Merrilies a piece of money, and I did it after the traditional fashion of handing her a large purse full of coin of the realm, in the shape of broken crockery, which was generally used in financial transactions on the stage. But after the play Miss Cushman said to me: 'Instead of giving me that purse, don't you think it would have been much more natural if you had taken a number of coins from your pocket and given me the smallest? That is the way one gives alms to a beggar, and it would have added to the realism of the scene.' I have never forgotten that lesson."

Pleasantries.

Tommy: "Pa, what makes the stars so bright?" Mr. Figg: "Oh, those astronomers are scouring the heavens all the time."

"The newspaper of to-day treats a man like a king." "It does?" "Yes; it places a dozen pages at his service every morning."—Truth.

Star Boarder: "Here is another fly that has met a watery grave." Landlady: "Where is it?" Star Boarder: "In this pitcher of milk."—Exchange.

A mouse lately showed great presence of mind on falling into a dish of cream. It swam round and round violently until it was able to crawl out on the butter. This was in America.—Tit-Bits.

A smart bit of repartee was overheard the other day at Killarney. A guide with a tourist scowled at a peasant who stared well at him. "You'll know me again if you meet me," said the guide. "Not if you wash yer face," said the peasant.—Exchange.

According to a German doctor, who has just published the results of a long course of experiments on this subject, the sight is rarely alike in both eyes. He finds that only in one case out of fifteen are both eyes in good condition. In seven cases out of ten one eye is stronger than the other. In two cases out of five, patients are affected with astigmatism, which may be defined as an imperfect focusing of the light rays entering the eyes. This usually arises from a difference in the curvature of the cornea, or transparent portion of the front of the eye. Nearly 50 per cent possess only imperfect appreciation of colors.

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder
ABSOLUTELY PURE

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

Oroville Register: The sale of Antone Christensen's orange grove at Thermalito is worthy of comment. He owned 20 acres, of which eight were planted to oranges and lemons. He sold the tract for \$8000, or \$400 an acre. As similar land not planted can be bought in the vicinity for \$100 per acre this would make \$6800 for eight acres of oranges and lemons, or \$850 an acre for trees five and six years old. The varieties are mostly navel, Mediterranean Sweets and Majolica. The lemons are the Villa Franca.

Oroville Mercury: The new olive mill constructed by E. W. Fogg at his Thermalito olive grove is running steadily, crushing great quantities of olives and converting the same into oil. Besides the large crop from his own grove, Mr. Fogg received a consignment of 2000 pounds of olives from Sutter county, shipped by G. W. Harney, who purchased the same from different growers. He expects to ship in about 10,000 pounds more to be converted into oil. The capacity of the mill is about 1500 pounds daily, and the shipment of olives here is worthy of special note and shows that we are just entering upon a very important industry.

Note was made in these columns last week of the fact that Commissioner Eben Boalt had discovered the Eastern peach borer in a lot of trees brought from the North. From the Oroville Mercury we find the following additional facts: The trees were grown by the E. J. Carter & Co. nursery, of Woodburn, Oregon, and were shipped in here for distribution by their agent, H. Cleveland. Mr. Cleveland was through this section last spring and took orders for large numbers of trees through the eastern part of the county, at Bangor, Hurleton, Bidwell Bar and Forbestown. He had already made delivery of many trees to purchasers when the discovery was made by the commissioner. Mr. Cleveland and Mr. Boalt then started out, and at all the places where the trees on peach stock had been delivered, dug up and burned the same. The balance of the stock, amounting to 450 trees, is in Oroville, and will be burned or shipped back to the nursery. The other trees which the nursery shipped here were found to be in a healthy condition. The commissioners, Messrs. Boalt and Springer, are to be commended on their vigilance. The Eastern peach borer is one of the most dreaded of pests, and when it obtains a hold is hard to stamp out.

Contra Costa.

Martinez Gazette: During the season the Contra Costa Fruit Union has shipped fruit from Martinez, mostly grown in the immediate vicinity, as follows: Three carloads of pears, 31 of grapes, 33 tons of pears and 375 tons or 30,000 crates of grapes. It has paid to the railroad company \$14,307.50 for freight, and has used 28 refrigerator cars and 6 ventilator cars. Eighteen carloads were consigned to Porter Bros., 6 carloads to the Earl Fruit Co., 4 carloads to the National Fruit Co. and 2 carloads to Barnett Bros. Three carloads were bought in Martinez by Perry & Co. of Denver, Colo. There were in all 35 parties shipping through the Union, the largest shippers being Mr. John Reid 75 tons and Mr. R. Barber & Son 40 tons. Outside of the Union, Mr. A. B. Coleman and others shipped three carloads.

The prospects for a fine grain crop are excellent in Contra Costa county and, says the Ledger, cheerful anticipations largely compensate for the present low prices.

Fresno.

T. L. Reed of Reedley has just completed putting in 14,000 acres of wheat below Herndon. He has taken his teams to Reedley, where he contemplates putting in 8000 acres more.

Kern.

The raisin-growers of Riverside have formally protested against the proposition to reduce the tariff on raisins.

Kings.

Grangeville letter: A few vineyardists have started to prune their vines. It is getting to the work rather early; in fact, vine pruning is seldom attempted before the vines will "bleed" or the sap begins to flow. The black knot is supposed to be caused by early pruning of the vines, allowing the pruned parts to heal before the sap flows, thus shutting off all escape for the sap, and it is forced to break out and forms a knot on the side of the vine. But the fact of the matter is that grape growing is more or less of an experiment from year to year. What is believed this year may be discarded for something else next year. Knowledge is being gained at all events.

Grangeville letter in Hanford Journal: About 20 acres of the Verona vineyard is being pulled up. In place of the vines will be planted a variety of the most profitable fruit trees. We also hear that quite a number of others contemplate taking out part of their vineyards. Thus is the raisin industry being set back by the avaricious combine of middlemen, by making the business unprofitable to the producer.

Noting a recent suggestion that licorice might prove a profitable crop in California, the Hanford Sentinel says: Some years ago a piece of licorice root got into some land now known as the Little Gem ranch, owned by J. C. Goar, 2½ miles west of Hanford. It spread, and there was soon a patch of nearly an acre of it. We remember when Mr. Jewett, who owned the ranch a few years ago, harvested a large quantity of the root and cured it in good shape, but there was no market for it that would pay. It grows wonderfully here, and Mr. Goar has

been working hard and has finally nearly succeeded in killing the plant and ridding the place of it so he can plant the land to fruit. It grows without any special care and can be produced cheaply.

Elias Gallup, of Kings county, has just imported a fine lot of Poland-China hogs from Iowa and Illinois.

Visalia Times: L. L. Waltou of Kings county sold a hog that weighed 525 pounds. But his hog is only a shoat beside the mammoth porker of J. F. Firebaugh near Visalia. The Firebaugh hog now weighs nearly 700 pounds.

Los Angeles.

Monrovia Messenger: A few weeks ago Capt. Stedman received a supply of the new black scale parasite from Elwood Cooper at Santa Barbara, being the only party here receiving the same. They must have increased at a very rapid rate, for they are spreading out to neighboring orchards. Mr. Harris has discovered thousands of them on his trees. They seem to be doing their work well. Further developments will be watched with interest. One grower thinks that Monrovia orchards will be free from black scale next year.

Pomona Progress: Howland Bros. have their new oil-mill in operation early and late, turning out 40 to 50 gallons of oil every day. Although the crop is very short in this valley, they have already received about 30 tons of olives, coming mostly from San Fernando, Cucamonga and Redlands. The power used is a six-horse power gasoline engine, and the cost is about \$1 per day. The engine needs no attention after starting except to see that the bearings are properly oiled. The grinders consist of two cast-iron cylindrical rollers. They revolve in a cast-iron hattery and can be easily raised or lowered so as to prevent the crushing of the pits, which vary in size according to variety, each variety being worked up separately. Automatic scrapers keep the pomace off the crushers and from packing in the bottom of the hattery. The pomace is placed under a hydraulic press of immense pressure, which is applied by a pump operated by power from the engine. Before crushing the olives are exposed to the sun or a drying air for the purpose of evaporating some of the water in the fruit.

Monterey.

Salinas Index: C. P. Bailey has received an order from South Africa for half a dozen of his prize-winning Angora goats, and will ship them from his Soledad ranch.

Orange.

Santa Ana Blade: Every one is kept busy at work now. If not picking peas, they are pruning grape vines or taking care of their potato crop or shipping oranges, so that we have not time to stop and complain of hard times.

Santa Ana Blade: Some years ago Victor Montgomery planted in his garden in this city two off-shoots of a banana plant taken from the parent tree at Yorba, Orange county. One of these uncumbered to the vicissitudes of transplanting. The other, however, grew apace, and is now a fine specimen of this noble branch of the plantain family. As new and additional proof of the capacity and climate of the Santa Ana valley to produce tropical fruits, the plant in question has borne this season five clusters or bunches of bananas, which, for delicacy of flavor, equal any species imported of this delicious and nutritious fruit. The younger members of the Montgomery family are just now luxuriating in ripe bananas, gathered by their own hands, in their own garden, at No. 210 East Walnut street, this city.

Orange county, and El Toro in particular, being blessed by a good rain some seven or eight weeks ago, advantage was taken of it by at least a few ranchers, notably E. P. Hoyle, owner of Rancho Canada de los Alisos, and his father, whose land adjoins. These two purchased a carload of trees from the north, for the reason that such trees become dormant before southern, which allows of early planting, and they have now got in about 120 acres in several varieties, notably Robe de Sergeant, Petit, Royal and peach apriocots and almonds.

Placer.

The Placer County Horticultural Society has taken steps looking to the formation of a local fruit exchange to co-operate with the State exchange. A committee of three—J. Parker Whitney, P. W. Butler and Capt. McCann—has been appointed to attend the convention at San Francisco on the 29th of December.

A grower of Placer county writes us: The results this year show that the Placer county oranges have taken the cream in prices, owing to the earliness of the locality, and has already marketed about the whole product from \$5 to \$3.50 per box, being altogether ahead of the southern part of the State, which has only lately commenced to market oranges.

Santa Barbara.

Santa Maria Times: Henry Tunnell brought in a section of wood cut from the trunk of a two-year-old apricot tree that had died during the past season. He says several trees in two different rows died the same way; commencing on one side a whole limb would be dead, while balance of the tree would appear perfectly healthy; then another limb would die, then another, until finally the whole tree was gone. The inner wood is streaked with black, but the heart and sap surface seem perfectly sound and healthy. Can any one tell the cause? He says it is not gopher work, nor anything else that he is aware of, that has disturbed the roots.

Graphic: Lon Wood is busy these days getting R. L. Leeson's 180-acre orchard tract plowed and cleared ready for planting the trees. Mr. Wood expects to hire enough men to plant ten acres a day when he gets the ground ready, and that will be about the 1st of February.

This large orchard will greatly improve the looks of the mesa, and it shows that people are beginning to find out that Nipomo is the place for fruit.

Santa Maria Times: The man who persistently stands up and says our valley lands are not as good as our mesa lands for fruit, is doing inestimable damage by driving people away, and he would confer a lasting favor upon this section if he will either "take a tumble to himself" or quit the country.

Santa Cruz.

Pajaronian: The farmers who had good crops of onions this season, and have not sold them, are in a fair way to make a coin-killing. The price is moving upward, and the supply is short. One of the Chinese contractors, who has cleared and farmed part of the Harkins slough, got 1450 sacks of onions from four acres of land. Such a yield ought to suit any man.

Sonoma.

Santa Rosa Democrat: Workmen are very busy digging up grape vines on the Fowler farm and are preparing the soil for tree planting. Guilford Grange is soon to be a fine tree-fruit farm instead of a splendid vineyard ranch. Bennett Valley is well adapted to fruit and berry culture. Everybody knows about our strawberries. David Hedrick has had a force of teams and men who, with seed-sowers, harrows and skill, have been seeding for a hoped-for bountiful harvest.

Sutter.

Yuba City Farmer: There was a meeting of Horticultural Commissioners from Butte, Yuba and Sutter counties at this place for the purpose of discussing the advisability of organizing together the Commissioners in northern California, to better facilitate the work of inspecting and eradicating fruit pests. After considerable discussion an association, to be known as the Horticultural Commissioners of Northern California, was organized with H. P. Stahler as president and G. M. Gray as secretary.

Yuba City Farmer: The new drier of J. B. Wilkie is in operation this week on several lots of raisins received from vineyardists who found it impossible to cure the raisins properly with the present weather. The drier works well and soon puts the raisin in good condition.

At a recent meeting of the Sutter County Horticultural Society, the following resolutions were passed: WHEREAS, The prices received for our fruit products the past season have demonstrated the fact that the present system of handling California fruits is faulty, often resulting in a loss to the grower; therefore be it Resolved, That we hail with delight the prospect of marketing our fruit on a co-operative basis, and we endorse the movement that has resulted in the organization of the State Fruit Exchange. A committee consisting of B. F. Walton, H. P. Stahler, C. E. Williams and J. J. Pratt was appointed to report at the next meeting of the society a plan for organizing a local fruit exchange.

Tehama.

Observer: There were several carloads of hogs and sheep shipped during the week. Mr. J. J. Donovan shipped one carload of very fine hogs, bought of F. Houghton; Mr. W. H. Morrissey shipped another carload—did not learn where from, and Mr. Crahtree shipped 400 sheep and a carload of roasting pigs.

Corning Observer: H. B. Galliher, superintendent of the Maywood Colony, has a large force of colonists at work, plowing and doing the general work preparatory to planting, which will be commenced some time in January—indeed, right away if the weather permits. He will want many more hands. It is estimated that the season's planting will reach 1000 acres.

Corning Observer: There was filed in the Clerk's office in Red Bluff on Saturday an instrument by which J. Granville Jones of Vina leases to a Chinese company, known as the Fong Lee Yuen Co., 100 acres of land known as the Shearer place, situated on Deer creek. The lease is for ten years, and the Chinese are to pay in yearly installments \$15,200. This leasing of land is the racket to employ Chinese. The southern counties have been expelling them, and now the northern counties are employing the dirty opium-smokers that have been driven out, and leasing the rich land to them so that they can't be classed as laborers, but as land proprietors. This "leasing" is carrying on so far that we expect to hear of some lazy husband leasing his wife and children for ten years, or some preacher his church, or some big dry-goods man his store.

Yolo.

Dunnigan letter in Woodland Democrat: Growing grain is looking remarkably well and promises, with a good season, to make a big crop. Feed in the hills west of here is coming on nicely and will soon be at its best. Our tule friends have occasion to feel in the seventh heaven, as there have not been such good indications for a crop in the tule for 10, these many years.

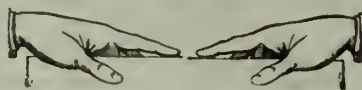
An Attractive Offer.

Readers of the PACIFIC RURAL PRESS need not be told of the high character and general value of the Cosmopolitan Magazine. It is a splendid monthly publication, a marvel of beauty and excellence.

We will send the PACIFIC RURAL PRESS and the Cosmopolitan Magazine to any address in the United States or Canada for twelve months for \$3.50. This is an attractive and unusual offer and will not long continue.

\$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 11, 508 Montgomery St., San Francisco (Pacific Mutual Life Insurance Building).



BENICIA PLOWS



Their MERITS are:

They are made by the
Benicia Agricultural Works
With California Capital and Labor.
There is just as good money
There is no better labor.

Every year they
Take Premiums
Over Eastern Plows.

They are better made
Last longer and
Cost no more than
Any of their Competitors.

Made to suit all Work,
Garden, Orchard, Vineyard,
Stubble, Breaking, Subsoil, &c.
Every Plow marked "Benicia"
Which means "GUARANTEED"
By the oldest Implement House
On the Pacific Coast.

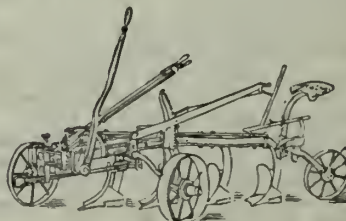
BAKER & HAMILTON

SAN FRANCISCO AND
SACRAMENTO

PEERLESS SINGLE AND GANG PLOWS.



Sulky Attachments
To fit all sizes.



Steel Beams,
Steel Axles.

Absolutely Center Draft,
And Strongest Beams made
Are used on this Plow;
Hence draft very light.

This is the best Plow
Of its class ever sold.
We Guarantee it.

BAKER & HAMILTON,

SAN FRANCISCO and SACRAMENTO.



World's Fair Passenger Business.

Under the caption, "How They Got Here," the Chicago *Inter Ocean* prints the following as the amount of passengers carried to the city by the various roads:

Chicago, Burlington & Quincy.....	2,300,000
Chicago & Alton.....	250,000
Northwestern.....	2,700,000
St. Paul.....	622,000
Michigan Central.....	350,000
Chicago & Grand Trunk.....	367,903
Santa Fe.....	88,618
Baltimore & Ohio.....	581,500
Illinois Central.....	250,000
Fort Wayne.....	542,000
Pan Handle.....	186,100
Wisconsin Central.....	53,174
Chicago & Erie.....	295,000
Rock Island.....	600,000
Wabash.....	200,000
Great Western.....	50,000
Monon.....	100,000
Lake Shore.....	270,000
Nickel Plate.....	50,000
Chicago & Eastern Illinois.....	60,000

Total..... 9,916,295

SUBURBAN LINES.

Illinois Central.....	18,178,893
St. Paul.....	6,750
Burlington.....	2,760,000
Baltimore & Ohio.....	500,000
Northwestern.....	1,800,000
Rock Island.....	600,000
Lake Shore.....	540,000

Total..... 24,385,643

LOCAL LINES.

South Side.....	94,000,000
North Side.....	36,501,394
West Side.....	60,000,000
South Side Elevated.....	22,248,779
World's Fair steamships.....	3,000,000

Total..... 215,750,173

How Coke Is Made.

The process of producing coke is thus described: Ovens in the shape of beehives are built with an opening in the top and a small door in front. After the fires have once been started in the ovens, the bricks retain sufficient heat to ignite each subsequent charge of coal. The coal goes in through the opening at the top, the door below is sealed with firebrick and clay, and in a very short time the coal becomes heated to a liquid mass. It remains in this state two or three days. All this time a fierce flame is pouring out of the opening through which the coal entered, but it is only the gases and other volatile matter that are passing away, as the flame prevents the introduction of air, and the carbon—the greater substance of the coal—will not burn without oxygen. Thus in time all noxious gases, such as phosphorous and sulphur, which would enter into and injure the product of the ores in smelting, are lost, and only the carbon is left. About a third of the coal is consumed in this process. When it is time to draw the oven, the burning coal is drenched with water, and as it cools, it cakes and cracks from the contraction of the cold. It is then drawn, and is ready for use.

The Purity of Gold.

The purity of gold is estimated by an Abyssinian weight called a carat, Arabian quirrat, a bean, the fruit of the carab tree, which is subdivided into four parts called grains, says an exchange. The term carat when applied to gold and silver is not a weight unit, but the mode of expressing the purity and fineness of the metal in twenty-fourths. Thus 18-carat gold is metal in which eighteen parts out of twenty-four (or three-fourths) are pure gold. This method of estimating fineness is traceable from the marc of Europe having been divided into twenty-four-real carats or actual weight units. The present method is to estimate fineness in thousands; i. e., gold fine has 250 parts alloy, corresponds to 18-carat gold, three-quarters of the metal being pure gold in each case. Our gold coins are 21.19.

The joint irrigation dam of the Modesto and Turlock irrigation districts, across the Tuolumne river, near La Grange, was completed Dec. 13th after two and one-half years' work. It is claimed to be the highest overflow dam in the world, being 127 feet high. At the base it is 117 feet thick, and at the top 15 feet. It is in the shape of an arch, and is 236 feet across at the top. The cost was about \$550,000. It contains 38,700 cubic yards of masonry, and 31,000 barrels of cement were used. The dam will supply water to 276,000 acres of fertile, level land in the two irrigation districts in Stanislaus county. The canals upon both sides have been partially finished, the total work so far costing \$1,800,000. The dam is also intended to furnish power by electricity for manufacturing purposes. Two million dollars in bonds have been voted for the enterprise.

Seeds, Plants, Etc.

San Ramon Valley Nursery.

Surplus Stock of

ALMONDS, 8 Varieties.

PEACHES, 4 Varieties.

PRUNES, 3 Varieties.

At very LOW PRICES. Also an assortment of other varieties of Fruit Trees.

WRITE FOR PRICES ON STOCK YOU NEED.

BALDWIN & STONE,
Danville, Cal.

OLIVE TREES

In Variety for Nurserymen,
Dealers and Planters.

Will also contract now to propagate Rooted
Olive Cuttings for persons who wish to
plant them in nursery spring of 1894.

OLIVE CULTURE IN CALIFORNIA,

Sixteen pages, mailed free.

Address:

JOHN S. CALKINS,
POMONA, LOS ANGELES COUNTY, CAL.

OLIVES.

Missions and Nevadillos.

A NO. 1 TREES,

Two-Year-Old, 4 to 6 feet High.

Extra inducements offered to intending buyers both
as regards choice trees and very low prices. Order
once or open correspondence with me.

J. E. PACKARD, Pomona, Cal.

OLIVE TREES.

ALL KINDS OF

Nursery Stock

Send and get book on Olive Culture.

HOWLAND BROS.,
Pomona, Cal.

OLIVE TREES FOR SALE.

Twelve years experience has taught me how to
PROPERLY root the olive. No artificial heat used.
Address

W. ALSTON-HAYNE Jr.,
Montecito P. O., Santa Barbara, Cal.

MYROBOLAN PLUM

AND

MAZZARD CHERRY SEED.

Fresh Crop Now Ready for Shipment.

FULL PRICE LIST OF

FRUIT STOCKS AND SEEDS
ON APPLICATION.

THOMAS MEEHAN & SONS, GERMANTOWN, PA.

Pepper's Nurseries.

ESTABLISHED IN 1858.

For Sale at Low Rates, a General Assortment of Hardy Deciduous Fruit Trees.

I do not buy trees to sell; what is offered is grown in my own grounds and free from scale bugs. No scale bugs of any kind to be found in the Nursery. No agents employed. Order direct from the nursery and procure your trees true to label. Order early, as early planting is the most successful with deciduous trees. Prices furnished on application.

Address W. H. PEPPER Petaluma, Cal.

50 000 FRENCH PRUNE TREES
On California Peach Root, for sale.

No. 1—6 to 8 ft.....\$50 00 per 1000
No. 2—4 to 6 ft..... 30 00 per 1000
No. 3—3 to 4 ft..... 15 00 per 1000

First class stock. Free from insect pest. Samples sent on application. Address

N. B. HARVEY, Milwaukee, Oregon.

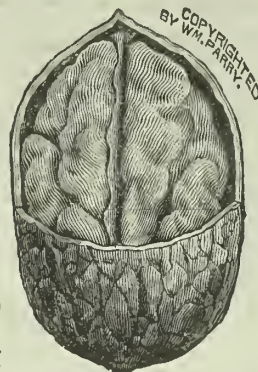
WE GIVE ESPECIAL ATTENTION TO

Fruit Trees! Deciduous Fruit Trees!

ALEXANDER & HAMMON'S

Rio Bonito Nurseries, Biggs, Butte Co., Cal.

KACHAZI



PERSIAN

:- SOFT SHELL :-

:- WALNUT! :-

Our Stock of TREES and VINES is Most Complete
in EVERY CLASS of Fruits.

A LARGE STOCK OF THOMPSON'S SEEDLESS GRAPES.

SHIPPING, CANNING and DRYING Fruits of all Kinds.

Best Assortment of RAISIN and TABLE GRAPES in California.

Early Shipping Plums a Specialty.

SPECIAL PRICES FOR TREES IN LARGE QUANTITIES.

DURING the last three years, trees grown on the FEATHER RIVER BOTTOM LANDS, at RIO BONITO, BUTTE COUNTY, have been much sought after, and the demand for them is increasing all over the State where they have been planted. Owing to the peculiar adaptability of the soil and climate of this section for growing nursery stock, the trees making a very large and well-furnished system of root growth, and maintaining a correspondingly strong and vigorous top, maturing the wood thoroughly, we are enabled to supply our patrons with the best of trees, healthy in every respect, entirely free from insect pests, and in perfect condition for transplanting.

If You Are Going To Plant Trees, It Will Pay You To Correspond With Us Before Purchasing.

ALEXANDER & HAMMON,
BIGGS, BUTTE COUNTY, CALIFORNIA.

Incorporated 1884.

500 Acres.

CALIFORNIA NURSERY COMPANY,

Niles, Alameda Co., California.

FRUIT TREES,
SHADE TREES,
EVERGREENS,
PALMS AND FLOWERING PLANTS.

SPECIALTIES: OLIVES—38 sorts, French, Italian and Spanish.
ROSES—360 sorts, all the leading kinds, new and old.
CLEMATIS—25 Varieties.

SEND FOR CATALOGUES.

JOHN ROCK, Manager.

PRUNE TREES

FOR SALE—50,000 Trees on Myrobalan Stock.

Imported from one of the first French nurseries. Scions from an orchard near Saratoga. Fruit raised in this celebrated district has taken for us six first-class awards, INCLUDING HIGHEST AWARD, COLUMBIAN EXHIBITION. Apply to

BALFOUR, GUTHRIE & CO., 316 California St., San Francisco, Cal.

Agents for Saratoga Packing Company.

LOW PRICES

ON

ALMOND TREES!

California Paper-Shell, Nonpareil, Ne Plus Ultra
and I. X. L.

A pamphlet on Almonds mailed free of charge on application. A large supply of the GOLDEN PEACH and FRENCH PRUNE. All kinds of leading fruit trees for sale. No charges made for baling trees.

NO CHARGE FOR BALING.

Address, PERCY W. TREAT,
Davisville Nurseries.....Concord, California

Treatment of the Foot of the Horse.

The importance of the frog should be known to every horseman, says the *Rider and Driver*. It should never be touched with a knife, as it breaks the jar to the coffin joint in coming in contact with the ground, and from its elasticity it allows natural expansion—this being the great function of the frog when the horse is in motion. But if the shoe is so constructed that it closely fits each side of the frog, then the iron shoe controls the elasticity of the foot, and so induces the first step to contraction. So the shoe, properly applied, should follow the gradual curvature of the wall of the foot, taking care to give the frog plenty of room to perform the functions already indicated.

The horse should be shod once a month, and when shod very little alteration is necessary on the foot. The rasp is the only tool necessary to be used. The scooping out of the sole of the foot with the knife, or mutilating the frog in any form, should be carefully avoided; and owners and blacksmiths, if they observe these hints, will find in consequence less lameness connected with the horse.

When horses first become feverish, the simple remedy is just to stand them in mud—yellow clay—up to the fetlocks. This reduces all local inflammation.

The treatment for thrush in the frog of the foot is quite simple. The foot should be poulticed with flaxseed meal for twenty-four hours. This treatment softens the parts and reduces the inflammation. A dressing of fine tar and oakum should be applied. This is all that is necessary to complete the cure.

The remedy for scratches I give for the benefit of the horse. It is to apply simple white lead with a painter's brush—and nothing else. No surer remedy has ever been suggested. All that is necessary is to continue the treatment till cure is effected, which will occur in from six to seven days.

Corns in the foot of the horse should never be cut out, as by this means support is taken away from the wall of the foot and a receptacle is created for the lodgment of dust and gravel, which are very penetrating and may cause separation to take place between the wall and the sole. The part of the heel affected with the corn should be lowered and a side-calk put on the shoe, thus relieving the part from pressure and keeping the foot soft. The attainment of this result is all that is required. It may be accomplished more readily by using a wet swab or by poulticing.

Horses foraging should be shod light in front and never behind.

Horses that interfere should be thoroughly examined in regard to position of the foot on the ground. If low on the inside, they should be raised from the point of the toe to the heel, thus widening their gait. This mode of treatment will effect a cure, except in cases of abnormal construction or build.

Artificial Sunlight.

In a dark room with alternating currents of 800,000 voltage, Nicola Tesla, by means of atmospheric vibrations, caused a faint glow of light to appear. Explaining the phenomena, he said: "If I can increase the atmospheric vibrations, say one million or ten thousand millions, I can produce sunlight in this room. Of course I can increase the vibrations by increasing the voltage. I can make the voltage 8,000,000 as easily as 800,000, but I am not ready to handle 8,000,000 volts of electricity. Currents of such strength would kill everybody in the room. I expect, however, to learn how to control a large voltage. When I have increased the atmospheric vibrations, perhaps a thousand times, the phenomena will be no longer electricity. It will be light. I am satisfied that sunlight can be made from electricity without doing harm to anybody, and I expect to discover how it is done."

It Helps Germination.

Prof. R. Chodat describes an investigation into the action of electric light on vegetation, in which he demonstrated that electric illumination exercises a favorable influence on the germination of seeds. He confirms G. Bonnier's statements that the effect of this kind of light on herbaceous plants promotes the lengthening of the stems and leaves. Under glass the light greatly accelerates growth and causes the green parts of the plants to assume a more intensely green tint. The structure is at first strongly differentiated, but prolonged exposure acts in this direction with a deleterious effect.

Increasing Use of Spectacles.

A writer in the *Atlantic Monthly* for November argues very clearly that eyesight is not steadily tending to the bad. This writer on spectacles tells us that the present-day common use of spectacles is entirely due to modern science. In former times young people with defective eyesight were not aided simply because they were young. Spectacles were for aging or elderly people. The consequence was that many young people received permanent injury or loss of eyesight because it was assumed that tender years and wearing of glasses were incompatible. There is no doubt that the great advances made during recent years in sight-testing, and the reduced price at which good spectacles can be vended, have done much to popularize the use of aids to vision.

A General Round Up.

In the farming districts of California where the depredations of squirrels and gophers are so universal, and where the individual and aggregate losses thereby caused foot up such enormous amounts, it becomes the duty of every man or woman engaged in agricultural pursuits to exert every means within their reach to destroy the evil. This is a duty that they owe no less to their neighbors than to themselves. When it is known that the means for destroying the pests is at hand and easily obtained, the problem is at once simplified, and as the mating season of these rodents is at hand, prompt and active measures by those who have been their victims in past seasons will no doubt be the order of the day.

Then for a general massacre, the farmer who is wise with experience or advice will ask his grocer for "Wakelee's Squirrel and Gopher Exterminator." And he will take no other. In case the dealer should not have the genuine article in stock and should attempt to push an inferior preparation upon him, the man who is determined to kill will at once order "Exterminator" from headquarters (Wakelee & Co., San Francisco). The cost, 50c per one-pound can, or \$5.50 per dozen, is practically about the price of the imitations, and will cut little or no figure in the business when the results accruing are taken into consideration. To give a better idea of the nature and application of the Wakelee Exterminator, as well as to quell the doubts of those who are not at present acquainted with its merits, the following testimonials are submitted:

[From John T. Ward, Esq., Napa.]

MESSRS. WAKELEE & Co. Gentlemen:—We have given your Squirrel Exterminator a fair trial, and are perfectly satisfied with its workings. It is a dead shot; 15 kernels at each squirrel hole will kill almost every squirrel, and after filling up the holes few are found re-opened.

We poisoned one field which was badly infested; to secure the scalps, we placed the poison two feet from the holes. In almost every instance it killed before the squirrel could get back to the hole. In the field we found blackbirds and meadow larks dead from its effects, and dogs and cats which ate the dead squirrels were also killed. So completely was the field rid of the vermin, that the grain stood thickest about the stumps and trees, where always before the squirrels had destroyed the seed.

I can recommend your Exterminator to all who are troubled with squirrels. It does all you claim for it, and is the most effective poison I ever used.

Perhaps the best recommendation I can give it is, that after one season's trial I am so well satisfied with it that I shall use it in larger quantities this season.

Very truly yours,

JOHN T. WARD.

[From the Squirrel Inspector, San Lorenzo District, Alameda County.]

MESSRS. WAKELEE & Co. Gentlemen: I have used your Squirrel Exterminator in this district, and find that it fully comes up to its recommendation, and the most efficient poison yet used by me.

GEORGE HYDE,

Squirrel Inspector San Lorenzo School District.

During the past year I have sold many hundred cans of WAKELEE'S Squirrel Poison to our farmers and Squirrel Inspectors in the vicinity of Antioch. To my knowledge many experiments have been tried systematically with the poison by them, and all pronounce it to be the most economical as well as the most destructive poison now in use.

WM. ODEN.

[From well-known farmers in San Luis Obispo County, El Paso de Robles Springs.]

MESSRS. WAKELEE & Co. Gentlemen:—In reply to your note, we would state that, after having given your Squirrel Exterminator a thorough trial, we can unhesitatingly pronounce it the most efficacious and destructive agent we have ever employed against squirrels.

We have used strychnine and phosphorus, and can confidently state as to their merits, compared with those of your Exterminator, either as regards cheapness or destructibility, the odds are greatly in favor of the Exterminator. Many of our neighbors are using it, and with the most satisfactory results.

The squirrels, many of them, die before they can get to their holes; and fields, which a few weeks ago swarmed with pests, are now comparatively free.

Respectfully yours,

W. D. ILLINGWORTH,
C. D. MOREHOUSE,
W. T. JOHNSON.

Procure only the genuine Wakelee's Exterminator and a general round-up of the rodents will follow.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos., \$1 10 mos., \$2 16 mos., \$3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

A Garden for a Dollar.

Any one of the following six collections will be sent free by mail for \$1. Plants all distinctly labeled.

\$1 GARDENS		Vegetable Seeds.	Plants.	Chrysanthemums.	8
1	20 p'ck'ts, fine assortm't	Flower Seeds.	3	3 Chrysanthemums.	1 French Canna.
2	5 pkts Orn't'l Foliage.	2	4	2 Geraniums.	1 Begonia, Rex.
3	5 pkts Climbing Plants.	1	1	1 Heliotrope.	1 Rose Geranium.
4	5 pkts Annuals.	2	2	2 Pelargoniums.	1 Lemon Verbena.
5	5 pkts Perennials.	2	2	2 Roses.	1 White Lily.
6	5 pkts Biennials.	3	3	3 Carnations.	1 Tea Rose.
7	5 pkts Orn't'l Grasses.	3	3	3 Chrysanthemums.	1 Pelargonium.

Selection of varieties in collections must in all cases be left to us. Substitution made if necessary.

Sunset Seed and Plant Co.,

Seed Farm and Nurseries,

(SHERWOOD HALL NURSERY CO.)

427-9 Sansome St.,

MENLO PARK.

SAN FRANCISCO, CAL.

Write for beautifully illustrated catalogue containing instructions for cultivating. Sent free.

CATALOGUES MAILED FREE.



NEW & RARE SEEDS AND PLANTS

New Roses.
New Chrysanthemums.

Our Descriptive Catalogue contains valuable information about GARDEN, FARM and FLOWER SEEDS, PLANTS, SHRUBS and FLOWERING BULBS, AUSTRALIAN and PACIFIC COAST TREE SEEDS.

Fruit Trees,
CALIFORNIA GROWN VEGETABLE and FLOWER SEEDS.

Cox Seed & Plant Co.

San Francisco, Cal.

FANCHER CREEK NURSERY,

FRESNO, CALIFORNIA.

FRUIT TREES, ORNAMENTAL TREES, GRAPE VINES.

SPECIALTIES—OLIVES, ROSES, PALMS.

SEND FOR CATALOGUE AND PRICE LIST.

GEO. O. ROEDING, Manager.

McKEVITT'S EARLY.

The New Yellow Freestone Peach! —FIRST AND BEST OF EARLY YELLOW PEACHES.—

RIPENS IMMEDIATELY AFTER THE ALEXANDER (White Cling), which is the earliest peach in market.

Fruit is round, of medium size, VERY HIGHLY COLORED, flesh firm and sweet. THIS PEACH HAS BEEN SUCCESSFULLY SHIPPED EAST FOR FIVE YEARS and is no new, untried variety.

Tree healthy, strong grower, and heavy bearer, never having missed a crop. A limited number of yearling trees for sale this season. Apply early before stock is exhausted.

FRANK B. McKEVITT, : : : : VACAVILLE, CAL.

THE HOOD RIVER STRAWBERRY.

Known as Clarke's Early, is coming to be acknowledged as a world beater. Took a medal at World's Columbian Exposition. They are bi-sexual; large; firm-fleshed; prolific and uniform in size. They can be picked while they are white and will bear shipping to New York and come out a beautiful scarlet or crimson, looking as though made of wax, dotted with golden seeds and painted and varnished by an artist. Their flavor is superb. They originated in Oregon. The first crates that came to Portland this year were a fortnight later than last year. It was latter part of May and best California berries were selling at two boxes for a quarter. The Clarke brought at once 30 cents per box by the crate of 24 boxes. They sold all over Puget Sound, and at Spokane, Helena, Butte, Salt Lake, Denver, Omaha and Chicago at highest prices, extending a 2000-mile trip without apparent deterioration. We challenge the world to produce their equal for excellence of flavor combined with shipping quality. Any amount of references. Price per doz., \$1.00, sent by mail; by express, large, vigorous plants at buyer's charge, \$5 per 100, \$20 per 1000. Address

GUY M. PILKINGTON, HOOD RIVER, OREGON.

NAPA VALLEY NURSERIES.

NEW CATALOGUES NOW READY.

Fruit, Nut and Shade Trees, Grape Vines, Etc., Citrus Fruits, Ornamental Shrubs, Flowering Plants, Roses, Palms, Bulbs, Seeds, Etc.

Fruit and Nut Trees propagated from bearing orchards at Sausal Fruit Farm; Unirrigated, Clean and Healthy. Do not fail to correspond before making purchases. Satisfaction guaranteed.

LEONARD COATES, - - - NAPA, CAL.

Do Species Exist?

Prof. David Starr Jordan, of Stanford University, lectured in this city recently on evolution. Darwin, said the lecturer, once wrote a monograph on barnacles in which he tried to describe all the barnacles in the sea. He wrote:

"This systematic work would be easy were it not for this confounded variation, which, however, is pleasant to me as a speculatist though odious as a systematist."

He could not depend upon his barnacles; they were always varying. After describing a set of forms as a distinct species, tearing them up and making them separate, and making them over again, I have gnashed my teeth, cursed species and asked what sin I had committed to be so treated.

While writing to describe many species, and at the Arlington Hotel, Santa Barbara, the floor of my room was covered with letters rejected because each new individual made the prior description useless.

The crucial test of the development theory is the fact—does one species change into another? Species generally means a kind. The word was used first about 146 years ago by Linnæus, who, in a sense, was the founder of modern zoology on account of his system of recording. In animals of a limited district, such as eastern Sweden, there is no difficulty in telling where one species leaves off and another begins. Differences may be simple, but they are constant and apparently permanent.

In the system of Linnæus there was no doubt as to species being a definite thing, and he says that there are as many species on the earth now as there were different forms created in the beginning, that each species had been separately created by the hand of God and had not undergone change. Linnæus did not know of extinct species, nor that comparatively only few species are left. Linnæus recognized the idea of variety dependent on geological limitations, climate, etc. In the genus homo he recognized homo sapiens, the aboriginal man, and homo troglodytes, the orang-outang, and of the former he recognized five varieties.

Cuvier recognized that species underwent variations, and thought that modern species could have descended from extinct species. Cuvier thought that there were as many species of animals now as there were different formations created at the beginning of each geologic era, which he believed to be about fifty.

Lamarck in the Paris Museum ran across cases where a shell in one country would gradually undergo changes until it became something quite different and that these variations were just what they appeared to be on their face, modification by climate.

In the days of Cuvier the difficulty of the men who maintained the descent of species was to show the things causing the change. Whatever the factors in evolution were not shown until the time of Darwin, Lamarck's exploration was not regarded as sufficient, though Goethe prophesied that the time would come when it would be valued as scientific. This is the conclusion reached by every one who has taken up the study of late years. The reason why it was not discovered earlier is that people neglected the little for the great, whereas the progress of science has been by the collation of small facts.

Darwin's study of the land birds of the Gallapagos islands, off South America, and also of the Cape Verde islands, off western Africa, the persistence of the same species and their resemblance to the animals of the continents led him to the conclusion that these birds were waifs of the storms that had taken root there and changed to match the changed surroundings. If you admit that new species can be found upon the islands you admit that one species can be formed from another.

In Australia the mammals are marsupials, the fossil mammals are marsupials, and the lecturer concluded the modern were descendants of the ancients. Shells that in the upper reaches of swift and rocky streams are rough, in the lower and calmer waters of the mouth become smooth, and the transition is so perfect that it is impossible to tell where the one leaves off and the other begins. From these and other data we conclude that time and space bring about changed conditions and forms.

One of the greatest movements in recognizing evolution of species was the Pacific railroad survey. Numerous plants and animals were taken to Washington from the greatest stretch along the same latitude line that had ever been known. The birds, etc., were subjected to Professor Baird's minute

studies, and certain laws of variation were thence formulated. The paper of Dr. Joel Allen of Harvard on the mammals and birds of Florida in 1874 was a further step in the advance of our knowledge of species.

By means of hundreds of measurements of specimens he discovered laws by which he could predict the kind of variations in birds in some new places about to be investigated in Florida, and showed that many of these variations were connected with climate. In spite of the early opposition to Allen's theories, ornithologists and others have come to the conclusion that the only test of species is the known presence of intermediate forms.

Illustrations of Professor Allen's laws were given in the shore lark, the blue birds, the meadow lark, etc. In regard to his own conclusion to that belief in evolution of species, President Allen spoke of his early training under Agassiz in opposition to Darwin's theories, and how he was forced by his experience to take a view contrary to that of his professor. He then explained how fish spread in different rivers, especially how the trout had come from Siberia and worked its way to the Frazer and Columbia rivers, to the Snake and Lewis rivers, to Utah, and by the Colorado into and through California and up again to the Columbia and Frazer, where the two now recognized species of trout, the descendants of the original Siberian emigrants and the descendants of the trout that had migrated and spread over the western country, met and lived together as two distinct species.

The variation of words as shown in philology and the various species of animals is a very close parallel. There is just as much reason to believe that all the words of the French language were created separately in France, without any relation to Latin or Greek, as to believe in the independent creation of species.

Death Rate of Large Cities.

Statistics are given below compiled for the first half of this year by Secretary Carter, of the Maryland Board of Health, showing the mortality in various cities of this country and Europe having a population of more than 100,000:

	Population.	Deaths.	Death rate per 1000.
London.....	5,849,104	55,895	19.11
Paris.....	2,424,705	28,676	29.61
New York.....	1,801,739	23,856	26.47
Berlin.....	1,669,124	17,181	20.47
Chicago.....	1,458,000	13,690	18.95
Vienne.....	1,435,931	18,005	25.07
Philadelphia.....	1,115,562	12,249	21.95
Brooklyn.....	978,394	10,685	21.84
St. Louis.....	520,000	4,802	18.47
Brussels.....	488,188	4,359	17.86
Boston.....	487,397	5,816	23.88
Baltimore.....	455,427	4,806	21.10
Dublin.....	349,594	4,735	27.05
San Francisco.....	330,000	3,066	18.21
Cincinnati.....	305,000	3,000	19.67
Cleveland.....	290,000	2,538	18.19
Buffalo.....	290,000	2,361	16.28
Pittsburg.....	255,000	2,923	22.92
New Orleans.....	254,000	3,598	28.72
Edinburgh.....	267,000	2,572	19.22
Milwaukee.....	250,000	2,000	16.00
Louisville.....	227,000	1,630	14.80
Minneapolis.....	209,000	1,604	9.69
St. Paul.....	155,000	745	9.61
Christiania, Norway.....	156,500	1,385	17.75
Denver, Colo.....	150,009	871	11.61
Rochester, N. Y.....	144,831	1,291	17.87
Reims, France.....	105,408	15,03	28.62

In the near future the Southern Pacific Company will make an important extension of its coast division line. One branch of this division at present terminates at Tres Pinos, in San Benito county. The proposed extension will carry the road south through the mountains and several large fertile valleys to a point opposite Alcalde, Fresno county, and thence east into Alcalde, where it will be joined to the Goshen branch of the Southern Pacific. Another short road will be run easterly through the hills from Kings City, thus uniting the Paso Robles branch with the proposed road. One of the most beautiful sections in southern California will be tapped and have an outlet to the east over the Goshen route and two outlets to San Francisco by the way of Hollister and by Kings City. The survey has already been made, and it will not require an immense amount of work to complete the construction of the proposed branch. The opening of this road will be of great importance to the building trades in this section.

Trees are felled by electricity in the great forests of Galicia. For cutting comparatively soft woods, the tool is the form of an auger, which is mounted on a carriage, and is moved to and fro and revolved at the same time by a small electric motor. As the cut deepens, wedges are inserted to prevent the rift from closing, and when the tree is nearly cut through, an ax or hand-saw is used to finish the work. In this way trees are felled very rapidly and with very little labor.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

HORSES AND CATTLE.

F. H. BURKE 626 Market St., S. F. Registered Holsteins, winners of more first prizes, sweepstakes and special premiums than any herd on the Coast. Pure registered Berkshire Pigs. All strains.

JERSEYS AND HOLSTEINS, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. Wm. Niles & Co., Los Angeles, Cal., Breeders and Exporters. Established in 1876.

M. D. HOPKINS, Petaluma, Registered Shorthorn Cattle. Both sexes for sale.

P. PETERSEN, Sites, Colusa Co. Importer & Breeder of Registered Shorthorn Cattle. Young Bulls for sale.

PERCHERON HORSES.—Pure-bred Horses and Mares, all ages, and Guaranteed Breeders, for sale at my ranch near Lakeport, Lake County, Cal. New Catalogue now ready. Wm B Collin.

PETER SAGE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS—The best A. J. C. C. Registered Prize Herd is owned by Henry Pierce, S. F. Animals for sale.

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.

POULTRY.

WM. NILES & CO., Los Angeles, Cal., Breeders of nearly all varieties of Poultry, Dairy Cattle and Hogs.

JALIFORNIA POULTRY FARM, Stockton, Cal. Send for Illustrated & Descriptive Catalogue, free.

R. G. HEAD, Napa. Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

R. H. CRANE, Petaluma, Cal. Breeder and Importer. South Down Sheep; also Fox Hounds from Missouri.

SWINE.

E. J. PHILPOTT, Niles, Cal., Importer and breeder of Teumseh and other choice strains of Registered Poland-China Hogs.

J. P. ASHLEY, Linden, Cal. Breeder and Importer of Thoroughbred Swine Small Yorkshire Victoria, Essex and Poland-China Superior Stock, new Prices.

BERKSHIRES & POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. Wm. Niles & Co. Los Angeles, Cal. Established 1876.

P. H. MURPHY, Perkins, Sac. Co., Cal.—Breeder of Short-Horn Cattle, Poland-China and Berkshire Hogs.

C. WAITE, Perkins, Cal., breeder of registered Berkshire Hogs and Plymouth Rock fowls.

FYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.

CHAS. A. STOWE, Stockton, Regist'd Berkshires.



In These Dull Times

You Can Largely Increase

Your income by buying an Incubator and engaging in the chicken business. Send stamp for our cat logue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember, the best is the cheapest. PACIFIC INCUBATOR CO. 1317 Castro St., Oakland, Cal.

HATCH CHICKENS BY STEAM

With the Improved Excelsior Incubator.

Simple, Perfect, Self-Regulating. Thousands in successful operation. Guaranteed to hatch a larger percentage of fertile eggs at less cost than any other hatcher. Lowest priced first-class hatcher made. Circulars free. Send 5c. for illustrated catalogue. GEO. H. STAHL, Quincy, Ill.

World's Fair Highest Awards

Medal and Diploma on our INCUBATOR and BROODER Combined.

"Old Reliable" Leads them all.

If you are interested in Poultry, it will pay you to send 4 cents in stamps for our 72 page catalogue, giving valuable points on Poultry Culture. Address

Reliable Incubator and Brooder Co. Quincy, Ill.

Reliable Incubator and Brooder Co. Quincy, Ill.

Reliable Incubator and Brooder Co. Quincy, Ill.

Reliable Incubator and Brooder Co. Quincy, Ill.

Reliable Incubator and Brooder Co. Quincy, Ill.

Reliable Incubator and Brooder Co. Quincy, Ill.

Reliable Incubator and Brooder Co. Quincy, Ill.

Reliable Incubator and Brooder Co. Quincy, Ill.

Reliable Incubator and Brooder Co. Quincy, Ill.

Reliable Incubator and Brooder Co. Quincy, Ill.

Reliable Incubator and Brooder Co. Quincy, Ill.

Reliable Incubator and Brooder Co. Quincy, Ill.

Reliable Incubator and Brooder Co. Quincy, Ill.

Reliable Incubator and Brooder Co. Quincy, Ill.

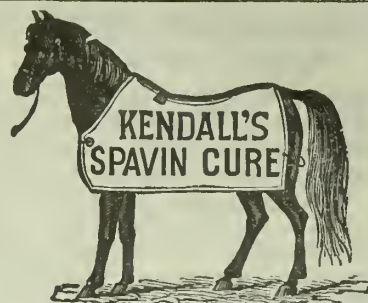
Reliable Incubator and Brooder Co. Quincy, Ill.

Reliable Incubator and Brooder Co. Quincy, Ill.

Reliable Incubator and Brooder Co. Quincy, Ill.

Reliable Incubator and Brooder Co. Quincy, Ill.

Reliable Incubator and Brooder Co. Quincy, Ill.



The Most Successful Remedy ever discovered as it is certain in its effects and does not blister. Read proof below.

KENDALL'S SPAVIN CURE.

STAR, LANE CO., OREGON, Feb. 8th, 1892.

DR. B. J. KENDALL CO.,

Dear Sirs:—I have used your KENDALL'S SPAVIN CURE for the last twelve years never being without it but a few weeks in that time and I have made several wonderful cures with it. I cured a Curb of long standing. Then I had a four year old colt badly spavined; tried every thing without any benefit, so I tried your liniment, and in a few weeks he was well and his shoulder filled up all right, and the other, a four year old that had a Thoroughbred and Blood Spavin on the same joint, and to-day no one can tell which leg it was on. These statements can be proven, if necessary; the four year olds are now seven and can be seen any day at Cottage Grove, Or. S. Z. FAYTON.

—Price \$1.00 per bottle.

DR. B. J. KENDALL CO.,

Enosburgh Falls, Vermont.

SOLD BY ALL DRUGGISTS.

FARM-POULTRY.

The Best Poultry Paper IN THE WORLD.

Write for SAMPLE COPY; Sent Free.

"It opened up a new field and cultivated it thoroughly."—So says the Fanciers' Journal.

"FARM-POULTRY is covering itself with glory."

—Thus the Philadelphia Farm Journal writes us.

It is worth \$1.00. It Teaches How to

Sent on Trial. Make Money with

Six Months for A Few Hens.

ONLY 25 CENTS.

IF YOU MENTION THIS PAPER.

One department "Answers to Correspondents," is worth ten times the subscription price to anyone who explains many things and to trouble even old breeders. Send for Index to first 3 vols. free; judge yourself, if as much instructive matter can be bought anywhere, for many times the price. Remit cash or stamps. This special offer good for only three months. I. S. JOHNSON & CO., 22 Custom House St., Boston, Mass.

HOW TO RAISE TURKEYS!



The numerous diseases that are usually prevalent among very Young Turkeys may be prevented by the use of

CARY'S PILLS.

Send for Circular

E. FOUGERA & CO.,

36 North William Street, New York.

FRANK A. BRUSH,

SANTA ROSA, CAL. (Cayo Santa Rosa National Bank)

Importer, Breeder, Exporter.

S. C. White Leghorn

S. C. Brown Leghorn

Barred Plymouth Rock

Black Minorcas,

Eggs, \$3 per 13. Send for circular.

A SEAL SKIN COAT FREE.

Send 25 cents for particulars, including sample cake of SEAL'S SKIN SOAP, for Complexion and Toilet.

A. J. McKNIGHT.

1125 Mission St., San Francisco, Calif.

A LOT FOR \$1 A WEEK

A dollar a week for sixty weeks, buys a lot 25x125 feet east of Chicago Heights, the great manufacturing suburb of Chicago. Six on factories, streets paved, stone sidewalk, beautiful shade trees, schools, churches, etc. No doubt these lots will triple in value within one year.

No such bargain was ever offered in Chicago Real Estate. These lots are now on the Belt Line where factories are now in successful operation, employing over 50,000 people. Business transacted for non-residents.

A. J. McKNIGHT, DeForest Land Co., Unity Building, Chicago.



—THE—

HALSTED INCUBATOR

COMPANY,

1312 Myrtle Street, Oakland, Cal.

Send Stamp for Circular.

Damage by Lightning.

Writing to *Industries*, Mr. A. A. Voysey gives an account of an apparently unusual cause of damage by lightning. In a room in a country house near Nottingham stood a table "ornamented by a fringe fastened securely to it by nails. This fringe had been almost entirely burnt on the side of the table facing the room, and the burning had partially extended to one other side. The wood was charred to a depth of one-eighth to one-quarter of an inch where the fringe was burnt. If the table had been struck by lightning, there must have been some marks in the room showing where the discharge had entered and where it passed to the earth. But not a mark or sign of any kind could be found, and the damage to the table was completely isolated. A rigid inquiry proved that no one had entered the room with a candle. The only possible explanation of the occurrence was suggested by an examination of the fringe. It was found to consist of a fluffy material, probably a mixture of cotton and wool, and certainly of an inflammable nature. Inter-spersed among the fluffy material were fine metallic threads. Now, it is in this combination of inflammable material with the metal threads that the explanation lies. The metal threads were acted on inductively by the lightning discharges taking place near the house. This inductive action was sufficient to cause small sparks to fly between various threads, and the sparks set the inflammable material on fire. If the fire caused in this peculiar manner had not quickly died out, the whole house might have been destroyed, and no sign would have been left to point to the true cause. It is not unusual for fires to occur in connection with thunderstorms, and they are generally attributed to the direct action of a lightning discharge. Possibly a large percentage of such fires have been caused by induction, and the simple incident which has come to my notice is sufficient to show how easily the inductive action may cause a fire."

Tobacco Displacing Cotton.

The president of the National Cigar Leaf Growers' Association (at Lake City, Florida) expresses the opinion that tobacco culture is the coming industry of South Georgia and Florida. In his opinion there will be 5000 farms in the localities indicated planted in tobacco next year that are now planted in cotton. They are growing fine grades of cigar tobacco, equal or similar to the Havana article, in the sandy lands of South Georgia and the bordering counties in Florida, and, the profits have proven attractive so far causing wide-spread interest and a rapid extension of the acreage. With more experience and care in curing the crop and its more general culture in the district referred to, the competition among the tobacco buyers resulting will make the returns to the growers very profitable. Prominent citizens of Lexington, Kentucky, are among the large investors in tobacco planting about Chipley, Florida.

A Novel Pencil.

A novel lead pencil has been invented by an Eastern man. The pencil is covered with narrow strips of specially prepared paper, run on coils, and so arranged that by releasing one end of a coil with a pin or the point of a penknife a strip of paper can be reeled off, leaving the pencil with a cone point and about one-eighth of an inch of an inch of lead uncovered. The company proposes to cover lead, crayon and slate pencils in the same way. The pencils are painted in fancy colors, and so closely wrapped around that the seams in the paper are said to be invisible.









—The next steamer that sails for Honolulu will have in her cargo a steam-plow plant, which is expected to revolutionize the present method of cultivating the great sugar plantations on the islands. The plant is for the plantation of R. Wilcox, on the island of Oahu, and consists of boiler and engine, cables, etc., and a 12 plow machine capable of plowing 50 acres a day. The machinery is in charge of George Carter, an expert machinist from Leeds, England, who will put the plant in working order on Mr. Wilcox's plantation. The steam plows will take the place of the horses now used to perform the same work, and are expected to go far toward cheapening the cost of production.

Government surveyors are surveying public lands between San Bernardino base line and the Mojave desert.

DIAMONDS!

GENUINE AND FIRST QUALITY.
Warranted Pure White and Perfect, and of
Extreme Brilliance.

This diagram shows the approximate sizes of the stones

							
1/8	1/4	3/8	1/2	5/8	3/4	7/8	1 K
1.16 carat... \$41 00			1 carat... \$81 00			1 carat... \$15 00	
carat.....25 00			carat.....35 00			carat.....50 00	
carat.....70 00			carat.....90 00			1 carat.....110 00	

S. H. MARKET REPORT

Market Review.

WEDNESDAY MORNING, Dec. 27, 1893.

This has been an off week in all respects in the local wheat market. The holiday season has interfered with trade, and the market has been weak in sympathy with the Eastern markets. There is simply nothing to report excepting quotations, which are as follows: Shipping wheat up to standard is quotable at \$1.02½ to \$1.03½, with possibly \$1.05 per cbl. for something fancy. Milling grades are held with moderate steadiness at \$1.06½ to \$1.07½ per cbl.

The course of the speculative markets in the East and in England is shown by the following tables. In Chicago and New York there were no sales in board on Friday, Saturday or Monday:

LIVERPOOL.		Dec.	Jan.	Feb.	Mar.	Apr.	May.
Wednesday	5603d	5603d	5604d	5605d	5606d	5607d	5608d
Thursday	5603d	5603d	5604d	5605d	5606d	5607d	5608d
Friday	5603d	5603d	5604d	5605d	5606d	5607d	5608d
Saturday	5603d	5603d	5604d	5605d	5606d	5607d	5608d

To-day's cablegram is as follows:
Liverpool, Dec. 27.—Wheat slow. California spot lots, 5s 5d; off coast, 2s 6d; promptly to be shipped, 2s 6d; nearby due, 2s 6d; Walla Walla spot lots, 1s 3d; off coast, 2s 6d; present and following months, 2s 6d; Australian off coast, 2s 6d; present and following months to U. K. 2s; cargoes off coast, quiet; on passage, rather easier; wheat and flour on passage to Continent, 1,061,000 qrs.; wheat and flour on passage to U. K. 2,335,000 qrs.; Indian shipments wheat to Continent, 20,000 qrs.; Indian shipments wheat to U. K., 22,500 qrs.; Mark Lane English wheat, market quite of holiday character; flour, slow; wheat in Paris, firm; flour, steady; weather in England, m. d.

NEW YORK.		Dec.	Jan.	Feb.	Mar.	Apr.	May.
Thursday	67	67	69	72			
Friday	65	66	69	71			
Tuesday	66	66	68	71			

The following is to-day's telegram—per bushel:
New York, Dec. 27.—December, 65; January, 65½; March, 67½; May, 70.

CHICAGO.		Dec.	Jan.	Feb.	Mar.	Apr.	May.
Thursday	61	61	63	67			
Friday	61	61	63	67			
Tuesday	60	60	62	66			

CHICAGO, Dec. 27.—December, 59½; May, 64½.

SAN FRANCISCO.		Dec.	Jan.	Feb.	Mar.	Apr.	May.
Thursday, highest	1.06½	1.06½	1.07	1.08			
" lowest	1.06	1.06	1.07	1.08			
Friday, highest	1.06½	1.06½	1.07	1.08			
" lowest	1.06	1.06	1.07	1.08			
Saturday, highest	1.06½	1.06½	1.07	1.08			
" lowest	1.06	1.06	1.07	1.08			
Monday, highest	1.06½	1.06½	1.07	1.08			
" lowest	1.06	1.06	1.07	1.08			
Tuesday, highest	1.06½	1.06½	1.07	1.08			
" lowest	1.06	1.06	1.07	1.08			

The following are to-day's recorded sales on Oat:
Morning—Informal Session—May, 200 tons, \$1.17; 300, \$1.17½; 1500, \$1.17½ cbl.
Regular Session—May, 300 tons, \$1.17½; 1100, \$1.17½; 500, \$1.17½; 1400, \$1.17½.
Afternoon Session—May, 1000 tons, \$1.16½; 200, \$1.16½.
January—100 tons, \$1.04.

Barley.
Business is of holiday character, there being no disposition to trade. We quote as follows: Feed, 70 to 72½c per cbl. for fair to good quality, 173½ to 75c for choice bright; brewing, 77½ to 87½c per cbl.

The following are to-day's recorded sales on Oat:
Informal Session—May, 100 tons, 82½c per cbl.

Dried Fruits.

The immediate situation is summarized in Thomas' Produce Report as follows: "The approach of a new year, bringing with it the usual annual stock-taking, is keeping buyers out of the market for the present time. Purchases for immediate necessary demands only are made, and this state of affairs will likely continue until 1894 will be with us. Holders also, by their anxiety to realize and turn into money the lots they may have on hand, are not helping the market, so that, in a general way, the situation is rather weak, although, owing to the reduced stocks of good Peaches and Apricots, these goods may be considered as firm, as some little demand exists to fill orders." We quote: Apples, 3½ to 4½c per lb. for quartered, 3¼ to 4¼c for sliced, and 7 to 7½c for evaporated; Pears, 5 to 6c per lb. for bleached halves, and 4 to 5c for quarters; bleached Peaches, 5 to 7c; sun-dried Peaches, 4 to 5c; Apricots, Moorpark, 11½ to 12½c; do Royals, 11 to 11½c for bleached and 6 to 7c for sun-dried; Prunes, 4½ to 4¾c per lb. for the four sizes and 3 to 4c for ungraded; Plums, 4½ to 5c for pitted, and 1½ to 2c for unpitted; Figs, 3c to 4c for pressed, and 1½c to 2½c for unpressed; White Nectarines, 5c to 6c; Red Nectarines, 4c to 5c per pound.

RAISINS—We quote: London Layers, \$1 to 1.25; loose Muscatels, in boxes, 75c to \$1; clusters, \$1.50 to 1.75; loose Muscatels, in sacks, 2½ to 3½c per lb. for three-crown, 2 to 2½c for two-crown; dried Grapes, 1½ to 2c per lb.

General Produce Market.

OATS—Trade has been fairly good of late, though for the past few days there has been a lull in the inquiry. This, however, is looked upon as only temporary, and dealers expect a renewal of activity after business men have balanced annual accounts. We quote: Milling, \$1.12½ to 1.20; Surprise, \$1.20 to 1.30; fancy feed, \$1.17½ to 1.20; good to choice, \$1.10 to 1.15; common to fair, 97½ to \$1.07½; Black, 85c to \$1.22½; Red, \$1 to 1.15; Gray, \$1 to 1.10 cbl.

CORN—Market weak, under large stocks and limited demand. Quotable at 77½ to 82½c per cbl. for large Yellow, 87½ to 90c for small Yellow, and 85 to 87½c for White.

CRACKED CORN—Quotable at \$20.50 to 21.50 per ton.

CORNMEAL—Millers quote feed at \$20 to \$21 per ton; fine kinds for the table, in large and small packages, 2½ to 3½c per pound.

OILCAKE MEAL—Quotable at \$35 per ton from the mill.

SEEDS—We quote: Mustard, brown, \$3 to 3.25; Yellow, \$3.50 to 3.75; Canary, imported, \$4 to 4.25; do, California, —; Hemp, 3½c per lb; Rape, 1½ to 2½c; Timothy, 6½c per lb; Alfalfa, 8½ to 9c per lb; Flax, \$2.25 to 2.50 per cbl.

CHOPPED FEED—Quotable at \$17.50 to 18.50 per ton.

MIDDINGS—Quotable at \$18 to 21 per ton.

MILLSTUFFS—We quote: Rye Flour, 3½c;

Rye Meal, 3c; Graham Flour, 3c; Oatmeal, 4½c; Oat Groats, 5c; Cracked Wheat, 3½c; Buckwheat Flour, 5 to 5½c; Pearl Barley, 4 to 4½c per lb; Normal Nutrient, \$3 per case of 1 dozen cans; Breakfast Delight, \$3.25 per case of 2 dozen packages.

BRAN—Quotable at \$16 to 17 per ton.
HAY—Supplies keep ample. Wire-bound hay sells at \$1 to 2 per ton less than rope-bound hay. Following are wholesale city prices for rope-bound Hay: Wheat, \$10 to \$13.50; Wheat and Oat, \$10 to 12.50; Wild Oat, \$10 to 12; Alfalfa, \$10 to 10.50; Clover, \$10 to 11; Barley, \$9 to 11; Compressed, \$11 to 13; Stock, \$6.50 to 8 per ton.

STRAW—Quotable at 50 to 55c per bale.
HOPS—Trade keeps of light volume. Fair stocks are said to be still in first hands. Quotable at 16 to 18½c per lb.

RYE—Quotable at \$1 to 1.02½ per cbl.
BUCKWHEAT—Quotable at \$1.25 to \$1.40 per cbl.
GROUND BARLEY—Quotable at \$16.50 to 17.50 per ton.

POTATOES—The market continues to be liberally furnished. New Potatoes, 3c per lb; Sweets, \$1.25 to 1.50 per cbl; Garnet Chiles, 50 to 60c; Early Rose, 50 to 55c; River Burbanks, 35 to 45c; River Red, 50 to 65c; Salinas Burbanks, 70 to 85c per cbl.
ONIONS—Quotable at 75c to \$1.10 per cbl.
DRIED PEAS—We quote: Green, \$1.50 to 1.65; Blackeye, \$1.60 to 1.75; Niles, \$1.50 to 1.60 per cbl.

BEANS—Movement is slow, though prices for desirable qualities show steady tone. Defective stock goes at anything that buyers will pay. We quote: Bayos, \$1.60 to 1.85; Butter, \$1.65 to 1.75 for small and \$1.85 to 2 for large; Pink, \$1.30 to 1.65; Red, \$1.65 to 1.90; Lima, \$1.90 to 2.10; Pea, \$2 to 2.10; Small White, \$1.50 to 1.90; Large White, \$1.50 to 1.90 per cbl.

VEGETABLES—Market very quiet. We quote as follows: Asparagus, 12½ to 18c per lb; Mushrooms, 10 to 25c per lb; Rhubarb, 6 to 7c per lb; Green Peas, 6 to 7c; String Beans, 8 to 12c; Marrowfat Squash, 7 to 8c per ton; Green Peppers, 8c per lb; Tomatoes, 25c to \$1 per box; Turnips, 75c per cbl; Beets, 75c to \$1 per sack; Parsnips, \$1.25 per cbl; Carrots, 40 to 50c; Cabbage, 50 to 55c; Garlic, ¼ to 1c per lb; Cauliflower, 60 to 70c per dozen; Dry Peppers, 5 to 7c per lb; Dry Okra, 12½ to 15c per lb.

FRESH FRUIT—Trade was quite slow to-day, as dealers have not all closed out holiday stocks. We quote as follows: Apples, 75c to \$1.25 per box for good to choice, and 25 to 65c for common to fair; Lady Apples, \$1.25 to 1.50 per box; Pears, 25 to 50c per box for common and 75c to \$1.25 for choice; Persimmons, 40 to 75c per box; Cranberries, Eastern, \$6.50 to 8.50 per bbl; do Coos Bay, \$3.25 to 3.75 per box.
GRAPES—Quotable at 40 to 75c per box.

CITRUS FRUIT—Oranges in plentiful supply and cheap. We quote as follows: Fair to choice Navel Oranges, \$2 to 2.75 per box; Seedlings, \$1 to 1.75; Vaccaville Oranges, small boxes, 50 to 65c; Mandarin Oranges, 65c to \$1 per box; Mexican Oranges, \$2.25 to 2.50 per box; Mexican Limes, 50 to 67c per box; Lemons, Sicily, \$4 to 5; California Lemons, \$1 to 2.50 for common and \$2.75 to 3.50 for good to choice; Bananas, \$1.50 to 2.50 per bunch; Hawaiian Pineapples, \$2.50 to 3; Mexican Pineapples, \$3 to 4 per dozen.

NUTS—We quote as follows: Chestnuts, 8 to 10c per lb; Walnuts, 6½ to 7½c for hard shell, 8 to 8½c for soft shell and — to —c for paper shell; Chile Walnuts, 8 to 9c; California Almonds, 11 to 12c for soft shell, 5 to 6c for hard shell and 12½ to 13½c for paper shell; Peanuts, 3½ to 3¾c; Hickory Nuts, 5 to 6c; Filberts, 10 to 10½c; Pecan, 8 to 9c for rough and 11c for polished; Brazil Nuts, 10 to 11½c; Coconut, \$4 to 5 per 100.

HONEY—We quote: Comb, 10½ to 11c per lb for bright, and 8 to 10 for dark to light amber; light amber, extracted, 4½ to 5c; dark, 4½ to 4¾c; water white, extracted, 5 to 5½c per lb.

BESWAX—Quotable at 22 to 23c per lb.

BUTTER—The market shows pronounced weak tone, and prices are likely to take another turn any day. We quote as follows: Creamery, 30 to 32c; fancy dairy, 27½ to 29c; good to choice, 24 to 26c; common grades, 18 to 24c per lb; pickled roll, 19 to 21c; firkin, 18 to 19c; Eastern ladle-packed, 17 to 18c per lb.

CHEESE—Stocks are not large, but there is enough to readily meet all ordinary demands. We quote as follows: Choice to fancy new, 11½ to 12½c; fair to good, 9 to 10½c; Eastern, ordinary to fine, 11 to 14c per lb.

EGGS—The week opens favorably for buyers. Stocks are liberal and dealers will make concessions sooner than lose a sale. We quote: California ranch, 28 to 34c; store lots, 25 to 27c; Eastern Eggs, 22 to 23 for ordinary and 24 to 26c per dozen for good stock.

POULTRY—The market is overstocked with dressed Turkeys, large quantities left over from Christmas being put on cold storage. It will probably be a week yet before the market is cleaned up and the situation assumes its normal condition. Prices just now are largely nominal. We quote: Live Turkeys—Gobblers, 10 to 12c per lb; Hens, 10 to 12c; dressed Turkeys, 12 to 14c; Roosters, \$4 to 4.50 for old and \$3.50 to 4.50 for young; Fryers, \$4 to 4.50; Broilers, \$3 to 4; Hens, \$4 to 5; Ducks, \$3.50 to 5; Geese, \$1.50 to 1.75 per pair; Pigeons, \$1 to 1.50 per doz.

GAME—Only 50 sks arrived yesterday morning, but the amount was more than wanted, the demand being light. We quote as follows: Quail, 1½ per doz; Canva-backs, \$3 to 6; Mallard, \$2.25 to 2.50; Widgeon, \$1 to 1.25; Teal, \$1; Sprig, \$1.50 to 1.75; Small Ducks, 75c to \$1; Gray Geese, \$2 to 2.50; White Geese, 75c to \$1; Brant, \$1 to 1.25; English Snipe, \$1.50 to 2 per doz; Common Snipe, 75c to \$1 per doz; Honkers, \$3.50 to \$4; Hare, 75c; Rabbits, \$1 to 1.50 per doz.

PROVISIONS—We quote as follows: Eastern hams, 12 to 15c per lb; California hams, 11 to 12c; Bacon, Eastern, extra light, 15½ to 16½c; medium, 11 to 11½c; do, light, 12c; do, light, clear, 13 to 13½c; light, medium, boneless, 12½c; Pork, extra prime, \$13 to 15; do, prime mess, \$14 to 15; do, mess, \$21 to 22; do, clear, \$20 to 20.50; do, extra clear, \$21 per bbl; Pigs' Feet, \$12 to 50 per bbl; Beef, mess, bbls, \$7.50 to 8; do, extra mess, bbls, \$8.50 to 9; do, family, \$9 to 10; extra do, \$11 to 11.50 per bbl; do, smoked, 10 to 10½c; Eastern lard, tierces, 8 to 8½c; do, prime steam, 10c; Eastern pure, 10-lb pails, 11c; 5-lb pails 11½c; 3-lb, 11½c; California, 10-lb tins, 10½c; do, 5-lb, 11c; do, kegs, 11½ to 12c; do, 20-lb buckets, 11c; compound, 8c for tierces and 8½c for hbls.

WOOL—Dealers and manufacturers alike are act-

ing with caution, and business is very slow in consequence. The tariff question is the disturbing element just now, and, until there is some definite arrangement in the premises, the Wool market is not likely to show either strength or activity. On the 10th of January next there will be a convention in this city of parties identified with Wool interests generally, for the purpose of discussing the situation and bringing about concerted action for the benefit of State and Pacific Coast growers. We quote spring:

California, year's fleece, 7 to 9c; do 6 to 8 months, 7 to 8c; do Foothill, 10 to 11c; do Northern, 12 to 13c; do extra Humboldt and Mendocino, 11 to 13c; Nevada, choice and light, 12 to 14c; do heavy, 8 to 10c; Oregon, Eastern, choice, 10 to 12c; do Eastern, poor, 7 to 9c; do Valley, 12 to 15c. We quote fall: Free Mountain, 6 to 7c; Northern defective, 5 to 7c; Southern and San Joaquin, 3 to 5c.

HIDES AND SKINS—Quotable as follows:

	Sound.	Culls.
Heavy Steers, 57 lbs up, ½ lb. 5	@-c	4 @-c
Medium Steers, 48 to 56 lbs. 4	@-c	3 ½ @-c
Light, 42 to 47 lbs. 3	@-c	3 ¼ @-c
Cows, over 50 lbs. 3	@-c	2 ½ @-c
Light Cows, 30 to 50 lbs. 3	@-c	2 ½ @-c
Stags, 17 to 30 lbs. 2	@-c	2 @-c
Kips, 17 to 30 lbs. 4	@-c	3 @-c
Veal Skins, 10 to 17 lbs. 5	@-c	4 @-c
Calf Skins, 5 to 10 lbs. 6	@-c	5 @-c

Dry Hides, usual selection, 6½ to 7c; Dry Kips, 6½ to 7c; Calf Skins do, 6½ to 7c; Cull Hides, Kip and Calf, 4c; Pelts, Shearling, 10 to 20c each; do, short, 25 to 35c each; do, medium, 40 to 50c each; do, long wool, 50 to 75c each; Deer Skins, summer, 25c; do, good medium, 15c; do, winter, 5c per lb; Goat Skins, 25 to 40c apiece for prime to perfect, 10 to 20c for damaged, and 5 to 10c each for Kids.

TALLOW—We quote: Refined, 5c; rendered, 4½ to 4¾c; country Tallow, 4½ to 4¾c; Grease, 3 to 3½c per lb.

SPECIAL ANNOUNCEMENT.

We have made arrangements with Dr. B. J. Kendall Co., publishers of "A Treatise on the Horse and his Diseases," which will enable all our subscribers to obtain a copy of that valuable work free by sending their address (enclosing a two-cent stamp for mailing same) to Dr. B. J. KENDALL CO., ENOSBURGH FALLS, VT. This book is now recognized as standard authority upon all diseases of the horse, as its phenomenal sale attests, over four million copies having been sold in the past ten years, a sale never before reached by any publication in the same period of time. We feel confident that our patrons will appreciate the work, and be glad to avail themselves of this opportunity of obtaining a valuable book.

It is necessary that you mention this paper in sending for the "Treatise." This offer will remain open for only a short time.

Hay Pressing.

If you are interested in pressing hay write Truman Hooker & Co., San Francisco. They will save you money.

Treatise on the Horse and His Diseases.

By B. J. KENDALL, M. D.

35 Fine Engravings showing the positions and actions of sick horses. Gives the cause, symptoms and best treatment of diseases. Has a table giving the doses, effects and antidotes of all the principal medicines used for the horse, and a few pages on the action and uses of medicines. Rules for telling the age of a horse, with a fine engraving showing the appearance of the teeth at each year. It is printed on fine paper and has nearly 100 pages, 7½ x 10 inches. Price, only 25 cents, or five for \$1, on receipt of which we will send by mail to any address DEWEY PUBLISHING CO., 220 Market Street, San Francisco.

HEALD'S

BUSINESS COLLEGE.

24 POST STREET, SAN FRANCISCO.
FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Book Keeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils. Our school has its graduates in every part of the State. SEND FOR CIRCULAR. E. P. HEALD, Pres. O. S. HALEY, Sec.

Poultry and Stock Book

Niles's new manual and reference book on subjects connected with successful Poultry and Stock Raising on the Pacific Coast. A new Edition, over 100 pages, profusely illustrated with handsome, life-like illustrations of the different varieties of Poultry and Live-Stock. Price, postpaid 50 cts. Address PACIFIC RURAL PRESS Office, San Francisco, Cal.

WANTED, BY A COMPETENT POULTRY Breeder, a position to take charge of a poultry plant, or to join some one wishing to start a poultry farm. My capital is muscle and best of references as to ability and character. O. B. Diamond P. O., Alameda county.

California Inventors Should consult DEWEY & CO. AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists and large practice as Patent attorneys enables them to offer Pacific Coast Inventors far better service than they can obtain elsewhere. Send for free circulars of information. No 220 Market St., San Francisco Cal.

Commission Merchants.

ALLISON, GRAY & CO.,

501, 503, 505, 507 & 509 Front St.,
And 300 Washington Street, SAN FRANCISCO.

GENERAL

Commission - Merchants,

GREEN and DRIED FRUITS,

Poultry, Eggs, Game, Grain, Produce and Wool.

P. STEINHAGEN & CO.



404 & 406 DAVIS ST. S. F.

MOORE, FERGUSON & CO.
WOOL, GRAIN, FLOUR

—AND—

General Commission Merchants,
310 California St., S. F.

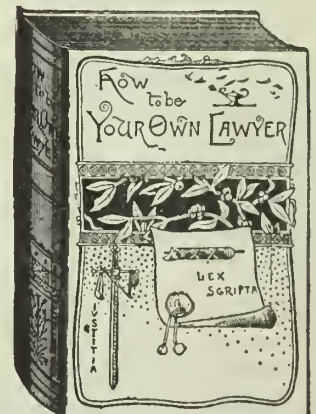
Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

MONEY TO LOAN ON FARMING and ORCHARD PROPERTIES

From \$1000 upwards at market rates. We also deal in county lands. Several foreclosed properties for sale cheap, on easy terms. Write for list, or if you desire to sell, send us full particulars. LINDSAY & CRAIG, Land and Financial Agents, Crocker Building, San Francisco.

\$1000 WORTH OF LAW FOR \$1.50.



"How to Be Your Own Lawyer" is the title of a book of over 500 pages, adapted for use in every State and Territory in the Union, and is by far the best and most complete work of the kind ever published. It gives instruction on all the most important law points which a Farmer, Mechanic, Merchant or anybody else would want to know about, and is carefully studied and kept at hand for consultation when needed will save any man, in the course of an ordinary business career, hundreds, if not thousands of dollars. It is a lawyer whose retainer fee (the price of the book, \$1.50) has to be paid but once in a lifetime. Plain and concise directions are given and forms furnished for the transaction of all kinds of business, and the preparation of every description of legal document in common use. A copy of this valuable work, handsomely bound in extra cloth, with ink slide-stamp, will be mailed to any address on receipt of \$1.50.

Address THE DEWEY PUBLISHING CO.,
220 Market St., San Francisco, Cal.

VALUABLE

Information relating to orchard tree planting and care of orchards, together with a complete catalogue of the

RANCHO CHICO

NURSERIES, will be sent FREE, postage paid, to any address, upon application to

JOHN BIDWELL,

Chico, Butte County, California.

RANCHO CHICO ORCHARDS EMBRACE OVER 1000 ACRES IN FULL BEARING.

PACIFIC RURAL PRESS is the Largest Illustrative and Leading Agricultural and Horticultural Weekly of the West. Established 1870. Trial Subscriptions, 50c for 3 mos. or \$2.40 a year (till further notice). DEWEY PUBLISHING CO., 220 Market Street, San Francisco.

PATRONS OF HUSBANDRY.

Random Thoughts.

By A. P. ROACHE, W. M. S. G. of California.

A greater prize than worldly pelf
Is this, my friend, To know thyself.

THE OBLIGATION OF A PATRON.

There is an old adage, that a nation, a system, or an individual, must die before their true worth can be fully appreciated; in other words, the ameliorating influences of time and the dispassionate views of those occupying a different plane or advanced position in life recognize those truths, which were ever present, but ignored in the age in which they occurred.

We have as a simile the good works of the Order of Patrons of Husbandry, and this brings us to our subject proper, "The Obligation of a Patron."

The first duty imposed by his obligation is a proper recognition of his Creator, expressed and acknowledged by him in his boundless faith in nature, as in confidence he plies his daily vocation, thus proving that he is not alone a praying, but a working Christian as well.

His next duty applies to those dearest treasures of the human heart—home and loved ones. He is to beautify and improve the home, not alone by dollars, but by his handiwork and care. He must plant the tree, vine or flower; prune here, add there, and implant his own personality in all his acts and works, yet in providing the material comforts of his home he is conjured not to forget the moral and intellectual and the refining influences of books, papers and music within his means. He is most sacredly bound to recognize the partner of his joys and sorrows as his companion and equal in life—not as a beast of burden; not as the virtual slave who performs the crushing, treadmill task of house-keeping, not alone as a necessity for his comfort and pleasure, but as a being representing the crowning perfection of all nature's glory—one whose soul is wrought in a finer mold than his, a being to be cherished and loved, and whose ever-thoughtful ministrations and unselfish devotion are to be acknowledged and requited by affection and praise.

His third duty applies to his country and all humanity. He is firmly bound by every sentiment of patriotism and honor to support and maintain the integrity and laws of his country to take a proper interest in her politics; to eradicate bribery and corruption in his own party by all efforts within his power; to practice temperance in all things; to lend his best efforts in support of justice, moderation and equality to the end that the Great Republic shall descend to his posterity as pure and as good as it descended upon him—the priceless gift of those deathless patriots of other days.

We are at once met with the inquiry, Can the leopard change his spots at will?

Can the frailties of men be eradicated by simply taking an obligation, however broad in its bearing? Do patrons fulfill these lofty obligations? Let facts attest. The preservation of life, property and law is secured by a vast army of men, both civil and military, armed with deadly weapons, maintained at an enormous expenditure of money, whose occupations entail a national loss of their aid as productive home-builders. Then there are other thousands of money and time of men required for the operation of courts, jails, penitentiaries, asylums, etc. Notwithstanding all these so-called safeguards, law and decency are continually outraged. A procession so large that it required two hours to pass a given point paraded through one of our great cities, and there was not one American flag to be seen, but in its place waved the red flag of anarchy. Statistics tell us that more people have been murdered in one year in the United States than the greatest number killed in any one day in any of the most sanguinary battles of our civil war, counting the loss on both sides. Then there are strikes, riots, robberies, defalcations and swindles without number. Yet it is a notable fact that amid all this wickedness and crime, no man or woman who has truly taken the obligation of a patron has ever been found. This fact we are pleased to consider a worthy tribute to agriculture and its representative, the order of Patrons of Husbandry.

We truly believe that when the heaven of this obligation shall permeate every farm home in our land—which means the education and elevation of nearly one-half our population—the pistol, the bludgeon and the whisky bottle, not to mention the bomb, the grog-shop, the brothel and the saloon, shall be annihilated by the just vengeance of an outraged people. Men and women of progress who love America and her grand in-

stitutions, this is the obligation we are anxious to have you take!

Watsonville, Dec. 25, 1893.

Secretary's Column.

Merced Grange celebrated the anniversary of the order on December 2d by a literary and musical entertainment and a harvest feast prepared by the sisters of that grange, which was open to the public; also elected officers for the ensuing year, which will be given in this issue of the RURAL.

Sebastopol Grange elected officers December 16th. Their installation will be held January 8, 1894, and your humble servant has been extended a cordial invitation to act as installing officer, and will accept, business engagements permitting. They expect to have a musical and literary programme, and a good dinner; to the latter part of the programme we hope to do ample justice.

This office has received the December quarterly report of Pescadero grange, cash accompanying same.

This office acknowledges receipt of a kind invitation from Enterprise Grange to install their officers on January 6th, but having accepted a previous invitation, regret that I am unable to accept their invitation. Have also received the December quarterly report of Pescadero Grange, cash accompanying same.

We have received a communication from the worthy master which will be mailed to subordinate granges in due season.

This office desires to particularly call the attention of the newly-elected masters of subordinate granges, and as soon as they are installed, to at once notify us and if they are square on the books they will receive information which no doubt will be of much assistance to them in grange work during the coming year. I trust that those who read this will govern themselves accordingly.

Independent Grange will have an entertainment, dance and euchre party on Monday night, January 1, 1894, for the benefit of the grange. They have asked us to see what we could do in furnishing them with an orator for the occasion.

We have received the quarterly reports of Bennett Valley and Lockeford Granges for December quarter, 1893, cash accompanying same.

Brother G. N. Whitaker has been invited to and will install the officers of Bennett Valley Grange, Saturday, January 6, 1894. A good time is expected and all members of the order are cordially invited to be present.

We have received the sixth degree certificates and will at once mail them to the different members who received the sixth degree at the late session of the California State Grange.

Grange Elections.

WATSONVILLE, No. 124.—Master, G. A. Webb; overseer, H. F. Blohm; lecturer, Alberta Cox; steward, G. W. Rowe; assistant steward, R. Williamson; chaplain, W. T. Gilkey; treasurer, W. H. Bomman; secretary, Frank Mauk; gate-keeper, Sister C. Blohm; Ceres, Sister G. W. Rowe; Pomona, Myrtle Burnside; Flora, Kate Hutchings; lady assistant steward, Helena Ready; trustee, J. C. Drew.

MERCED, No. 7.—Master, Mr. A. Bickford; overseer, Mr. H. C. Healy; lecturer, Mrs. M. D. Atwater; steward, Mrs. J. T. Leander; assistant steward, Miss Alice Peak; chaplain, Mrs. Adam Kahl; treasurer, Mr. M. D. Atwater; secretary, Miss Jessie Peck; gate-keeper, Miss Mattie Perry; Ceres, Miss E. S. Elliott; Pomona, Miss Belle Clark; Flora, Miss L. Archibald; lady assistant steward, Miss Emma Perry; trustee, Mr. W. E. Elliott.

ENTERPRISE, No. 129.—Master, J. A. Simons; overseer, Thomas Walt; lecturer, J. O. Sherwood; steward, W. Coy; assistant steward, H. Toomey; chaplain, Geo. Wilson; treasurer, Mrs. Z. Coy; secretary, Minnie Toomey; gate-keeper, N. G. Wilson; Pomona, Nellie Coy; Flora, Bertha Toomey; Ceres, Mrs. M. Toomey; lady assistant steward, Hattie Boulton; organist, Mrs. Annie Plummer.

GRASS VALLEY, No. 256.—Master, A. Henderson; overseer, M. Thornton; lecturer, Mrs. R. S. Twitchell; steward, M. Wallace; assistant steward, F. W. Rowe; chaplain, Mrs. M. Wallace; treasurer, A. Matteson; secretary, O. L. Twitchell; gate-keeper, W. Alderman; Ceres, Mrs. L. Matteson; Pomona, Mrs. M. J. Wales; Flora, Mrs. M. A. Coulton; lady assistant steward, Miss Lillie Alderman; trustee, S. J. Alderman.

SEBASTOPOL, No. 45.—Master, G. F. Sanborn; overseer, D. Litchfield; lecturer, Mrs. F. H. Lawton; steward, G. D. Espey; assistant steward, C. E. Hotle; chaplain, Mrs. E.

Sheridan; treasurer, Otis Allen; secretary, Mrs. A. E. Palmer; gate keeper, J. H. P. Morris; Ceres, Mrs. Harriet Allen; Pomona, Miss Cora Litchfield; Flora, Mrs. D. Litchfield; lady assistant steward, Mrs. G. Huntly; trustee, J. H. P. Morris.

FLORIN, No. 130.—Master, John Reese; overseer, T. E. Davies; lecturer, I. A. Casev; steward, J. P. Brown; assistant steward, D. Reese; chaplain, Jane Clark; treasurer, Lillie Jones; secretary, Arthur Jenkins; gate keeper, Milton Casev; Ceres, Lillie Whipple; Pomona, Nannie Kennedy; Flora, Laura Jenkins; lady assistant steward, Mira Reese; organist, Minnie Robinson; trustee, C. Towle.

MAGNOLIA, No. 261.—Master, C. D. Bilderback; overseer, T. P. Cannon; lecturer, W. H. Cunningham; steward, Lee Bilderback; assistant steward, F. D. Rollin; chaplain, Mrs. Robt. Elder; treasurer, J. W. Gautier; secretary, Mrs. Annie Cunningham; gate keeper, Robt. Elder; Pomona, Mrs. Amelia Lloid; Ceres, Mrs. J. R. Nickeson; Flora, Mrs. C. D. Bilderback; lady assistant steward, Birdie Bilderback; trustee, Jackson Cunningham.

EDEN, No. 166.—Master, C. Christensen; overseer, J. H. Driver; lecturer, Amelia Gading; steward, H. P. Mohr; assistant steward, W. T. Christensen; chaplain, Dora-thea Hollister; treasurer, J. Hollister; secretary, J. Sharai; gate keeper, R. Thomas; Ceres, R. Perham; Flora, Kate Monsen; Pomona, Mahlia Turkleson; lady assistant steward, Emma Reiter. Installation will take place the second Saturday of January.

DANVILLE, No. 85.—Master, M. W. Hall; overseer, C. J. Wood; lecturer, D. N. Sherburn; steward, Geo. Hall; assistant steward, James Steward; chaplain, Mrs. Flournoy; treasurer, R. O. Baldwin; secretary, Mira V. More; gatekeeper, F. B. More; Ceres, S. E. Wood; Pomona, Mrs. Allie Gould; Flora, Mrs. W. Z. Stone; lady assistant steward, Mrs. E. Flournoy.

RUDY'S PILE SUPPOSITORY is guaranteed to cure Piles and Constipation, or money refunded. 50 cents per box. Send stamp for circular and Free Sample to MARTIN RUDY, Lancaster, Pa. For sale by all first-class druggists.

Richard Gird, the Chino capitalist, is about to build a fine brick school house for Chino.

CALIFORNIA FRUITS

—AND—

HOW TO GROW THEM.

A MANUAL OF METHODS WHICH HAVE YIELDED
GREATEST SUCCESS; WITH LISTS OF VARIETIES
BEST ADAPTED TO THE DIFFERENT
DISTRICTS OF THE STATE.

PRACTICAL, EXPLICIT, COMPREHENSIVE.

Embodying the Experience and Methods of Hundreds
of Successful Growers, and Constituting a Trust-
worthy Guide by which the Inexperienced
may Successfully Produce the Fruits
for which California is Famous

SECOND EDITION, REVISED AND ENLARGED.

BY EDWARD J. WICKSON, A. M.

Assoc. Prof. Agriculture, Horticulture and Entomology,
University of California; Horticultural Editor
PACIFIC RURAL PRESS, San Francisco; Sec'y
California State Horticultural So-
ciety; Pres. California State
Floral Society; Etc.

Large Octavo—599 Pages, Fully Illustrated.
PRICE \$3, POSTPAID.

FOR SALE BY

THE DEWEY PUBLISHING CO.,
PUBLISHERS PACIFIC RURAL PRESS,
220 Market Street, Elevator, 12 Front Street
SAN FRANCISCO, CAL.

MAMMOTH.

A SUPERIOR QUALITY OF APRICOT.
Fine for Canning, Drying and Shipping.

They run 3 and 4 to the pound. The Largest and Finest
fruit of the Apricot variety.

ADDRESS

N. B. SMITH, Ventura, Ventura Co., Cal.

WANTED, BY A MARRIED MAN

Work on a Fruit Ranch,
Who thoroughly understands the business in all its
branches. Good references. Address F. FOHEMAN,
Sacramento, Cal.

ST. JACOBS OIL

CURES . . . Rheumatism.
PERMANENTLY

DESCRIPTION OF THE
WHITE CRESTED BLACK POLISH CHICKENS.

The Polish are considered the most beautiful and stylish of our domestic fowls. With their rich, illuminated black plumage and white crest they are indeed a beautiful sight, and a rival of the Leghorns as layers. They are not only ornamental but useful. They are extraordinary layers of pure white, good sized eggs, and are non-setters. There is no prettier fowl for the lawn or as pets. They are quite tame and with very little handling will become perfect pets. They are hardy and easy to raise if kept out of the dew.

My birds have taken first and second premiums at all fairs where exhibited. They are well bred and are beauties. I spare no expense to get the very best new blood for my breeding pens, as I breed for pleasure as well as for profit.

A FEW GOOD BREEDING BIRDS FOR SALE.

W. O. BOWEN, - - - National City, Cal.



DROP IT

IF YOUR BUSINESS DOES NOT PAY
Chickens are easily and successfully
raised by using the **Petaluma Incu-
bators and Brooders**. Our illus-
trated catalogue tells all about it. Don't

buy any but the Petaluma if you want strong, vigorous chicks. We are Pacific Coast Headquarters for Bone and Clover Cutters, Markers, Books, Caponizing Tools, Fountains, Flood's Roup Cure, Morris Poultry Cure, Creosoline the great chicken-lice killer and every other article required by poultry raisers. See the machines in operation at our exhibit with the Norwalk Ostrich Farm, Midwinter Fair, hatching ostriches and all kinds of eggs. Catalogue free, if you want it, write to us.
PETALUMA INCUBATOR CO.,
750-752-754-756 Main St., Petaluma, Cal.



BERKSHIRE SWINE.

Prize Herd of Southern California.

PIGS OF ALL AGES FOR SALE.

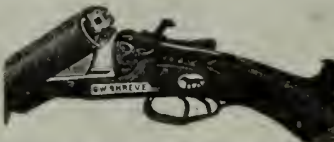
SESSIONS & CO., Los Angeles, Cal.

P. O. Box 686.

Send for Price Lists

OF GUNS

And all Articles used
by Hunters and
Anglers.

GUNS SENT ON
TRIAL.OLD GUNS TAKEN
IN EXCHANGE

GEO. W. SHREVE. 525 KEARNY STREET. SAN FRANCISCO.

The Cure of Colds.

The season of colds is here. People are always complaining about sore throats, about colds in the head which are started from the throat, or live in constant dread of specific throat affections, such as quinsy or diphtheria. It is due to the unnatural habit of eating most forms of food and drinking many sorts of drinks in an excessively hot state. Many men would get in a towering passion if the soup at dinner was anything below scalding heat, and many women would feel that their tea was not worth drinking if it had got down to anything like the heat of the body, says the *New York Commercial Advertiser*.

It is quite easy to illustrate the sensitive nature of the back of the throat. If a soft cloth be dipped in cold water and applied to the abdomen for a short time it will at once be seen that the delicate rosy tint of the lining at the back of the throat has changed to a deeper red, and if the cold application be retained sufficiently long in its position by dropping on iced water this red color will still further deepen, till distinct inflammatory symptoms will appear; these can be removed by substituting a warm poultice for the cold application, and the throat will regain its normal color if a definite inflammatory stage has not been reached.

This illustrates very well the mode of treatment which should be used in cases of inflammation of the throat—that is to say, that warm applications, such as poultices or fomentations, should be applied to other parts of the body and especially to the abdominal region. When the throat has been weakened by the use of hot foods, inflammatory symptoms are very often caused by a chill to the front of the body. Ulcerations of the throat are very often caused by drinking impure water. The utmost care should be taken to see that all water be boiled before it is used, or that it be taken in that peculiarly valuable state, namely, the juice of fresh ripe fruit.

Another cause of throat trouble is the presence of carious teeth, for we not infrequently find that some of the diseased matter proceeding from them lodges in the folds of the membrane lying in the throat, and there sets up an irritation which may develop into a serious sore throat.

The last point to mention is the value of oils and fats for the throat. Their effect is not wholly understood, but that they have a very soothing one in case of irritation, and a strengthening one in case of illness, is beyond a doubt.

One of the best forms to take oil is to drop a little fine olive oil on the back of the throat when the head is held back, and then allow it to find its way down by repeated swallowings. Half a spoonful taken in this way three times a day has often a most wonderful effect in strengthening the throat, in putting an end to that rough tickling which is so distressing a cause of cough and in generally soothing the organs with which it comes in contact.

Ocular Aperture.

It has been remarked by an authority on the use of the rifle that persons whose eyes have small pupils usually make the best shots, says the *Optician*. And in riflemen's "orthoptics," as is well known, we meet with a practical recognition of the same idea. It leads to the inference that, owing to the automatic adjustment of the iris, there must be more certainty in aiming at a small dark object against a light background than *vice versa*. Passing for a moment to the matter of telescopic sights, we may observe with what facility the advantages of such could be obtained by means of the compound spectacles or eyeglasses. There is one point worth noticing here, which is the greater perfection with which glasses for looking at distant objects only can be corrected—the angle of view being so small that, for the front lenses, the rays are practically parallel. Of course vision is always best in the optical axis of a spectacle lens, and this must be borne in mind in the case of riflemen who wear spectacles habitually.

\$100 Reward, \$100.

The reader of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly on the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials. Address

F. J. CHENEY & CO., Toledo, O.
Sold by Druggists, 75c.

Seeds, Plants, Etc.

TREES! TREES!

IT HAS BEEN DEMONSTRATED IN THE PAST FEW years by the large number of trees sold by me that nursery stock grown on the river bottom of Sutter county is far superior to any grown in the State. I am prepared to supply in large or small quantities:

Bartlett Pears, Plums and Prunes
On Myrabalan Plum Roots.

—ALSO—

Cherries, Peaches, Apricots, Apple, Almond Trees, Etc.

Special Rates on Large Orders.
Send for Price List for 1893-94.

James T. Bogue, Marysville, Cal.

Santa Rosa Nurseries.

AN IMMENSE AND WELL ASSORTED STOCK.

TREES TRUE TO NAME.—Warranted clean and raised without irrigation.
PEARS AND PRUNES at about HALF USUAL PRICES till my surplus is sold.
Price List mailed free.

Address R. W. Bell, Santa Rosa, Cal.

OAK LAWN NURSERY.

90,000 First-Class Fruit Trees
AT LOWEST PRICES.

MUST BE SOLD.
PLEASE WRITE AT ONCE.

HARRY E. HULBERT,
211 THIRD STREET,
SANTA ROSA, - - SONOMA CO., CAL.

GOLD DUST.

"Gold Dust Cling," says H. E. Van Deman, U. S. Pomologist, "is a yellow cling of medium size, round and regular in shape, and very firm in flesh. The color is very attractive, being dark yellow with a very red cheek. It bears heavily and carries to market with very little damage. Coming as it does before the main peach crop is gathered, it is about the first yellow cling of any special value and therefore finds a ready sale. Each year it gains in favor, but as it is a variety but recently originated the public know little of it. It is a very profitable variety." Price \$1 each, \$5 per half dozen. For sale by SACRAMENTO RIVER NURSERY COMPANY, Growers of HIGH-GRADE Fruit Trees, Walnut Grove, Sacramento County, California. Our Specialties—Genuine Tragedy Prunes, Clyman and Japan Plums on true Myrabalan whole root seedlings—we use no piece roots nor cuttings; price 15 cents each; Sacramento River Bartlett's and Peaches—price 10 cents each. Large quantities at lower rates. WE GUARANTEE OUR TREES TRUE TO NAME.



Trees, Vines and Plants,

—FOR 1893 and 1894.—

Terms on Application.

ADDRESS, - - L. D. BUTT,
Penryn, Placer Co., California.

B. F. GODFREY & CO., NURSERYMEN,

Davisville, Cal.

Write for Catalogue and Prices.

E. J. BOWEN, SEED MERCHANT.

ALFALFA:

Grass, Clover, Vegetable and Flower Seeds,
Onion Sets.

LARGEST STOCK AND
MOST COMPLETE ASSORTMENT.

Illustrated, Descriptive and Priced Seed Catalogue for 1894 mailed free to all applicants. Address

E. J. BOWEN,

815 & 817 Sansome St., San Francisco, Cal.
65 Front Street, Portland, Or.
or 214 Commercial St., Seattle, Wash.

BUY NORTHERN GROWN TREES

Grown on high rolling fir land without irrigation or manure. 250 000 Prunes—French, Italian, Silver and Golden. Peaches—E. Crawford, Alexander, Amsden, Foster, Muir, Malta, and 20 other kinds, including Early Charlotte, the greatest peach that Nature has yet invented. (Write to us about it.) Plums—Burbank, Satsuma, Oregon, Clyman, Tragedy, Eton, Columbia, and a dozen others. Clark's Early Strawberry. If you want the above in quantity, we will give you the finest trees grown, healthy, true to name and at unprecedentedly low prices. Address FILLINGTON & CO., Portland, Or., or Dr. J. B. Fillington, Los Angeles, Cal.

OLIVE TREES.

Apply for Catalogue.

C. F. LOOP & SON, - - Pomona, Cal.

RIVERSIDE NURSERY AND FRUIT FARM,

LODI, - San Joaquin Co., Cal,
HAS A CHOICE STOCK OF

Royal Blenheim and French APRICOTS,
I.X.L., Nonpareil, Ne Plus Ultra and
Texas Prolific ALMONDS.

FRENCH PRUNES, TRAGEDY PRUNES,
PEACHES, APPLES and PEARS
In Variety,

No. 1 Yearling Trees, also June Bud Trees
at Bedrock Prices.

For Particulars Address

JAMES A. ANDERSON,
Lodi, San Joaquin County, Cal.

GENUINE

Thompson Seedless RAISIN ROOTS

For sale at \$1.50 per hundred or \$12 per thousand. Address

ROBERT DAVIS,
Yuba City, Sutter County, Cal.

CENTRAL NURSERY COMPANY,

VAN GELDER & WYLIE, Proprietors.

GROWERS AND DEALERS IN ALL THE LEADING VARIETIES OF

Fruit and Ornamental Trees.

Our Stock is Free From all Insect Pests and for Health and
Strength of Root Growth Cannot be Excelled.

Write for Prices on Wholesale or Retail Orders. Address

CENTRAL NURSERY COMPANY, - - Acampo, California.

STOCKTON NURSERIES,

—ESTABLISHED 1853.—

FRUIT TREES. FRUIT TREES.

—GRAPE VINES.—

Also Fine Stock of Shade and Ornamental Trees, Shrubs, Palms, Roses, and Carnations,
PLANTS IN GREAT VARIETY.

Correspondence Solicited.

E. C. CLOWES, STOCKTON, CAL.

ESTABLISHED 1863.

THOMAS MEHERIN,

AGENT FOR CALIFORNIA NURSERY CO.,

LARGE STOCK OF

FRUIT & ORNAMENTAL TREES

AT REDUCED RATES.

SEEDS.—Kentucky Blue Grass, Clover, Vegetable, Flower and Tree Seeds.—SEEDS.
PRICE CATALOGUE MAILED ON APPLICATION.

THOMAS MEHERIN, - - 516 Battery Street, San Francisco.
P. O. Box 2069.

FOR THE SEASON OF 1893-94.

BUDDED ORANGE TREES, of the leading varieties, one and two-year buds; also a small lot of choice budded and seedling LEMON TREES. Sweet Seedling Oranges, 1 to 4 years old. Shade and Ornamental Plants. Prices to suit the times.

ORCHARD AND NURSERY.....THERMALITO, BUTTE COUNTY, CAL.
For prices and terms, address

OROVILLE CITRUS ASSOCIATION, OROVILLE, BUTTE COUNTY, CALIFORNIA
Correspondence Solicited.

THE RAISIN INDUSTRY.

A PRACTICAL TREATISE ON THE RAISIN GRAPES,
THEIR HISTORY, CULTURE AND CURING.

By GUSTAV EISEN.

This is the Standard Work on the Raisin Industry in California. It has been approved by Prof. Hilgard, Prof. Wickson, Mr. Ohas. A. Wetmore and a multitude of Practical Raisin Growers.

Sold only by the DEWEY PUBLISHING CO. or its Agents at the uniform price of \$3.00, postage prepaid. Orders should be addressed:

THE DEWEY PUBLISHING CO.,
220 Market St., San Francisco.

PACIFIC RURAL PRESS.

А.	РАОБ.
----	-------

Agricultural Corporations or Colonies.....	342	Game Law, California.....	107, 251	Palms at San Fernando Mission.....	1, 117	Palms as Street Trees.....	245	Palms Planting in Cal.....	117, 245	Paper, How to Make Straw.....	34	Peach-Almond.....	265	Peach, Cooking the.....	167	Peach, Albright's Late.....	296	Peach Borer.....	452	Peach, Elberta and Wonderful.....	164, 182	Peach Drying.....	47	Peach, Second Crop.....	382	Peach Varieties.....	235	Peach, Wright's November.....	331	Peanut Growing.....	223	Pears for Drying.....	6	Pears, Varieties of.....	235, 297	Pension Question.....	3, 67, 87, 104	Pineapple Culture.....	217	Plums, Japanese.....	121, 149	Political Affairs—The Elections.....	343	*Port Los Angeles Wharf.....	405	Potatoes, Sweet.....	4, 4	Potatoes at World's Fair.....	446	Poultry, Bone for.....	344	Poultry, Capons.....	170	Poultry Diseases.....	72, 106, 182, 410, 447	Poultry Feeding.....	26, 170, 201, 315, 394, 410	Poultry for Exhibition.....	219	Poultry in Orchards.....	427	Poultry Interest.....	72, 201	Poultry Keeping.....	5, 107, 123, 410	Poultry Lice.....	8, 91, 100, 107	Poultry, Make Them Scratch.....	346	Poultry, Nests for.....	201	Poultry, Profits.....	5, 72, 302	Poultry, Selecting.....	347	Plants, Need of Water.....	347	Plum Varieties.....	235	Prune, Black at Pit.....	68	*Prune Drying Floor.....	44	Prune Drying Methods.....	47, 48, 71, 106, 169, 190, 217	Prune Drying, Santa Clara.....	169	Prune Perforating.....	48, 263	Prunes Cost and Yield.....	91, 366, 367, 382, 399	Prune Prices.....	215	*Prune Tree Illustrated.....	41	Pumping Feet, Big.....	227	Quarantine, Mr. Craw's Essay on.....	392	Railroads, Nationalization of.....	392	Raisin Drier, Wilk's.....	39	Raisin Values.....	362	Raisin Yields.....	358	Rec'aming English Marshes.....	373	Red Spider.....	91, 344, 399	*Redwood, A Giant.....	149	*Redwood Logging.....	65	Rhizobium Ventralis.....	152, 153	Rice.....	433	Road Convention in Sacramento.....	120, 200	Roads, Cost and Profits of Good.....	426	Roads, How to Build.....	285, 351	Roots, Tropical.....	209	Root Knot, Cause of.....	106, 185	*Roses, Climbing, in California.....	261	Roses, Popular in England.....	266	*Russian River Scenery.....	85	Saghalien Knot Weed.....	326	San Diego Fair.....	250	San Joaquin Horticultural History.....	265	*Santa Catalina Island.....	405	Scale, Gas Treatment for.....	232, 415	Seed Distribution, University.....	433	Seed Shop, Government.....	422	Senator, U. S.....	43	Sewage Farms in California.....	122	Sheep Feeding and Shipping.....	394	Sheep, French Merino.....	363	Sheep, Persian Flat-Tailed.....	363	Sheep, Shropshire and Merino Cross.....	29	Silk at World's Fair.....	72	Silver Question, 2d, 43, 67, 103, 119, 135, 167, 183, 259, 311, 359, 423.....	259	Smith, Fred C., Letters of.....	26, 90, 105, 153, 233, 360	*Southern Cal. Valley, Ideal Sketch.....	373	Sparrow, English.....	13	Species, Do They Exist?.....	455	Squirrel Poisoning.....	34	*State Capitol, Sacramento.....	197	State Fair, Address at.....	63	Strawberry Growing.....	185	Strawberry Yield.....	127	Sugar Cane.....	433	Sulphur, Use of.....	41, 45, 50	Summer Fallow.....	346, 395	Sutter County Fruits.....	238	Taganast in California.....	85, 89, 120	Tariff Matters.....	295, 311, 389, 390, 407	Tea Growing, American.....	136	Tenant Farmer, English.....	266	Timber, Comparative Values of.....	163	Timber Supply.....	210	Tobacco in California.....	159, 171, 250, 323	*Tohoco, Nevada.....	29	*Tomato Tree.....	23	Tomatoes, Value per Acre.....	435	Trees Pruned and Unpruned.....	127	Tree Wounds, Remedies for.....	185	Turkey Growing.....	315, 328, 379	University Bulletins.....	8, 23	*University Conservatory, New.....	213	University Experiment Station Report.....	406	Utah Homes and Farms.....	292	Watermelons, Lodi.....	425	Water Supply for Plants.....	34	Well, Removing Foul Air From.....	29	Wheat at World's Fair.....	29	Wheat Corner.....	19	Wheat for Hogs.....	114, 219, 403	Wheat for Shep.....	43	Wheat at Gambling and Low Prices.....	21	Wheat Growers, Oregon.....	215	Wheat Growing in Cal, 51, 58, 182, 188, 190, 223, 266, 444	444	Wheat, Higher Culture for.....	199, 214, 266	Wheat Outlook.....	44	Wheat Situation.....	86, 166, 424, 433	Wheats, Carter's New.....	433	Wheat Supply.....	154, 311	Wheat Value in Russia.....	294	Wheat, White Tuscany.....	303	Wind Storms of France.....	246	Wine Yield of France.....	6	Wool Growers, Ashton by.....	186, 199, 200, 206, 284, 447	Wintering Young Stock.....	331	World's Fair, Cal. Exhibits.....	72, 91, 123, 182, 331	World's Fair Horses and Cattle.....	202, 213	World's Fair Dairy Tests.....	25, 106, 107, 122, 330, 379	World's Fair by A. S. Halliday.....	150	World's Fair, Honey at.....	331	World's Fair, Horticulture at.....	331	World's Fair, Sheep at.....	331	Yosemite, Visit to.....	54
--	-----	---------------------------	----------	------------------------------------	--------	----------------------------	-----	----------------------------	----------	-------------------------------	----	-------------------	-----	-------------------------	-----	-----------------------------	-----	------------------	-----	-----------------------------------	----------	-------------------	----	-------------------------	-----	----------------------	-----	-------------------------------	-----	---------------------	-----	-----------------------	---	--------------------------	----------	-----------------------	----------------	------------------------	-----	----------------------	----------	--------------------------------------	-----	------------------------------	-----	----------------------	------	-------------------------------	-----	------------------------	-----	----------------------	-----	-----------------------	------------------------	----------------------	-----------------------------	-----------------------------	-----	--------------------------	-----	-----------------------	---------	----------------------	------------------	-------------------	-----------------	---------------------------------	-----	-------------------------	-----	-----------------------	------------	-------------------------	-----	----------------------------	-----	---------------------	-----	--------------------------	----	--------------------------	----	---------------------------	--------------------------------	--------------------------------	-----	------------------------	---------	----------------------------	------------------------	-------------------	-----	------------------------------	----	------------------------	-----	--------------------------------------	-----	------------------------------------	-----	---------------------------	----	--------------------	-----	--------------------	-----	--------------------------------	-----	-----------------	--------------	------------------------	-----	-----------------------	----	--------------------------	----------	-----------	-----	------------------------------------	----------	--------------------------------------	-----	--------------------------	----------	----------------------	-----	--------------------------	----------	--------------------------------------	-----	--------------------------------	-----	-----------------------------	----	--------------------------	-----	---------------------	-----	--	-----	-----------------------------	-----	-------------------------------	----------	------------------------------------	-----	----------------------------	-----	--------------------	----	---------------------------------	-----	---------------------------------	-----	---------------------------	-----	---------------------------------	-----	---	----	---------------------------	----	---	-----	---------------------------------	----------------------------	--	-----	-----------------------	----	------------------------------	-----	-------------------------	----	---------------------------------	-----	-----------------------------	----	-------------------------	-----	-----------------------	-----	-----------------	-----	----------------------	------------	--------------------	----------	---------------------------	-----	-----------------------------	-------------	---------------------	-------------------------	----------------------------	-----	-----------------------------	-----	------------------------------------	-----	--------------------	-----	----------------------------	--------------------	----------------------	----	-------------------	----	-------------------------------	-----	--------------------------------	-----	--------------------------------	-----	---------------------	---------------	---------------------------	-------	------------------------------------	-----	---	-----	---------------------------	-----	------------------------	-----	------------------------------	----	-----------------------------------	----	----------------------------	----	-------------------	----	---------------------	---------------	---------------------	----	---------------------------------------	----	----------------------------	-----	--	-----	--------------------------------	---------------	--------------------	----	----------------------	-------------------	---------------------------	-----	-------------------	----------	----------------------------	-----	---------------------------	-----	----------------------------	-----	---------------------------	---	------------------------------	------------------------------	----------------------------	-----	----------------------------------	-----------------------	-------------------------------------	----------	-------------------------------	-----------------------------	-------------------------------------	-----	-----------------------------	-----	------------------------------------	-----	-----------------------------	-----	-------------------------	----





